MANITOBA HEAVY CONSTRUCTION ASSOCIATION (MHCA)
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June 11, 2019

ITEM 10 UNFUNDED MAJOR CAPITAL PROJECTS - PRESENTATION TO EXECUTIVE POLICY COMMITTEE

Good morning,

I am here to speak in support of the recommendations outlined in Item 10 Unfunded Major Capital Projects Report.

I also wish to add a separate recommendation that the Mayor & Council lead a public conversation during the pending provincial and federal election campaigns, in support of a *New Fiscal Deal* to re-shape the fiscal relationship between Canadian municipalities, the provinces and the federal government.

Before getting into the substance of my presentation, I wish to commend the Mayor and Council. This report along with the Capital Asset Management Plan and the 2018 State of Winnipeg's Infrastructure report, give meaning to your commitment to be transparent in public engagement on a strategy, with which to fund Winnipeg's major capital assets and infrastructure needs including its transportation system. These reports as well, flow from Council direction to govern according to asset management principles and vision, supported by multi-year forecasts for investment.

In many ways, this discipline serves as a model for other levels of government to follow.

As to the issue at hand?

There are 22 projects on the list in front of you today[1], $4.9 billion worth of major capital infrastructure works the City has identified as needed in the next decade. Given Winnipeg's current funding sources, the total unfunded liability of $4.5 billion would put taxpayers on the hook for:

i) Additional tax increases of 3% in each of the next 10 years - a 30% increase; and
ii) Total hike to sewer and water rates of 37% in the next decade.

Respectfully, neither of these options is conceivable.

Major capital projects need major funding sources, and given current municipal access to revenues and revenue sharing that by necessity, means tapping into the higher levels of government for assistance. There is simply no way around that for municipalities across Canada and Winnipeg is no different a situation.

Further complicating the discussion is the provincial government pulling back on shared road funding agreements that were historically embedded as part of the City's base funding for local and regional street renewals.

While street renewal is not considered "major projects", our major arteries are critical links to our local and regional streets. And the route is only as strong as the weakest link.

With the dilemma before us – funding capacity and sources – the lack of funding alternatives and the uncertainty of provincial multi-year agreements, have thrown a wrench into the infrastructure funding, planning and strategy. But the provincial issue is just part the problem here.

[1] Attached is an impressive current investment activity on the CenterPort Canada footprint. It should update the 'Unfunded Major capital Projects Details May 2019 report project 'Need/Rationale' backgrounder, to accurately demonstrate that the main project driver and therefore need, is in fact growth.

The local and regional street renewal program remains dug into an infrastructure investment deficit. The plan to eliminate the local streets investment deficit, set out in 2013, was predicated on getting to sustainable annual funding for local streets by 2022. Sustainable funding for the local street renewal program was estimated at $80 million, rising by approximately $13 million per year through to 2033.

Where do we sit? This year, we see $21.9 million for local streets renewal. Even with the federal one-time gas tax top-up, we are short $10 million this year, against the original plan.

The regional renewal program will hit "sustainable" levels with $64 million this year, thanks to the new cash from Ottawa's New Building Canada Fund, which Manitoba has agreed to match.

But - what happens in five years? Will those governments renew this funding agreement? Where will our regional street renewal program be then? Winnipeg does not have reliable, predictable funding to ensure its streets are repaired.

How did we get to this point? It is due to a number of factors, some of which flow from City Council decisions made in the public budget approvals process, and some recent high-profile provincial government decisions.

For a variety of reasons, Councils have not always adhered to the public plan that introduced the 2% annual tax hikes for the local and regional street program – not every year did the budget rise by the full +/-$10 million in revenue raised by that tax annually.

Further, the cash to capital for the street renewal budget has not stuck to the original plan. In 2014, the budget's five-year forecast for cash to capital for street renewal was set at $133 million. By 2019, however, total cash-to-capital contributions have amounted to $76.5 million – a shortfall of $56.5 million.

Further, in 2018 Council decided it would no longer contribute cash to capital in future years. That complicates the funding plan, especially given the unpredictability of provincial roads funding.

In addition, Council in 2018 decided to eliminate using external debt to finance local and regional street renewal. This, by default, means rate payers will be bearing the brunt. Or our streets won't get fixed.

But there is another looming funding problem: In adopting the 2019 Operating Budget, Council decided that bridge projects could draw funding from the local and regional street renewal reserve. That was a monumental shift away from the purpose of the dedicated levy. It qualitatively changes the deal made with Winnipeggers when the 2% annual tax levy was implemented.

What are the implications of this decision?

A quick review of the expenditures on "bridges" from 2016 to 2019, and the forecasted expenditures from 2020 to 2024, shows that any one year of bridge work can consume all additional revenue raised by the 2% streets renewal levy. From 2014 to 2019, the increase to the reserve amounted to $50.9 million; the total bridge expenditures amounted to $51.9 million.

Respectfully, this change flies in the face of the original purpose of the Local and Regional Streets Renewal Reserve. The levy was designed to address the investment deficit in its streets. It was not designed to add to its burden, an additional $1 billion investment deficit for the city's bridges and structures.

We cannot afford to set back the local and regional street renewal program in this way. There has to be a better way, a better strategy.

However, the evident problem is that Winnipeg has does not have access to a Plan B - no better way to fund or finance its core infrastructure, including major capital projects. The City is nearing its approved debt ceiling for major

capital projects. Given the scale involved, it cannot impose a greater burden on property owners who already bear a huge load for funding basic services.

It is time for a *major shift* in infrastructure finance strategy. It is time to assertively push senior levels of government for a New Fiscal Deal.

To underscore, I point to Page 8 of the your 'Unfunded Major Capital Projects Detail Report.' It succinctly summarizes the City's dilemma: Current demands *"place large pressures on both the operating and capital budgets to the extent that there is an unsustainable structural deficit."* Your words.

The referenced 'major shift' in funding relations is not new - it was recommended to City Council in the 1998 *'Strategic Infrastructure Reinvestment Policy Report (SIRP I)';* in 2000 in the *'SIRP Implementation Committee Report'*; and again in 2011 in *'New Relationship: A New Order, a balanced approach to funding municipal infrastructure in Manitoba'* a report of the Infrastructure Funding Council (IFC).

These three reports spoke directly and in detail, to how Winnipeg (and municipalities, generally) could reposition their futures, through new thinking about revenue sourcing, finance structures and agreements with higher levels of government.

Those reports were never more relevant than they are today. And so, I implore this Council to pull out the IFC 2011 report. If you read only Recommendation 17, you will see a way to start the public discussion.

It provides an outline for a new fiscal deal to be forged for municipalities through reframing the funding relationships with higher levels of government, and to lay out new means for cities and towns to raise revenues dedicated to such purposes.

The current way of funding our infrastructure – unreliable political agreements with federal and provincial governments; heavy reliance on property owners; sewer and water rates; debt leveraging - has proven insufficient.

I respectfully ask you to rethink, to shift, to consider new paradigms.

2019 is an opportune year with both a provincial and federal election. It is a good time to push for a new shared funding formula and responsibilities because the very infrastructure upon which our city, provincial and country's economy and wealth are built, is clearly at risk.

I ask therefore that you add to the report, a recommendation that the Mayor and Council in the pending elections lead Winnipeggers and fellow municipalities and challenge current provincial and federal policy leaders: to commit to enter into a re-organized shared relationship - a *New Fiscal Deal* - with which to reinvest and build our cities and towns - our country; to responsibly set out the priorities for infrastructure and the reliable revenue sourcing to back it up.

It has to start now and it has to get done - to protect our economy, and in that way, protect and fund all other critical services upon which we rely.

I ask you as municipal leaders to be the provincial and national driver, towards a New Fiscal Deal.

Thank you.



Chris Lorenc, B.A., LL.B.,
President, Manitoba Heavy Construction Association (MHCA)

CENTREPORT™ CANADA

Canada's Centre for Global Trade
WINNIPEG, MANITOBA

BACKGROUND

CentrePort Canada is Manitoba's 20,000-acre inland port and Foreign Trade Zone. The footprint includes land from the City of Winnipeg (CentrePort South) and the Rural Municipality of Rosser (CentrePort North). Most of the development to date has taken place in CentrePort North due to the availability of serviced industrial land.

To date, more than 60 different companies have built or are building new operations at a rate of industrial growth higher than anywhere else in Manitoba. Many of these companies were drawn to CentrePort by infrastructure investments such as the $212-million CentrePort Canada Way, establishment of a special planning area to streamline land development approvals, and water and wastewater servicing.

It is a prime example of how strategic investments in public infrastructure can leverage new private investment and create jobs. Future water and wastewater servicing of the City of Winnipeg lands within CentrePort will enable projects to move forward, including the industrial lands west of the airport campus. In addition to industrial development, a new residential community is planned on 500 acres, connected to Crestview and Heritage Park, which will become home to up to 8,000 residents.

INDUSTRIAL PROJECTS IN CENTREPORT NORTH (RM OF ROSSER LANDS AT CENTREPORT)

Brookside Industrial Park West Phases I and II

- Sold out several years ago - approx. 130 acres
- Examples of companies located here include Fort Garry Fire Trucks, CenterPort Cold Storage, Payne Transportation and Pacific Coast Express Ltd.

Brookside Industrial Park West Phase III

- Approx. 100 acres of fully-serviced, shovel-ready land brought to market by Crystal Developers
- Lots ranged from $325,000-$400,000 an acre and sold out in 6 months
- Projects announced so far include:
    - National Research Council's new $60 million Advanced Manufacturing Centre to break ground this fall.
    - Freightliner Manitoba's new 78,000 square foot facility is under construction and it is anticipated that their new location will open in early 2020.
    - Groupe Touchette recently announced its $20 million, 100,000 square foot new distribution centre. Groupe Touchette will occupy 75,000 square feet and plans to lease out the remaining 25,000 square feet.
    - Canada West Ltd., an Alberta-based developer, has purchased 26 acres and is bringing over 250,000 square feet of build to lease/build-to-suit space to market. Currently the first building, being constructed now, is 70% sold and a second building, starting construction in the next few weeks, is 30% sold.
    - Four additional announcements are pending

Brookside Business Park

- Approx. 150 acres
- Examples of companies include SMS Equipment, FedEx Freight, Goodman Manufacturing Group and Ply Gem Canada

- The only remaining lots in this park belong to a developer who is building multi-tenant buildings – one is complete, and one is currently under construction.
- These buildings will be occupied by some well-known brand distribution centers, announcements are pending

BrookPort Business Park

- Brought to market by Whiteland Developers
- Phase I: 80 acres of fully-serviced lots ranging from $315,00-$385,000 an acre
- The first phase of BrookPort Business Park is currently 75% conditionally sold
- Phase II, an additional 80 acres, is coming to market this fall but some land has already been committed through pre-sales.

CentrePort Canada Rail Park

A 665-acre rail park is planned, which will combine industrial space with logistics infrastructure to serve companies who ship by rail. A Request for Proposals was issued in June 2018 to seek a development partner and negotiations with a private developer are currently under way. It is anticipated that construction will begin in spring 2020.

Market interest in this project is strong. Examples of potential tenants include:

- Regional manufacturing/distribution supercenter – 40 acres
- Bottling plant and warehouse – 20 acres
- Transload facility – 50 acres
- Metal recycling facility – 30 acres

Sturgeon Creek Land Development Corporation

- 225-acre land purchase just north of the planned CentrePort Canada Rail Park

Whiteland Developers (West of Brookside Industrial Park West Phase III)

- Bringing 68 developable acres to market
- Public hearing held June 6, 2019
- Awaiting conditional approval

Imperial Seed

- Manitoba-owned forage and turf seed company, distributes within Canada and to markets in Europe, the United States, Asia and South America
- New CentrePort location opened in 2017
- $8-million facilities on 20 acres
- Facilities include a 20,000 square foot seed processing plant, office space, and seed testing lab, a 30,000 square foot storage warehouse and eight acres of screening, research and demo plots

4 Tracks Ltd.

- Transportation and logistics company currently located in Brookside Business Park
- 40 acre land purchase to accommodate expansion of their operations
- Construction to begin in 2020

CENTREPORT SOUTH (CITY OF WINNIPEG LANDS AT CENTREPORT)

Future Development

1800 developable acres

- 1,100 acres industrial
- 260 acres West Airport Campus (Area Structure Plan complete)
    - Ideal for intermodal facilities, e-commerce distribution centers & foreign trade zone development
- 500-acre residential project (Precinct Plan complete)

CentrePort South's 1,360 acres of industrial/airport lands are larger than the 1,095-combined acreage of Winnipeg's four major industrial zones, which are at or near capacity.

Bison Transport

- One of the largest long-haul carriers in Canada
- Significantly invested in lands at CentrePort with a 475-acre purchase in CentrePort South to facilitate future growth and expansion
- Awaiting servicing to move development forward

Water and Wastewater Servicing

- The City of Winnipeg 2018 capital budget included $2.1 million for the preliminary design of the water and wastewater extensions to CentrePort South

Strategic Infrastructure Reinvestment Policy



Report & Recommendations

"There must be a commitment to policy and direction with no room for ambiguity."

Plan Winnipeg
... Toward 2010

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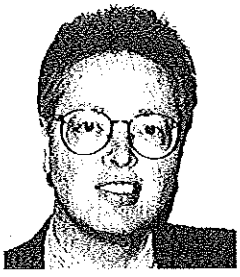

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Note to Reader

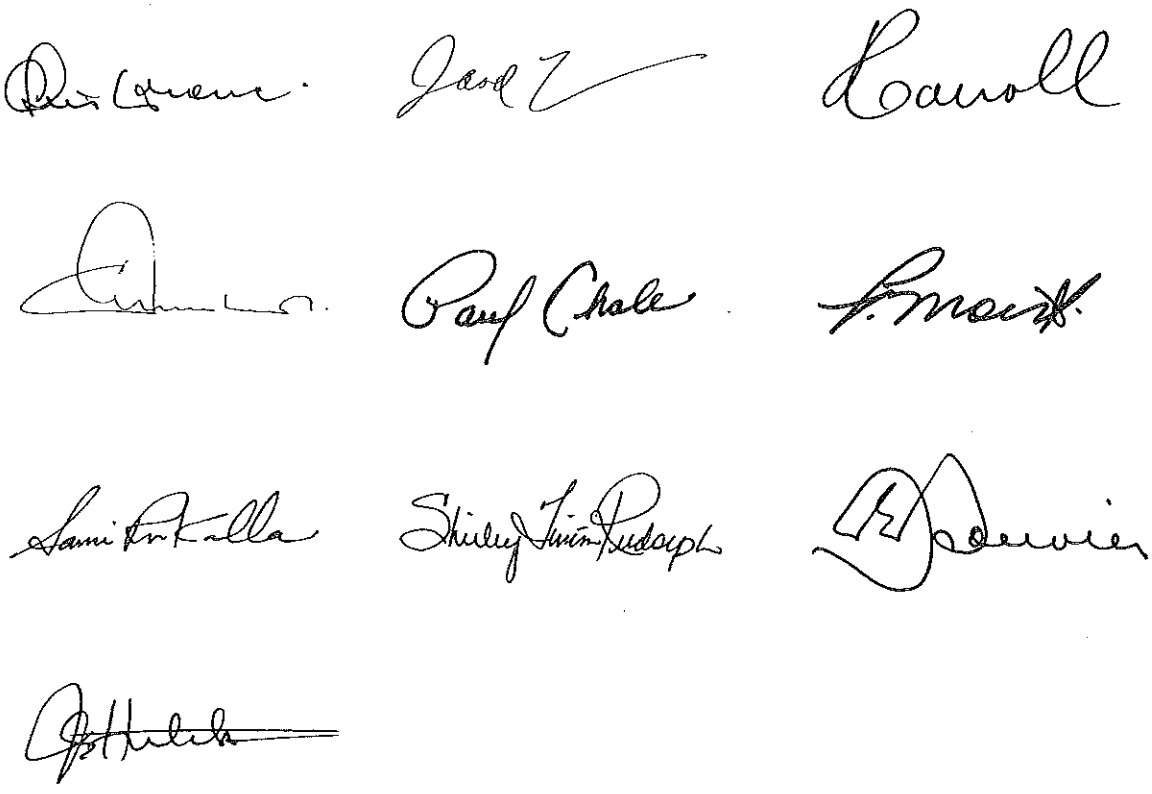
This report represents the end of a long road of research and discussion for the SIRP Task Force. More importantly, it marks the beginning of a new road toward infrastructure solutions.

Every attempt has been made to ensure that this report has been written in a reader-friendly manner, defining necessary technical terminology along the way. Many useful references have been sourced throughout, and are listed in the accompanying appendices and bibliography.

The SIRP Task Force members acknowledge with sincere appreciation the work done by Chris Lorenc and Bill Carroll, who are primarily responsible for authoring this report.

Many resources have been called upon to compile the information contained herein. Every effort has been made to ensure that all the figures in this report are as current and accurate as possible. The SIRP Task Force members acknowledge all City of Winnipeg departments and staff who assisted in the preparation of this report. Without their expertise and dedication — in providing research, consultation, and administrative support — we could not have accomplished our task. To those individuals, too numerous to mention, we sincerely say thank you.

— The SIRP Task Force



Executive Summary

In April 1995, the Committee on Works and Operations recognized the need to adopt a Strategic Infrastructure Reinvestment Policy (SIRP) for Winnipeg. It established a volunteer task force comprising a cross-section of participants from government, business, labour and academic communities.

The SIRP Task Force was charged with the responsibility of drafting a plan with the following goals:

- document the current infrastructure condition
- identify investment needed for upgrade and strategic investment
- establish a plan to fund infrastructure investment
- identify such legislative and other amendment(s) required to facilitate implementation of the financial plan, and
- recommend a "Strategic Infrastructure Reinvestment Policy".

The Task Force's view is that any infrastructure policy that the City adopts must be sustainable. Sustainable infrastructure decisions are ones that make sense for today **and** tomorrow. They should be referenced against key elements, including:

- cost/benefit analysis
- life cycle costing
- management of existing resources
- appropriate financing decisions
- strategic product selection
- use and application of new technology and new products
- infrastructure technology research
- development of economic opportunities resulting from the challenges of infrastructure investment.

Practicing these concepts will ensure that we do not pass on today's problems to future generations.

The purpose of the report is not to identify a specific dollar amount to remedy the situation. Instead, it is designed to identify infrastructure needs, investment options, and to create a policy framework that arms City Council with knowledge and consequences of its infrastructure decision-making.

Winnipeg has a large infrastructure deficit — that is, *the difference between what is currently being dedicated to infrastructure maintenance and renewal, and what needs to be invested.* Such a condition is common to most North American cities. The Federation of Canadian Municipalities and McGill University published the *"Report on the State of Municipal Infrastructure in Canada" (January 1996)* which then estimated Canada's municipal infrastructure deficit at $44 billion.

The City of Winnipeg undertook a limited analysis of the state of its infrastructure and published the *Report on Infrastructure 1994.* This report reviewed the state of the City's bridges, streets, alleys, sidewalks and water and sewer mains, and determined that by the year 2000, this infrastructure may require approximately $525 million (1994 dollars) in maintenance and renewal works. The Task Force notes that by including the City's parking structures, buildings, swimming pools, solid waste and electric utility components, the total infrastructure maintenance and renewal works backlog easily exceeds $750 million.

It is worthy to note that Winnipeg's infrastructure currently represents a cumulative public investment of approximately $14.4 billion.

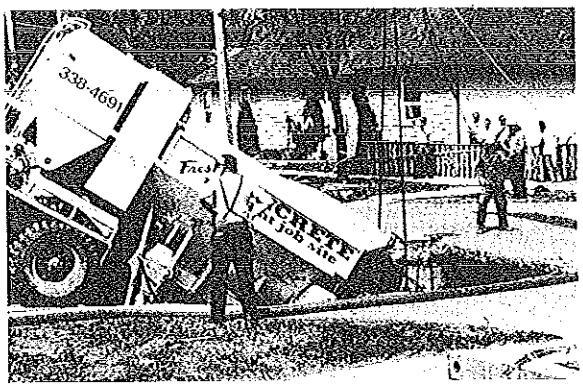
The SIRP Task Force report attempts to identify the magnitude of the problem facing Winnipeg by documenting the current condition and outlining reinvestment needs. To do so, this report evaluates historical investment, required annual investment and average annual investment budgeted in the following categories:

- Structures: Bridges, Underpasses & Culverts
- Pavements: Streets, Lanes, Sidewalks
- Underground: Watermain and Sewer
- Other Municipal Infrastructure: such as hydro facilities, buildings, parkades, bus fleets, sewage treatment plants, swimming pools, arenas, water reservoirs, aqueduct, and pumping stations.

The major infrastructure outlined above requires approximately $202 million per year in required annual maintenance and renewal works. In reality, only about $120 million per year has been budgeted. While the City's efforts in maintaining the infrastructure with limited resources is notable, the annual infrastructure investment deficit of almost $82 million must be addressed. As in other jurisdictions, the City of Winnipeg's infrastructure budgets fall seriously short of prudent asset management.

The infrastructure deficit facing Winnipeg can be attributed to a number of significant factors:

- old infrastructure
- severe climate and soil conditions
- inadequate maintenance
- inadequate and non-uniform standards
- changing growth patterns
- exurban development
- financial restrictions
- cash accounting methods
- insufficient analysis
- absence of policy.



Deferring required investment in infrastructure maintenance and renewal results in eventual costs of repair as much as three to five times higher — depending upon the specific asset. It also contradicts a fundamental principle of sustainability, namely that each generation should pay for its share of use and enjoyment of intergenerational assets.

Maintaining existing infrastructure is not our only concern. New infrastructure requirements to meet new federal or provincial regulations, accommodate growth, facilitate economic opportunities and provide flood protection over the next 10 - 20 years are estimated to be an additional $1.4 billion.

Upon reviewing our infrastructure condition and the reasons for it, the SIRP Task Force concludes that there are three key issues:

1) we must invest more into infrastructure

2) we must make strategic investments with the dollars we do have, and

3) we must find ways to reduce the magnitude of the infrastructure deficit problem.

It is essential that infrastructure spending be seen as an investment and not a cost. Infrastructure investments must be sustainable, strategic in nature, balanced in approach, and based on sound cost benefit and life cycle analyses.

Winnipeg City Council has long recognized the need for a strategic infrastructure reinvestment policy, and has articulated this commitment in three major policy documents:

- *Plan Winnipeg...Toward 2010*
- *Financial Management Plan — 10 Goals for a Stronger Financial Future*
- *Priorities for Winnipeg — Building Toward the 21st Century.*

The documented and continuing deterioration of our infrastructure, coupled with escalating costs of rehabilitation, requires immediate policy and programming attention. Sustainable infrastructure programs will only occur if they are based on sound policy and fiscally responsible principles.

The SIRP Task Force's examination of this issue resulted in development of 30 policy recommendations with respect to infrastructure reinvestment in the following categories:

- infrastructure maintenance
- new technology
- financing options
- alternative service delivery
- Winnipeg Transportation Utility
- National Infrastructure Policy
- sustainable infrastructure principles

A summary of these recommendations and a plan for their implementation follows on page **71** of this report.

Dealing with the infrastructure deficit is an important challenge. The risks of further neglect are great. Neglect creates an overwhelming future financial burden and the potential risk for public harm — and therefore, liability. Continued underfunding will result in accelerated infrastructure decay, more borrowing, and increased taxation. It will also result in infrastructure that is inefficient and substandard in capacity. The cumulative effect will result in reduced economic opportunity and a decline in Winnipeg's quality of life. Therefore, we must practically and reasonably reduce the infrastructure deficit.

By adopting a comprehensive policy-based approach to infrastructure investment — based upon knowledge and decision-making consequences — Winnipeg will not only lead by example, but will be well-poised to meet the challenges and opportunities of the new millennium.

Introduction

The SIRP Task Force

In April 1995, the Committee on Works and Operations recognized the need to adopt a Strategic Infrastructure Reinvestment Policy (SIRP) for Winnipeg. To do so, a volunteer task force comprising a cross-section of participants from government, business, labour and academic communities was established. The Task Force members are identified on page four of this document.

The challenge for the SIRP Task Force has been to devise strategies to make the seemingly impossible, possible — that is, during a time of government fiscal restraint, to direct more resources to infrastructure. Our findings and policy option recommendations for Council's consideration are outlined in this report.

Terms of Reference

The SIRP Task Force was charged with the responsibility of presenting recommendations with the following goals:

- document the current infrastructure condition
- identify investment needed for upgrade and strategic investment
- establish a plan to fund infrastructure investment
- identify such legislative and other amendment(s) required to facilitate implementation of the financial plan, and
- recommend a "Strategic Infrastructure Reinvestment Policy".

In addressing these goals, the Task Force report reflects its consensus opinion.

Report Structure

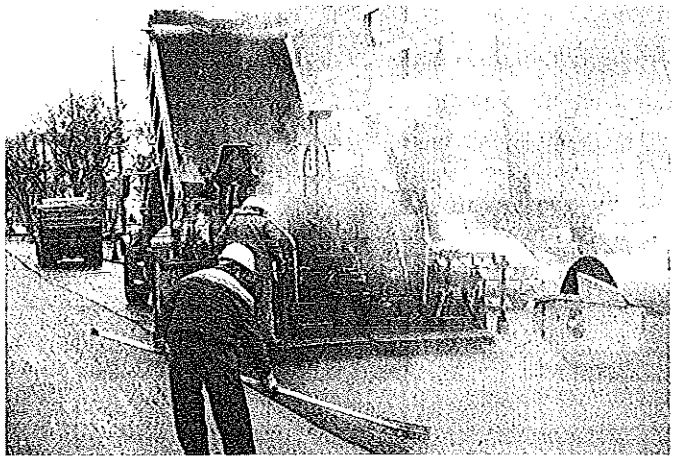
This report is designed to provide a comprehensive overview of infrastructure issues in Winnipeg. It begins by defining sustainable infrastructure and its policy context. It reviews the existing infrastructure condition, including the total estimated infrastructure deficit, and explores why this deficit has occurred. It outlines new infrastructure requirements and their associated costs. The report concludes with strategic policy recommendations, as well as a proposed implementation plan.

Report Purpose

When this report becomes public, the first question will be "What's the cost to the taxpayer?" The purpose of this report is not to identify a spending plan. Rather, it is designed to:

- identify the infrastructure investment requirements referenced against planned investment,
- provide a policy framework that arms current and future councillors with increased knowledge on the consequences of their decision-making, and
- identify options such as user fees, cash financing and alternative service delivery for investment decisions.

Within the above framework, Council can assess the merits of infrastructure investment decisions and adjudicate upon their relative priority against the backdrop of all the financial demands made upon the City.



Sustainable Infrastructure: Policy Context

In 1994, the Manitoba Round Table on Environment & Economy (MRTEE) was established by the Provincial government to create a sustainable development strategy for Manitobans. It developed *10 Principles for Sustainable Development and Six Fundamental Guidelines (MRTEE, "Towards a Sustainable Development Strategy for Manitobans", 1994)* that should guide our actions on every front, including infrastructure rehabilitation and development *(Appendix "A")*.

A sound infrastructure improves economic competitive position in the international marketplace.

These principles and guidelines are valuable, important and should be more widely embraced than they are at present. They are the basis for the *10 Principles for Sustainable Infrastructure Development (Appendix "B")* developed by the SIRP Task Force, against which we have referenced our recommendations. In short, these principles are:

1. *Efficient use of resources*
2. *Systematic decision making and long-term planning*
3. *Proper infrastructure maintenance*
4. *New technology and scientific innovation*
5. *Shared responsibility and accountability*
6. *Stewardship*
7. *Environmental management*
8. *Pollution prevention*
9. *Understanding and respect*
10. *Sustainability*

Sustainable Infrastructure Defined

Many people struggle with the meaning of sustainable development, and its relationship to infrastructure. For the purposes of this report, *"sustainable infrastructure development"* means the process of making infrastructure decisions that make sense for today **and** tomorrow.

The concept embraces the following concepts and tools:

- cost/benefit analysis
- life cycle costing
- managing the use of existing resources
- appropriate financing decisions
- intelligent product selection
- use and application of new technology and products
- supporting infrastructure technology research and application, and
- developing economic opportunities from the challenges of infrastructure investments

"... investing in public infrastructure directly augments private sector production."

Practicing these concepts will help ensure that we do not pass on our problems to future generations.

The Case for Reinvestment

Our quality of life depends upon an efficient and well-maintained infrastructure. Canada depends heavily on international trade for economic growth and prosperity. Canadian exports are equivalent to almost 40 per cent of our Gross Domestic Product (GDP); by contrast, exports are only 13 per cent of the U.S. economy *(Rubin, "Battered on All Fronts", December 16, 1997).*

To compete in international markets, as well as maintain and enhance prosperity, an efficient infrastructure is necessary. Our advantage over less developed countries exists because of our technology; our systems for moving goods, services and information; and our basic infrastructure fabric that keeps our citizens healthy and strong. As a country, we cannot afford to lose this competitive edge.

In citing examples of how infrastructure can affect quality of life, the Association of Consulting Engineers of Canada identifies the impacts of doing nothing about our municipal infrastructure as including the following:

- increased water treatment and waste water treatment costs
- diminished quality of service
- increased pollution through leakages
- higher long term renewal costs due to deferred maintenance

("Infrastructures in Canada — An Ounce of Prevention is Worth a Pound of Cure", March 1998).

All levels of government strive for full employment, economic growth and prosperity. Infrastructure investment puts people to work, replaces failing systems, and facilitates economic growth. The public generally supports infrastructure programs because of tangible results in the form of improved roads, bridges and enhanced communities. The business sector supports infrastructure investments because an efficient infrastructure improves its competitive position in the international marketplace. *Infrastructure — America's Third Deficit (Aschauer, 1991)* clearly demonstrates that *"investing in public infrastructure directly augments private sector production."*

Winnipeg is an important gateway to the international marketplace, and was ranked as one of the top five Canadian cities for exports *(Globe and Mail, Report on Business, August 1997).* Reliable infrastructure is key to maintaining this position.

The Infrastructure Deficit

In January 1985, the Federation of Canadian Municipalities (FCM) published a comprehensive report entitled *Municipal Infrastructure in Canada: Physical Condition and Funding Adequacy.* This report defined a municipal infrastructure deficit as essentially *"the difference between infrastructure investment and needs"*. In 1985, the national municipal infrastructure deficit was estimated by the FCM to be $12 billion. The report urged the Federal and Provincial governments to collaborate in a cost-shared national program aimed at helping municipalities cope with this massive problem.

Infrastructure Deficit – "the difference between infrastructure investment and needs."

McGill University conducted a subsequent cross-Canada survey of the municipal infrastructure condition *("Canadian Municipal Infrastructure Survey", December 1995).* This was closely followed by an update of the FCM report, prepared by McGill University *(FCM/McGill, "Report on the State of Municipal Infrastructure in Canada", January 1996)* which then estimated Canada's infrastructure deficit at $44 billion — and this just to improve the nation's infrastructure to an acceptable condition.

Part of the increase over the 1985 estimate was due to broadening the definition of municipal infrastructure to include municipal buildings, solid waste facilities, parking lots and structures, and electrical power distribution facilities. Notwithstanding this broadened definition, ***it is clear that the infrastructure deficit is a growing problem in this country.***

The City of Winnipeg undertook a limited analysis of the state of infrastructure in the *Report on Infrastructure 1994.* It was presented to the Works and Operations Standing Committee in October 1994. This report reviewed the state of the City's bridges, streets, alleys, sidewalks, and water and sewer mains, and determined that these represent a cumulative public investment of approximately $6.5 billion. By the year 2000, the report suggested this infrastructure may require approximately $525 million (1994 dollars) in maintenance and renewal works. By including the City's parking structures, buildings, swimming pools, solid waste and electric utility components, our total infrastructure maintenance and renewal works backlog easily exceeds $750 million.

A recent Canadian Union of Public Employees (CUPE) report stated *"The City's ever increasing infrastructure deficit is something that needs to be attended to. It is perhaps of greater long term consequence to the citizens we serve than our current finance related challenges." (CUPE, "Report to Council on Reshaping Our Civic Government", February 1997)*

It is widely accepted that the federal, provincial and municipal governments across Canada are faced with challenging financial circumstances. However, given the importance of infrastructure to our social and economic well-being, such investments are cost effective. This logic was embraced by the Federal Government, resulting in the $6 billion Canada Infrastructure Works Program (CIWP) approved in 1994. The CIWP was extended to cover a five-year period in the 1995 Federal Budget. In January 1997, a $425 million additional allocation to the program was announced to further assist job creation while focusing on infrastructure rehabilitation.

"... if anything, the CIWP (Canada Infrastructure Works Program) exposed the volume of infrastructure work which remains unfinished."

The continuing deterioration of our infrastructure and the escalating costs of rehabilitation require immediate policy and programming attention. Sustainable infrastructure programs will only occur if they are based on sound policy and fiscally responsible principles.

Infrastructure spending must be seen as an investment and not a cost. The investment must be strategic in nature, balanced in approach, and based on sound cost/benefit and life cycle analyses.

Council's Commitment to Infrastructure

Winnipeg City Council has long recognized the need for a strategic infrastructure reinvestment policy, and has articulated this commitment in a variety of public documents. Three major policy documents that demonstrate this commitment include:

- *Plan Winnipeg...Toward 2010*
- *Financial Management Plan — 10 Goals for a Stronger Financial Future*
- *Priorities for Winnipeg — Building Toward the 21st Century.*

• *Plan Winnipeg...Toward 2010*

It is fundamentally important that any decisions on municipal infrastructure be made within the context of an adopted policy by City Council. As with everything the City of Winnipeg does, the backdrop for policy making can be found in *Plan Winnipeg... Toward 2010 (City of Winnipeg Planning Department, 1993)*. Following extensive community consultation, *Plan Winnipeg* was approved by the Province of Manitoba and adopted by City Council on June 23, 1993.

Plan Winnipeg devotes an entire chapter to Urban Development Management, including infrastructure. It states:

> ***Our regional services and facilities represent a major investment of public funds. It is important that this investment be protected. The overall cost of orderly maintenance and reconstruction programs is less than deferral, which eventually requires expensive catch-up work.***

On the issue of maintenance of infrastructure, *Plan Winnipeg Policy 5C-01— Maintain Existing Infrastructure* — states:

> ***The City shall maintain the existing capacity of regional street, bridge, and public transit systems as its highest priority item for expenditure of funds when developing the yearly and five-year transportation capital programs.***

And finally, *Plan Winnipeg Policy 5C-36 — Provide Infrastructure Maintenance and Renewal* — states:

> ***The City shall endeavour to provide basic maintenance and renewal of its infrastructure of pavements, sewers and watermains.***

"It would cost every man, woman and child in Canada about $1500 each to upgrade infrastructure to an acceptable level."

- ***Financial Management Plan — 10 Goals for a Stronger Financial Future***

Plan Winnipeg called for the adoption of a financial management plan, by stating:

> ***The City shall prepare, implement and periodically review a financial management strategy that addresses alternative revenue sources and provides solutions for reducing property tax-supported debt.***

In response to this commitment, the *Financial Management Plan — 10 Goals for a Stronger Financial Future (City of Winnipeg, 1995)* was adopted by Council on July 12, 1995. The plan sets out Council's top 10 financial goals along with strategies designed to ensure performance measurement. These are designed to:

> ***... help the City balance its spending priorities with its available resources so that it can meet its obligations while improving Winnipeg's economic position.***

The *Financial Management Plan* links infrastructure renewal to economic development, global competitiveness and future prosperity — in short, to quality of life. Accordingly, the fifth goal — *Renew Infrastructure* — states:

> ***The City will develop a detailed list of total infrastructure liabilities with priorized plans to repair them and identified funding sources during the next term of Council.***

An outcome of the *Financial Management Plan* is this SIRP Task Force report. A future outcome must be Council's consideration and, hopefully, adoption of the recommendations in this report.

Decisions on municipal infrastructure must be made within the context of an adopted civic policy.

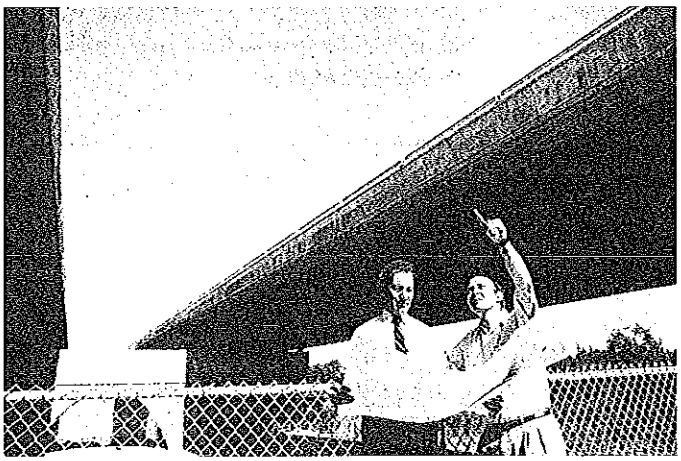
- ***Priorities for Winnipeg — Building Toward the 21st Century***

Council adopted *Priorities for Winnipeg — Building Toward the 21st Century (City of Winnipeg, 1996)* on June 19, 1996, premised on the principle enunciated in *Plan Winnipeg* that ***"there must be a commitment to policy and direction with no room for ambiguity".***

In *Priorities for Winnipeg*, Council set out five broad priority areas for the current term of Council. One of these is *"Managing our Investment in Infrastructure"* which targets five specific areas for attention:

- ***developing a residential streets renewal program***
- ***investing strategically in new infrastructure***
- ***re-investing in hydro and water quality***
- ***extending the life of the aqueduct***
- ***committing to long-range planning.***

Clearly in all its major policy documents, Council publicly recognizes the importance of infrastructure. It must now address this challenge with a bold commitment to policy and action.



Existing Infrastructure Condition

The figures used in this section of the report were provided and verified by Public Works, Water and Waste, and other civic departments of the City of Winnipeg, as required. The figures are estimates and include funding from several sources, including but not limited to: City of Winnipeg Capital Program and Current Operating Budgets, Provincial Urban Capital Project Allocation (UCPA) and Canada/Manitoba Infrastructure Works Program (C/MIWP). These figures do not include amounts from the Manitoba/Winnipeg Community Revitalization Program, developer agreements or local improvements. Every attempt has been made to ensure that these figures are as current and accurate as possible.

This Task Force report attempts to identify the magnitude of the infrastructure deficit challenge facing Winnipeg by documenting its current condition and outlining future reinvestment needs.

Understanding the following definitions is an important prerequisite to understanding our infrastructure condition:

Replacement Value
Indicates the gross replacement value of an infrastructure asset.

Historical Investment (Historical)
Unless otherwise noted, this is an annual average of infrastructure renewal investments made over the last 10 years, based on capital budgets.

Required Annual Investment (Required)
An estimate of the long-term annual average capital required to preserve existing infrastructure. It does not account for the current age or condition of the infrastructure, which may increase or decrease the current need, nor does it account for the day to day maintenance required to keep the system functioning.

Average Annual Investment Budget (Budgeted)
This is taken from the capital budget and five-year budgets. It represents an average of the budgeted investments proposed for the next six years.

Annual Investment Deficit
The difference between the required annual investment and either the historical or budgeted amount.

"... the (Canadian) infrastructure deficit has two elements — the absence of adequate funding and policy."

This section of the report illustrates historical, required annual, average annual budgeted investments, annual investment deficits, and the financing methods employed for each category of infrastructure.

Structures: Bridges, Underpasses & Culverts

Structures consist of waterway crossings, traffic and rail underpasses, and major culverts. There are approximately 196 such structures in our system. Collectively, they represent a replacement value of $987 million. The historic, required and budgeted levels of annual investment, as identified in the 1998 capital budget and five-year forecast, are:

Funding	Total
• Historical	$11.3 million
• Required	$19.7 million
• Budgeted	$13.7 million

With the exception of Provincial Urban Capital Projects Allocation (UCPA) funding, and the 30-year lease-back partnership agreement on the recently built Charleswood Bridge Project, all City funding in this category is by debenture debt financing.

The annual investment deficit in structures is $6.0 million. Deferring major rehabilitation impacts significantly on maintenance costs and results in higher capital improvement costs.

Structures in Fair to Poor Condition

Major Structures	Minor Structures
37%	52%

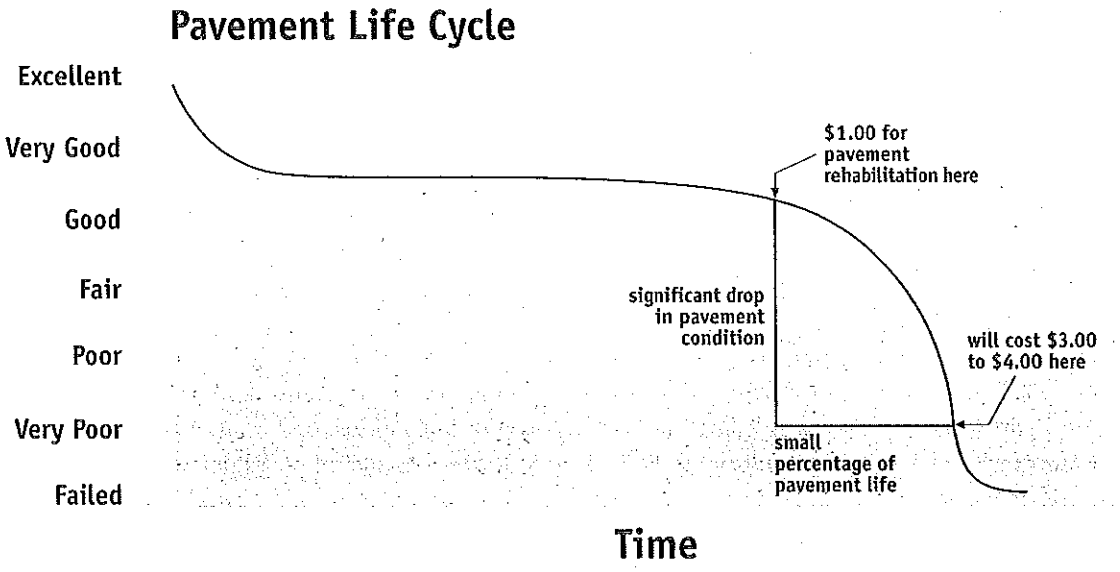
Major structures include waterway crossings and railway underpasses for vehicular traffic. Examples include the Jubilee Underpass and the Charleswood Bridge. Minor Structures include pedestrian waterway crossings such as the Assiniboine Park Footbridge, and major culverts such as the Omand's Creek crossings at St. Matthew's Avenue, Ellice Avenue and Sargent Avenue.

There are a number of major structures in poor condition, such as the Provencher Bridge and the Disraeli Bridge and Overpass. These represent a significant financial liability to the City within the next 10 years as major investments for rehabilitation will be required in this time frame.

Pavements: Streets, Lanes, Sidewalks

• Pavement Condition Rating & Management

Through timely use of overlays and concrete repairs, the City can reduce the rate of pavement replacement (as well as deferring the requirement for replacement). The diagram below illustrates the consequences of poor maintenance and rehabilitation timing. If such work is performed during the early stages of deterioration, before a sharp decline in pavement condition, a great deal of the cost of renewal can be deferred.



The consequences of poor maintenance and rehabilitation timing

In addition, the current operating budget for street maintenance provides for maintenance of both paved and unpaved streets, associated ditches, culverts, back lanes, sidewalks and railway crossings. Maintenance activities include both planned, rehabilitative work as well as reactive, or safety maintenance activities.

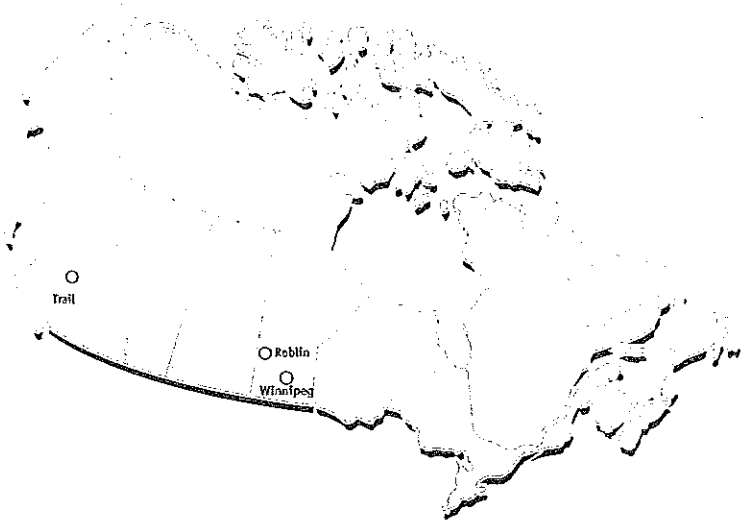
Good maintenance practices, at the optimal location and time, slow the deterioration rate of the pavement. Unfortunately, accelerated deterioration of the street system as a whole forces an increase in reactive maintenance measures. For example, the declining condition of the residential street system over the past three years corresponds to an increase in pothole patching expenditures of approximately 20 per cent over the same period of time.

The Public Works Department conducts annual surface distress surveys of both the City's regional and residential street systems. Through the use of a Pavement Management System (PMS), the calculated Pavement Condition Index (PCI) classifies each paved street section into the various levels of pavement condition: Excellent, Very Good, Good, Fair, Poor, Very Poor, and Failed.

Due to restricted resources, the pavement ratings have not been kept current. However, the data presented herein will give the reader a high level overview of the problem.

Regional Streets

Winnipeg's regional street system is vital to the movement of traffic and goods throughout the city. It is estimated the regional system carries about 80 per cent of the entire vehicle kilometres of travel for the city *(Public Works Department)*. The regional network of approximately 1720 lane kilometres (Winnipeg to Trail, B.C.) has a replacement value of about $1 billion.



Deterioration of the regional network has been kept to a minimum only because of reactive maintenance and renewal measures. Between 1994 and 1997, the inventory of regional streets in poor to failed condition increased from about 360 lane kilometres to about 380 lane kilometres (Winnipeg to Roblin, Manitoba) or 20 per cent of the entire regional network.

The historical, required and budgeted levels of regional street renewal investment, as identified in the 1998 capital budget and five-year forecast, are:

Funding	Total
• Historical	$9.3 million/year
• Required	$25.0 million/year
• Budgeted	$14.8 million/year

With the exception of the Provincial UCPA and the Canada/Manitoba Infrastructure Works Program (C/MIWP), all City of Winnipeg funding for regional streets, including the City portion of the above programs, is by debenture debt.

The annual investment deficit for regional streets has historically been about $15.7 million. With the increase identified in future budgets, the annual investment deficit amounts to $10.2 million/year.

Residential Streets

Beyond 1999, no investment in Winnipeg's residential street system is budgeted.

The residential street system carries about 20 per cent of the entire vehicle kilometres of travel in Winnipeg, and consists of 75 per cent of the lane kilometres of street pavement. It has a replacement value of approximately $2.6 billion. The residential street network consists of about 4350 paved lane kilometres (Winnipeg to St. John's, Newfoundland). There are an additional 680 lane kilometres of unpaved roadways (Winnipeg to Thunder Bay).



From 1994 to 1997, residential streets in poor to failed condition increased by 18 per cent — from 1360 to 1610 lane kilometres. Clearly, budget reductions in street maintenance and renewal programs contributed to residential street deterioration. Currently, the 1610 lane kilometres of poor to failed residential streets (Winnipeg to Sudbury) make up over 30 per cent of the entire residential street system.

Although the residential street inventory exceeds (by number of lane kilometres) that of regional streets by a margin in excess of three to one, the focus of street renewal dollars has been on regional streets because of the comparatively higher volume of traffic they carry.

The historical, required and budgeted levels of residential streets investment, as identified in the 1998 capital budget and five-year forecast, are:

Funding	Total
• Historical	$9.0 million/year (up to and including 1993 only)*
• Required	$30.0 million/year
• Budgeted	$2.5 (1998 capital budget)**

** From 1994 to 1997, no City capital budget funding was dedicated to a residential street renewal program. However, approximately $35 million worth of renewal work was achieved on residential streets through the Canada/Manitoba Infrastructure Works program from 1994 through 1998. The City contributed approximately one third of this amount through a supplemental capital works program.*

*** The 1998 residential street renewal program comprises a $5 million contribution from the Province of Manitoba and $5 million from the City's Capital Program. There is, as yet, no commitment by the City to residential street renewal funding beyond 1999.*

The City portion of funding for residential street renewal has to date been by debenture debt.

Historically, the City's annual investment deficit for residential street pavements has been $21 million ($30 million/year required less $9.0 million/year historical investment). With a $10 million investment in 1998, only 33 per cent of the required annual investment for residential streets will be met. With only $5 million projected for 1999, that percentage drops to approximately 16 per cent of the required investment. Beyond that time, no investment in the residential street system is budgeted.

By averaging the projected $15 million over the next six years, only $2.5 million per year will be invested — resulting in an average annual investment deficit of $27.5 million. At this rate, only eight per cent of the required investment in residential streets will be realized each year.

Back Lanes

Back lane pavements are an extremely important portion of the street network in the City of Winnipeg. They provide property access to residences, delivery access for businesses without impeding traffic flow on the front streets, and they facilitate refuse pickup in many areas. The City has approximately 880 lane kilometres of back lanes (Winnipeg to Flin Flon). These pavements have a replacement value of approximately $373 million.



Winnipeg currently has no program in place to assess the condition of back lanes. Primarily located in older neighbourhoods, it is believed that back lanes are generally in worse condition than residential streets. Both were built at the same time, however since construction, there has been extremely limited lane renewal work and lower levels of maintenance. Between 1994 and 1997, the C/MIWP injected about $3.3 million of badly needed renewal funds into Winnipeg's back lanes. The 1998 five-year capital forecast includes a back lane program of $2.2 million, beginning in 2000 and continuing at $2.7 million annually in subsequent years.

The historical, required and budgeted levels of lane investment, as identified in the 1998 capital budget and five-year forecast, are:

Funding	Total
• Historical	$0.0 million/year (except for C/MIWP funds, as noted)
• Required	$5.0 million/year
• Budgeted	$1.8 million/year

The City portion of funding for back lane renewal to date has been by debenture debt.

Based upon the above, the City's lane pavement investment deficit has in the past been $5 million annually, and this will continue until 2000. The proposed back lane program of about $2.7 million per year beginning in 2001 will still leave an annual deficit of $2.3 million.

Sidewalks

Sidewalks are the one aspect of Winnipeg's pavement network which serve the entire population. Sidewalks provide personal access to residential and commercial properties, as well as safety for pedestrians and aesthetics to urban neighbourhoods. Winnipeg has about 3100 kilometres of sidewalks (Winnipeg to Prince Rupert, B.C.). The replacement value of all sidewalks is approximately $163 million.



Sidewalk renewals are achieved in two ways: in conjunction with street renewal works (on both regional and local street projects); and as stand-alone projects (along both regional and local streets). It follows then that as the local and regional street renewal funds are increased, there is reduced stress on the sidewalk renewal program.

The historical, required and budgeted levels of dedicated sidewalk renewal investment, as identified in the 1998 capital budget and five-year forecast, are:

Funding	Total
• Historical	$0.6 million/year*
• Required	$2.0 million/year
• Budgeted	$0.9 million/year

** This does not include the approximately $1.9 million allocated to sidewalks (both regional and residential) through the C/MIWP from 1994 to 1997.*

The City of Winnipeg sidewalk renewal program, including the City's portion of funding for the C/MIWP, is financed by debenture debt.

At a budgeted level of $0.9 million, the annual investment deficit for City sidewalks is $1.1 million.

Underground: Watermain and Sewer

Watermain Infrastructure

Winnipeg's total watermain inventory consists of 2380 kilometres (Winnipeg to Montreal). The mains have a replacement value of approximately $1 billion. To its credit, the City has a well-established system for funding the replacement of its watermain system by means of a frontage levy. This methodology of charging a fee per foot of property frontage annually raises cash which is dedicated to watermain renewals. Since the program raises cash, no debt (or debt payments) are incurred.



As the number of leaks detected annually is the relative measure of the overall condition of the watermain system, the benefits of this frontage levy extend even further. Since 1985, the general trend has been to lower numbers of watermain breaks *(City of Winnipeg, "Better Streets for a Better City", 1993).*

The success of this type of dedicated funding is also echoed by the FCM in its conclusions and recommendations:

> *Where there is user pay funding to support infrastructure development and maintenance, facilities seem to be in better condition than the infrastructure supported through general revenue funding. (FCM/McGill "Report on the State of Municipal Infrastructure in Canada", January 1996.)*

"A dedicated program of timely watermain renewals has reduced watermain repair costs."

Since 1991, program investments of $11 million per year for watermain rehabilitation allowed the City to replace approximately one per cent of the system annually. In 1998, recognizing that in the short-term, the watermain system was in superior condition to the sewer system, the total water and sewer frontage levies were rebalanced to allow more spending on sewer renewals and less on watermain renewals.

The historical, required and budgeted levels of watermain investment, as identified in the 1998 capital budget and five-year forecast, are:

Funding	Total
• Historical	$8.4 million/year
• Required	$10.8 million/year
• Budgeted	$6.3 million/year

- **Watermain Infrastructure Maintenance**

The Water and Waste Department's current budget for watermain maintenance in 1997 was approximately $5.2 million. These funds are used for repair of watermain breaks and distribution system maintenance. In addition, the department spends about $7.8 million on service pipe, valve and hydrant maintenance. These programs are for preventative maintenance, as well as replacement of elements which have reached the end of their useful life. Approximately $1.3 million is spent on meter replacement and repair, as meters reach the end of their useful life and in response to customer issues.

The City estimates that with cathodic protection programs, the level of reinvestment in watermains projected in the 1998 - 2003 capital budgets is reasonably adequate.

Sewer Infrastructure

The City's sewer inventory consists of 3391 kilometres, including 1216 kilometres of wastewater sewer pipe, 1056 kilometres of combined sewer pipe, and 1119 kilometres of land drainage sewer pipe. If laid end to end, the City's sewer system would stretch from Winnipeg to Moncton, New Brunswick. The overall condition of our sewer system is almost the worst in Canada, second only to Montreal, according to the *Report on Infrastructure (City of Winnipeg, 1994).*



The sewer system replacement value is estimated at $2.9 billion. As with watermains, the funding for Winnipeg sewer renewals comes from a frontage levy of $0.85 (1997 rate) per front foot. This rate is to increase annually as part of a planned program to $1.90 per front foot by 2001.

The historical, required and budgeted levels of sewer infrastructure investment, as identified in the 1998 capital budget and five-year forecast, are:

Funding	Total
• Historical	$2.4 million/year
• Required	$29.0 million/year
• Budgeted	$17.5 million/year

This cash program will invest $17.5 million per year over the next six years. This level of investment permits less than one per cent replacement of the system annually. Conservative estimates suggest the level of reinvestment in the sewer system requires $29 million per year.

The annual investment deficit in sewers is approximately $11.5 million over budgeted levels.

• Sewer Infrastructure Maintenance

Approximately $4.3 million is invested annually in sewer maintenance, including cleaning, TV inspection and repair for wastewater sewers. A further $1.4 million is invested in similar activities for land drainage sewers.

Other Municipal Infrastructure

The City has many other types of infrastructure aside from those already outlined. The total value of the City's major infrastructure elements is estimated at $14.4 billion. In addition to the pavements and piping, the City owns hydro facilities, buildings, parkades, bus fleets, sewage treatment plants, swimming pools, arenas and other types of infrastructure. Each of these elements have special reinvestment needs that are driven by different factors.

The total value of Winnipeg's infrastructure is estimated to be $14.4 billion.

The City of Winnipeg applies monies toward the maintenance of existing infrastructure. However, given fiscal pressures, concerns about controlling expenditures, and expenditure reduction initiatives unreferenced against financial decision impacts, the reality is — that like capital budgets — maintenance budgets fall short of prudent asset management.

Rehabilitation investment strategies for the purpose of extending the useful design life of the City's infrastructure inventory are neither funded nor implemented. We can only assume that the absence of a maintenance policy framework against which to reference these financial decisions only adds to the problem.

In the following table, an attempt has been made to quantify needs and approximate expenditures to illustrate the current status of these major infrastructure types. The table reveals $202 million per year in required annual maintenance and renewal works. In reality, only about $120 million per year has been budgeted.

The City's efforts in maintaining these ongoing, day-to-day needs with such limited resources must be commended. However, the annual infrastructure investment deficit of almost $82 million over budgeted levels must first be recognized, then systematically and strategically addressed.

Deferred Maintenance & Renewal

As in many North American cities, the practice of deferring investment in maintenance and renewal of Winnipeg's infrastructure is evident. Deferring maintenance results in the eventual cost of repair being as much as three to five times higher — depending upon the specific asset — than if regular maintenance had been strategically undertaken.

Moreover, this contradicts a fundamental principle of sustainability. Each generation should pay for its share of use and enjoyment of intergenerational assets. Practicing deferred maintenance means we are passing on to our children and grandchildren the cost of our infrastructure use.

(in thousands of dollars)

Infrastructure Element	Replacement Value [2]	Required Annual Need	Average Annual Budgeted Expenditure[3]	Average Annual Investment Deficit	Present City Source of Funding	Expenditure Type
Bridges & Structures	$ 987	$19.7	$13.7	$6.0	Mill Rate[4]	Debt
Regional Streets	1000	25.0	14.8	10.2	Mill Rate[4]	Debt
Residential Streets	2600	30.0	2.5	27.5	Mill Rate	Debt
Back Lanes	373	5.0	1.8	3.2	Mill Rate	Debt
Sidewalks	163	2.0	0.9	1.1	Mill Rate	Debt
Watermains	1080	10.8	6.3	4.5	Frontage Levy	Cash
Shoal Lake Aqueduct	500	6.0	3.8	2.2	Surcharge	Cash
Other Waterworks & System Funding[5]	250	5.0	1.5	3.5	Water Rate	Debt
Sewers	2900	29.0	17.5	11.5	Frontage Levy	Cash
Sewage Interceptor/ Lift Stations	250	2.5	2.5	0.0	Sewer Rate/ Surcharge	Cash (Reserve) 34% Cash (Rate) 66%
Sewage Treatment Plants	600	6.0	7.5	(1.5)	Sewer Rate/ Surcharge	Cash (Reserve) 47% Cash (Rate) 53%
Land Drainage Systems	1700	2.0	2.0 [3]	0.0	Mill Rate	Debt
Power Plants & Dams[6]	550	7.3	11.5	(4.2)	Electricity Rate/ Retained Earnings	Debt 81% Cash 19%
Transmission Lines	90	1.2	5.9	(4.7)	Electricity Rate/ Retained Earnings	Debt 81% Cash 19%
Substations & Distribution Systems	560	16.0	9.4	6.6	Electricity Rate/ Retained Earnings	Debt 81% Cash 19%
Civic Buildings	229	9.5	4.1	5.4	Mill Rate	Debt
Parkades	58	1.7	0.2	1.5	Mill Rate	Debt
Parks & Recreation[7]	246	9.8	1.2 [3]	8.6	Mill Rate	Debt
Transit Buses	180	10.0	10.9	(0.9)	Transit Rate[4]	Debt 11% Cash 89%
Transit Plant & Equipment	85	3.2	2.0	1.2	Transit Rate	Debt
TOTAL (millions)	**$14,401**	**$201.7**	**$120.0**	**$81.7**		

[1] All numbers supplied and verified by respective civic departments.
[2] Replacement value in 1997 dollars.
[3] From 1998 capital budget and five-year (1998 - 2003) forecast — except Land Drainage Systems and Parks and Recreation, which are from the 1997 capital budget and five-year (1997 - 2002) forecast.
[4] These activities receive Provincial UCPA funding.
[5] Does not include water treatment plant cost of $204 million which will be 67% cash financed via a surcharge.
[6] Does not include reserve funds being accumulated for Power Plant Refurbishment.
[7] Does not include community center unheated spaces, hockey pens, or lighting systems, the zoo, conservatory, and hard and soft landscaping.

Infrastructure Requirements: Strategic Investments

Historical Investments

The City has made significant investments in infrastructure. In the past decade alone, over $380 million has been invested. The projects below are illustrative of some of the infrastructure investments made. Most included significant capital contributions from the Province of Manitoba:

McPhillips/Leila North	$ 6 million	1989
Chief Peguis Trail (Kildonan Bridge)	$ 34 million	1990
Bishop Grandin Boulevard Extension	$ 36 million	1990
North End Sludge Dewatering Facility	$ 20 million	1991
Regent Avenue Widening	$ 13 million	1992
Water Pollution Control Centres	$ 95 million	1994
Graham Avenue Transit Mall	$ 6 million	1995
Charleswood Bridge	$ 30 million	1995
Pembina Highway Dualling	$ 20 million	1997
Bishop Grandin / Kenaston Connection	$ 8 million	1998
Brookside Boulevard	$ 10 million	1998
Main Street / Norwood Bridges	$102 million	completion in 1999
Total	**$380 million**	

Future Requirements

Some new infrastructure projects that may have to be considered in the next 10 - 20 years are classified in the following categories:

A) Meeting New Federal and/or Provincial Regulations

- wastewater ammonia removal $100 million
- new water treatment plant $200 million
- combined sewer overflow mitigation $400 million

B) Accommodating Increased Demand (Growth) in the City

- southwest transit corridor $ 75 million
- hydro plant & transmission line upgrade $275 million

C) Facilitating Economic Opportunities that Generate New Wealth

- Winnport infrastructure $110 million

D) Flood Protection

• flood control infrastructure	$200	million
• river bank stabilization (public property)	$ 40	million

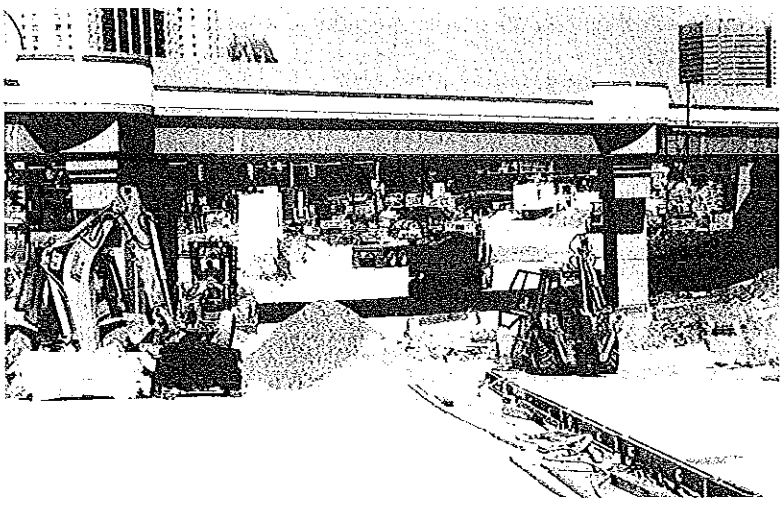
Total Estimated New Infrastructure Requirements

The intent of the foregoing is to demonstrate that the demand for infrastructure dollars is not limited to aging systems. The listing is not meant to be exhaustive, but rather is illustrative of the type of demands that exist. While governments may find private partners to share this burden, nonetheless, these elements must be factored into future planning.

Total additional, estimated	**$1.4**	**billion**

A dedicated revenue stream (i.e. surcharge) has been established to build reserves for the water treatment plant. As well, Winnipeg Hydro has begun to set aside a portion of its profits to address power plant and transmission line upgrade requirements. Although the amounts of revenue being set aside will fund only a part of what is actually required, this is a move in a positive direction.

In addition, some of these projects may be prime candidates for public/private partnership consideration because they may generate sufficient revenue to provide the required financing to be self-sustaining.



Why an Infrastructure Deficit?

The infrastructure deficit facing the City of Winnipeg is a result of a number of significant contributing factors, some of which are unique while others exist widely. In order to design a strategy to overcome a problem, it is important to clearly understand the root cause of the problem. The following section addresses this issue.

Because Winnipeg's infrastructure is aging, it is less efficient and more expensive to maintain.

Old Infrastructure

Compared to other western Canadian cities, Winnipeg is old. Our major growth period began long ago and slow, continual growth patterns followed. Much of our infrastructure was built in Winnipeg's boom period which began in the late 1800s and carried through until the 1930s. The result is that our infrastructure is now quite old and very expensive to maintain or replace. Examples include: Winnipeg's sewer and watermain system, some of which still dates to the 1890s; the Winnipeg aqueduct, which opened in 1919; hydro generation facilities which date back to the 1920s and 1930s; and some major structures like the Arlington (1912), Louise (1911) and Redwood (1908) bridges, and the McPhillips (1910) and Main Street (1904) underpasses.

Another period of infrastructure growth was in the 1950s and 1960s to sustain the post-war baby boom. Federal programs encouraged home ownership and put pressure on municipalities to develop housing subdivisions. This resulted in the need to invest in infrastructure facilities.

During the gradual aging process, the City has not adequately maintained or strategically replaced this infrastructure, causing even more frequent breakdowns and higher maintenance and replacement costs. The bottom line — our infrastructure is less efficient and more expensive to maintain.

Severe Climate and Soil Conditions

In addition to the natural aging of our infrastructure, it is also exposed to a severe climate. The freeze-thaw cycle, the necessary use of abrasive and corrosive ice treatments, as well as extreme temperature fluctuations all contribute to an accelerated aging process.

The highly expansive nature of much of the local soil bed results in structural fatiguing of the underground and surface infrastructure (eg. water, sewer and pavements) as temperatures and moisture content naturally fluctuate. Also, Winnipeg soils are aggressively corrosive, chemically attacking many types of construction materials and underground fixtures.

Inadequate Maintenance

Proper maintenance practices extend the life cycle of any structure. Conversely, neglecting needed maintenance shortens the life cycle and earlier, more costly replacement is required. For example, the cost to rehabilitate an existing residential street pavement is about $65 per square metre compared to $180 per square metre for a pavement reconstruction. Work such as a thin bituminous overlay can significantly extend the life of existing pavements for approximately 10 per cent of the reconstruction costs. This must be balanced with a street reconstruction program.

The problem is magnified as funds that are not available for basic maintenance are even more difficult to obtain for the escalated costs of major repair or replacement. Over time, this situation spirals into a monumental problem.

Inadequate Standards

As part of the Canada Infrastructure Works Program (CIWP), a technical literature review of standards and benchmarks was conducted by researchers at Queen's University *(Queen's, "Canada Infrastructure Works Program — Program Review and Evaluation: A Technical Literature Review", 1996).* The purpose of the study was to determine if standard protocols are used to assess infrastructure needs and to tie the results of these assessments to the allocation of resources needed to complete the necessary work. They found that *"standards and benchmarks are often inadequate and sometimes inappropriate"*. Because of this, infrastructure rehabilitation and replacement decisions become judgmental rather than based on scientific information.

Further, the lack of clearly defined protocols on which to base infrastructure investment decisions, coupled with gross underfunding, are factors leading to the deterioration of systems elsewhere. We believe that the same situation exists in this jurisdiction.

Non-Uniform Standards

Winnipeg's infrastructure deficit evolved over decades, and much of today's replacement and maintenance concerns stem from the fact that the City once operated as 12 separate cities, towns and villages. In 1971, these 12 communities amalgamated into one City. Prior to this time, no uniform standards existed, and the infrastructure needs of each community were addressed in isolation from one another. In some cases, infrastructure was originally built for a non-urban environment. Since amalgamation, maintenance of this non-uniform infrastructure and replacement to a common, acceptable standard has resulted in significant expense.

Changing Growth Patterns

Changing lifestyles in North America have centred on the development of suburban areas which require new roadways, sewer systems, lighting systems, additional transit routes, additional police services, etc. The local servicing needs and local regional upgrading in Winnipeg are covered by development agreement charges. However, regional services like expanded wastewater facilities, water reservoirs, feedermains and interceptor sewers, land drainage trunks, regional limited access throughways, and the like, remain to be funded by system users at large.

Exurban Development

Development beyond the City's boundaries has also had an impact. The rural municipalities outside Winnipeg have grown significantly in the last 10 - 15 years. These municipalities are building new infrastructure (eg. roads, community centres) and are asking for the extension of urban services (eg. water and sewer) to meet their local needs. This type of development competes for provincial funding in the Capital Region. The City also loses essential tax revenue from new residential development that is occurring outside its boundaries.

A recent presentation on the *"Capital Region ... the issue of services" (City of Winnipeg, January 1998)* highlights this assessment base problem, particularly the *"erosion of tax base at the upper end of the assessed values."* Demographics show predominant growth of double income families in the Capital Region, while the opposite is true in the City.

Illustrative of the above, demographic trends show the Capital Region population from 1991 to 1996 increased by 6,178 on a base of 81,349, while the City of Winnipeg increased by only 3,262 on a base of 615,215 during the same period. Further, socio-demographics indicate that 21 per cent of those living in the City are below the poverty line, while the Capital Region has only five per cent at this level *(City of Winnipeg, "Capital Region ... the issue of services", January 1998).*

Financial Considerations

Past decisions to pay for infrastructure placed greater reliance on the use of debt as opposed to cash, user fees or special levies. This increased property taxes. Significant steps are being taken to correct this now, but it will take a number of years to reduce our dependency on debt and its resultant effect on the property tax system. Meanwhile, further financial burdens cannot easily be placed on property owners to pay for new infrastructure.

Provincial, City and other local governments are encouraged to work together to facilitate future new and diversified revenue opportunities directed to infrastructure renewal. Potential opportunities include a gasoline tax, automobile registration tax, frontage levies, and others.

Another financial difficulty is caused by the ad valorem tax system itself. The tie between assessed property values and service delivery is weak at best, and results in all sorts of inequitable cross subsidizations. These issues have real effects in terms of raising appropriate revenue streams for infrastructure rehabilitation and renewal, but are beyond the scope of this report. Council has appointed a Committee on Tax Reform to deal with this issue.

Shift to Heavier Truck Loads

Truck loading capacity increased dramatically starting in the late 1960s. These heavier weights added stress to roads, bridges and structures that were never designed to accommodate such loads. Changing regulations in the transportation industry have caused this problem to further escalate.

Cash Accounting Methods

Another factor that has contributed greatly to the deterioration of the infrastructure relates to the government's method of accounting. *Reinventing Government: How the Entrepreneurial Spirit is Transforming the Public Sector (Gaebler and Osborne, 1992)* spells out how our cash accounting system of government bookkeeping *"gives the long term short shrift."* They state:

> *Business and governments practice very different forms of accounting. Businesses use 'accrual accounting' in which any future obligation incurred (a debt, a commitment to pay a pension) is counted as an expense. Governments normally use cash accounting, in which expenses are not counted until money is actually paid (or a slightly different version called modified accrual accounting). Hence governments can rack up enormous future obligations — far beyond their capacity to pay — and their accounts will look perfectly balanced. Government accounting, in other words, is future-blind. (p.243)*

Further they argue:

> *Physical assets are investments: when a government builds a highway or dam, it is creating something of value, almost like a savings account. As that dam ages and wears out, its value declines — because without expensive repair, it will ultimately give way. This use is a form of spending: in business, it is called depreciation. But as Leonard points out, 'our accounting systems hardly notice'. Since they were designed to track cash transactions, they don't record the declining value of a physical asset.*
>
> *At all levels of government, accounting records almost entirely ignore what assets are owned, their state of repair, and their value. These systems therefore imply that it costs nothing to use existing assets. Indeed, they suggest the opposite: by cataloguing the costs of maintenance as a current expense, they make it seem cheaper to use up assets than to keep them in good repair. (p.243)*

We chose to use a lengthy quote from *Reinventing Government* to describe this issue as it states the case well. The point made here is that government balance sheets do not reflect the true cost of deferring infrastructure rehabilitation and renewal.

Infrastructure investment decisions should be strategic in nature and accompanied by appropriate cost/benefit analysis.

Insufficient Analysis

In the past, important decisions on the reduction of rehabilitation or maintenance funding levels have been made without the benefit of detailed cost/benefit analyses. Often these decisions are made based on budget pressures, and invariably are viewed as temporary measures. Decisions to cut maintenance expenditures create a new lower base budget for carrying out these programs. When the next round of budget discussions take place, the already insufficient base budget is viewed as the starting point for the deliberations. The result is a downward spiral.

Similarly, important public policy decisions on the provision of new infrastructure elements are infrequently accompanied by detailed analyses of financial impacts into the future. Given its critical importance, we must be more fiscally practical in balancing our need for infrastructure maintenance and renewal with the need to balance the budget.

Absence of Policy

The existence of an infrastructure deficit — while attributable to all and more of the factors mentioned — also points to a problem common to all municipal governments, namely the absence of an infrastructure policy.

Major public investment decisions for service and delivery are generally tied to policy. Examples include social services, transit, police, fire, ambulance, and recreation. Nowhere in this mix does an infrastructure policy exist. The very existence of this Task Force and its report speaks to the need to establish one.

This observation is not intended to be a statement of criticism — but rather of fact — essentially applicable to all cities in Canada. Winnipeg has the opportunity and challenge to lead by example by adopting a comprehensive, strategic infrastructure reinvestment policy.

Inaction is Not an Option

There are other compelling reasons that tell us that inaction is not an option.

The question is not whether to fund an infrastructure program, but rather at what level and under what arrangements.

Liability Considerations

All governments have obligations to their citizens for matters under their control. The *City of Winnipeg Act* requires the City to maintain and repair streets. Further deterioration may expose the City to potential liability.

Demonstrating that the City is responsive to its statutory obligations by addressing infrastructure needs will help alleviate this concern. Policy decisions are required as positive "next steps" in this direction. *(Sokalski, "Who Plays the Fiddle While the Infrastructure Crumbles?", March 1997)*

Public Expectations

Winnipeggers have identified the condition of the City's infrastructure as one of their top five issues. The public expect civic government to make investing in infrastructure an effective budget priority. In recognition of this, Council has adopted policy positions on the importance of infrastructure and related financial issues. As well, economic development is among Council's highest priorities for Winnipeg, and a sound infrastructure is critical to attracting and retaining a viable business sector. In turn, the business sector expects Council to fulfill its promises of creating economic expansion opportunities.

General Observations

The City's infrastructure should not be left to deteriorate to the point where it no longer services the needs of Winnipeg. Allowing these systems to deteriorate impacts our urban image, our competitiveness, the environment and our economy.

Accordingly, the question is not whether to fund infrastructure programs, but rather at what level and under what arrangements. Therefore, since we recognize the problem and the urgent need to deal with it, our goal must be to find suitable, sustainable solutions that are consistent with Council's goals and public expectations.

When it comes to infrastructure reinvestment, we have concluded that there are three key issues:

1) we must invest more into infrastructure

2) we must make strategic investments with the dollars we do have

3) we must find ways to reduce the magnitude of the infrastructure deficit problem.

Addressing these issues will halt the trend toward further infrastructure decline. In doing so, there are many avenues and options to explore, and many opportunities to be created. A series of policy options has been developed and are presented in the next section.



Strategic Policy Options

Dealing with our infrastructure deficit is a major civic challenge. Winnipeg must in a practical fashion reduce the infrastructure deficit. Given our current economic climate, every infrastructure investment decision will be difficult to make. However, the maintenance of existing infrastructure and strategic provision of new systems must be Winnipeg's first order of business.

There must be a concerted effort to reduce the infrastructure deficit.

By adopting a comprehensive policy-based approach to infrastructure renewal, the City of Winnipeg can become a leader among Canadian municipalities and a model for other jurisdictions.

During the course of the SIRP Task Force's work, many respected Canadian authorities on infrastructure were reviewed. In addition, American studies were considered, including the 1994 U.S. Federal Infrastructure Investment Strategy *(High Performance Public Works, Report SR-16, November 1993)*. The conclusions of this study have been summarized in *"Sourcebook of Working Documents to Accompany 'High Performance Public Works', A New Federal Infrastructure Investment Strategy for America", September 1994.* Appropriate references are provided throughout this report and in the bibliography.

We believe that the policy options outlined herein are sound, and if adopted, will position Winnipeg well for the next millennium.

A.) Infrastructure Maintenance Policy Options

Clearly, a huge investment exists in the infrastructure that is already in place. Proper stewardship means that this investment must be protected and enhanced. This can happen by investing in maintenance.

Life Cycle Costing

The concept of analyzing future costs when comparing initial investment costs is called life cycle costing. Life cycle costing accounts for *"all costs incurred by the owner to buy, operate and maintain a system or equipment used for a specific task or set of tasks, over its period of ownership." (Zemansky, "Life-Cycle Cost Procurement", Costing Government Services: A Guide for Decision Making, 1989)*

In *"Life cycle costs — The true cost of infrastructure" (da Silva, November 1997)*, the author estimates that over the life of a system, 75 per cent of the system cost is for ongoing operation, maintenance and replacement of time-worn equipment, 23.5 per cent is for initial capital and 1.5 per cent is for engineering and design.

We believe that when considering a new project, or upgrading or retrofitting an existing system, a proper life cycle costing analysis should be completed. The Federal Government, in cooperation with the National Research Council, has developed a program for conducting life cycle costing in federal facilities *(Mirza, "Canada's Deteriorating Infrastructure", 1997)*. This program may be of use for City facilities and should be evaluated.

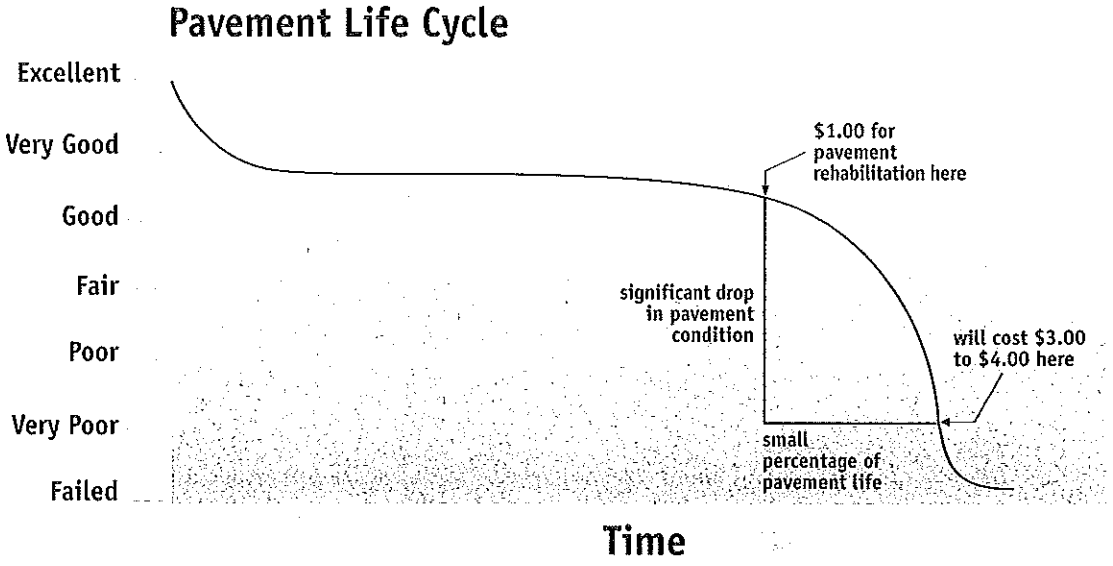
Policy Recommendation:

Life Cycle Costing

1. *That all capital programs for new or rehabilitated infrastructure be subjected to life cycle costing analysis to determine the most cost effective options for consideration.*

Minimize Deferred Maintenance

It is widely recognized that deferring maintenance results in higher long-term costs. For example, it costs significantly more to replace a failed road pavement than to rehabilitate and maintain a worn but structurally sound pavement. Relatively inexpensive asphalt overlays applied at the proper time in the pavement life cycle can easily add 10 to 15 years of life to a road surface.



The consequences of poor maintenance and rehabilitation timing

Deferred maintenance means *"that the eventual cost of the repair will be higher than if regular maintenance had been undertaken at appropriate points in the life cycle of the infrastructure. In addition, when maintenance is deferred, the life cycle of the infrastructure is decreased and complete reconstruction may be necessary at an earlier date." (Infrastructure Council of Manitoba, "National Infrastructure Policy (NIP): An Ongoing Commitment", January 1998)*

Maintenance programs should not be compromised for budgetary reasons, where possible, as the short-term savings result in significantly higher long-term costs. In addition, service to the public gradually worsens as the infrastructure element deteriorates over time. This results in damage, delays and inconvenience — all of which have costs associated with them that are rarely associated with infrastructure decay. Finally, deferring maintenance and incurring future costly liabilities is totally inconsistent with the sustainable infrastructure concept recommended in this report.

Deferring investments in maintenance results in higher long-term costs.

Policy Recommendation:

Minimize Deferred Maintenance

2. *That ideally, maintenance for existing infrastructure should only be deferred if the impact on the life expectancy and life cycle of the asset is documented to be minimal.*

Factor Maintenance into Initial Costs

We must recognize that **every part of the urban infrastructure fabric has an ongoing maintenance component.** When new or upgraded facilities are proposed, the incremental maintenance costs must be identified and built into budgets. Even projects as simple as streetscaping upgrades can result in significant new maintenance costs as a result of things such as non-standardized street lighting, fountains, planters and benches, etc., all of which require parts and service. In addition, there may be substantial incremental costs for annual maintenance operations such as snow clearing or street cleaning.

Policy Recommendation:

Factor Maintenance into Initial Costs

3. *That when new or upgraded facilities are proposed, they be accompanied by resulting incremental maintenance costs, linked into a parallel maintenance budget.*

Computerized Maintenance Management Systems (CMMS)

Preventative maintenance is much more cost-effective than reactive or breakdown maintenance. While initially more expensive, such a system produces impressive long-term benefits.

We need to develop better use of information and management systems. GIS (Geographical Information Systems) and CMMS (Computerized Maintenance Management Systems) would improve our management of infrastructure and help utilize the scarce available maintenance funding more effectively. The FCM recommends *"more reliance on geographic information systems for improved infrastructure management" (FCM/McGill, "Report on Municipal Infrastructure in Canada", 1985).*

Establish maintenance budgets parallel to capital budgets.

Policy Recommendation:

Computerized Maintenance Management Systems (CMMS)

4. *That civic department preventative maintenance programs be funded by Council to be information current, and supported by Computerized Maintenance Management Systems (CMMS).*

Management of Asset Data

The infrastructure deficit identified in this report is based in large part on the estimates available from the City of Winnipeg's *"Report on Infrastructure" (October 1994).* The average annual investment deficit values have been updated by departmental staff to reflect 1997 values.

Each time these surveys are conducted, great difficulty is encountered in obtaining data that is consistent from one department to another — and from one division to another.

We believe that there is a corporate role to be played in terms of strategically managing the City's infrastructure assets. Given Council's commitment to infrastructure as evidenced in major policy documents *(Plan Winnipeg...Toward 2010, Financial Management Plan, Priorities for Winnipeg),* and given the extent of the problem, its priority ought to be recognized at the most senior administrative level.

It is our view, therefore, that the Chief Administrative Officer (CAO) Secretariat should play an important coordinating role in this function and be properly resourced.

Policy Recommendation:

Management of Asset Data

5. *That the CAO Secretariat be assigned and resourced to coordinate the City's infrastructure asset data management.*

B.) New Technology Policy Options

The City's commitment to renew and upgrade infrastructure may result in benefits far beyond superior structures and a better quality of life. By embracing the concept of applying emerging, innovative, sustaining technologies and best practices, Winnipeg may also realize the economic opportunities associated with having such technology developed and utilized in our own backyard.

Reactive or breakdown maintenance is a costly and ineffective way to manage systems.

Intelligent Sensing for Innovative Structures (ISIS Canada) has a mandate to help develop Canadian civil engineering capabilities to a world leadership position through the application of advanced composite materials (ACMs) and integrated "intelligent" fibre optic sensing systems. ISIS Canada is based in Winnipeg at the University of Manitoba, Faculty of Engineering.

ISIS Canada technology provides the following benefits when applied to infrastructure:

- longer life cycle
- reduced maintenance costs
- superior strength
- enhanced durability
- resistance to corrosion
- increased job site productivity
- increased cost efficiencies
- expanded design options
- early warning system for structural failure
- substantial reduction of costly site inspections.

Using superior technology is a better long-term solution. It can dramatically increase the life cycle of structures and better meet the increased demands imposed upon them.

Advanced Techniques & Technologies

New products are being developed which will not only result in longer lasting, lower cost, more durable infrastructure, they will also provide economic opportunities for the communities in which the technology is developed and utilized.

Pioneered by ISIS Canada, the use of ACMs can result in significantly reduced capital and operating costs in facilities. These ultra-strong and non-corrosive materials used in place of reinforcing steel in structures are already being tested. In addition, applications of ACMs for hydro poles and the use of fibre-reinforced concrete and carbon fibre-reinforcement for upgrading substandard concrete structures offer cost savings and maintenance reduction opportunities.

"... conventional materials only feed the cycle of deterioration and costly repairs. The new technologies provid(e) an alternative..."

The coupling of ACMs and "intelligent" fibre optic sensing systems is leading edge technology that allows structures of all types to be remotely monitored and their performance measured. This capability supports superior maintenance, which will substantially enhance performance and longevity of infrastructure elements. The recently constructed Taylor Bridge in Headingley is a local example of this technology, which should be considered for other projects.

Policy Recommendation:

Advanced Techniques & Technologies

6. ***That the City encourage the application of "intelligent" technology, new methodologies and innovative products such as ACMs in infrastructure renewal, rehabilitation, construction or preventative maintenance programs.***

Improved Practices

A cooperative effort by the National Research Council (NRC), the Canadian Public Works Association (CPWA) and the FCM is presently underway that will hopefully see the development of a Technical Guide for Urban Infrastructure for Canada (*Félio et al.; "A Proposed Technical Guide for Infrastructure for Canada", 1994).*

In addition, a Committee of the Transportation Association of Canada (TAC) is developing a data base of best practices for maintenance and construction services. These will be best practice documents endorsed by private and public infrastructure practitioners and driven by functional requirements. They will provide decision-making tools leading to the use of best practice techniques.

"Innovations in Urban Infrastructure" (Baker and Lacasse, 1997) demonstrates that using conventional materials and methods to address old infrastructure problems will only cause the current cycle of deterioration to continue. The use of best practices in infrastructure renewal and rehabilitation makes good sense. For example, utility cuts in pavement can reduce its life cycle by as much as 60 per cent. Applying new trenchless technology methods can reduce the need for such cuts. Developing even better procedures and materials for something as simple as pavement crack sealing can result in significantly lower costs and add decades of life to paved surfaces.

Maintenance criteria that are standardized and materials and products that are suitable for our climates and service applications need to be developed. These efforts will not only result in better performing infrastructure — they will also create opportunities in our construction and manufacturing industry that are saleable globally. The City would gain knowledge that could be used locally and disseminated if it became a player in this important national project.

Policy Recommendation:

Improved Practices

7. ***That the City encourage the use of advanced techniques, improved technologies, better materials and best practices in all infrastructure programs, and participate in the technical guide for infrastructure initiative.***

Commitment to Research & Innovation

A research investment of $78,000 will save the City $1 million in bridge rehabilitation costs.

The use of standardized construction materials and techniques is commonplace in North America and a good degree of conservatism exists in the engineering community. Risks to public safety and the consequences of using materials and techniques that have not been properly scrutinized and tested are factors. However, we must be more aggressive in our evaluation of new ideas.

To successfully transfer the latest technology to the public domain, two factors are required: industry's support in learning to work with new materials and technologies, and government leadership by encouraging and incorporating application of new technologies into policy guidelines.

Industry is on side, recognizing the benefits of expanding their job market and capitalizing on the $2 trillion world-wide infrastructure need (*Mirza, "Canada's Deteriorating Infrastructure", 1997*). Governments must show leadership in embracing new technology by changing construction and purchasing policies to encourage the use of these new materials and techniques.

For example, the Canada/Quebec Infrastructure Works Program set aside $25 million to encourage local municipalities to showcase new products and technologies in infrastructure rehabilitation (*McGinnis and Redston, "Advanced Materials and Smart Technology — Preparing for 21st Century Opportunities", 1998*).

Locally, the City of Winnipeg invested $78,000 in a research project at the University of Manitoba in cooperation with ISIS Canada. The project involved testing new materials and techniques for use on the Maryland Bridge. That investment will save up to $1 million in the rehabilitation of the bridge, and provide valuable information on the use of advanced composite materials (ACMs) on other structures. Another pilot project saw the City use reinforced carbon fibre strips to upgrade a roof structure at the North End Water Pollution Control Centre, saving about $50,000 over conventional techniques.

These savings are not insignificant. They came to pass, however, only because of a willingness to invest in research and take some risk.

Policy Recommendations:

Update Construction Specifications

8. *That the City's standard construction specifications and general conditions be reviewed to encourage use of innovative practices, technologies and materials. The academic, engineering and construction communities should be involved in this review.*

Commitment to Strategic Research & Innovation

9. *That the City partner with academia to strategically fund research aimed at identifying new or improved materials, technologies and techniques having broad infrastructure application.*

C.) Financial-Based Policy Options

Urban Infrastructure Financing Plan

Infrastructure rehabilitation in Canada is underfunded. In a recent survey, funding shortages were cited by 92 per cent of respondents as the greatest impediment to improving the quality of infrastructure *(Federation of Canadian Municipalities Survey, 1995)*. Issues of much lesser magnitude included political inaction, prolonged public involvement, red tape, environmental assessments and lack of staff. ***We must invest more money into these programs.***

Since traditional funding methods no longer meet our infrastructure reinvestment needs, alternative funding sources must be explored. Although many of the following financing tools have been considered by Council over the years, they have not become part of an overall infrastructure reinvestment strategy, to provide concrete solutions to our infrastructure problem.

An urban infrastructure financing plan must be based on accepted principles in order to be credible, understandable and visible in the organization. These principles should speak to the elements that underlie the financing plan and reflect the values embodied in the plan. We have attempted to outline for Council the principles that we believe ought to be considered in developing an infrastructure financing plan. The list is attached as *Appendix "C"* and is not meant to be exhaustive, but thought provoking.

Policy Recommendation:

Urban Infrastructure Financing Plan

10. That the City create and adopt an urban infrastructure financing plan based on the principles outlined in Appendix "C" of this report.

Accrual Accounting System

This report documents that our government accounting systems do not recognize the costs of infrastructure deterioration as a real cost. Business accounting or accrual accounting does, through a principle called depreciation. This system allows for proper planning and programming of activities.

We need *"some accounting measure that will show a failure to maintain a physical asset as a form of current spending" (Osborne and Gaebler, Reinventing Government, 1992, p. 245)* so that even if maintenance is deferred, it will show up as a cost in the budget.

Policy Recommendation:

Accrual Accounting System

11. That the City adopt a system for showing depreciation on its capital assets and begin the process of accounting for deferred maintenance.

Fully Costed Services

Wherever possible, facilities and services should be provided on a user pay basis. The *"Report on the State of Municipal Infrastructure in Canada" (FCM/McGill, 1996)* showed that sanitary and combined sewage systems, water distribution and water supply installations are among the oldest facilities in Canada, yet they do not top the list of systems in greatest need of repair. That dubious honour is shared by roads, bridges and sidewalks, which are traditionally mill rate supported infrastructure.

Generally speaking, utility operated infrastructure supported through user fees is well maintained, but only when user fees are kept at a level that reflects the real costs of providing those services. When user fees are kept artificially low and systems allowed to deteriorate because of underfunding, an infrastructure backlog or deficit is created. It is important, therefore, to ensure that cost allocations are conducted carefully and routinely and that deviations from proper cost allocations are not made.

Policy Recommendation:

Fully Costed Services

12. That the City apply full cost accounting principles to all government services and that pricing of services should reflect the full true costs of service provision.

Application of User Fees

There are many examples in the public domain where the service provided can be directly identified with the service user. When those circumstances exist for government-supplied services, properly structured user fees should be instituted.

> *Pricing a public service should be considered whenever there are identifiable benefits to specific groups and in instances where there is a communitywide benefit, but where consumption can be measured. However, service charges are inappropriate whenever both users and nonusers benefit from the service or when the cost of collection exceeds the revenue generated (with the possible exception of nominal fees whose real purpose is to reduce waste). (Kelley, Costing Government Services: A Guide for Decision Making, 1989)*

In Canada, the move to user pay systems for refuse collection and disposal is a welcome transition in that these systems have traditionally been mill rate supported and underfunded in terms of reflecting the true costs of this service. A recent survey reported in *"Solid Waste Management" (Kelleher et al., "User Pay", 1996)* clearly shows this trend.

It is widely accepted that the public is far more likely to support a system that allows a direct benchmark comparison for private sector delivery of the same service. The *"Report on the State of Municipal Infrastructure in Canada" (FCM/McGill, 1996)* found that municipal governments that charged user fees were better able to maintain their infrastructure than others.



Policy Recommendation:

Application of User Fees

13. That the City implement properly structured user fees where the user and the service delivered can be identified.

Infrastructure Services Renewal Levy

The traditional approach to underfunding has been to identify new funding sources as a solution to the problem. Winnipeg is no exception to that rule. Revenue sources, such as gasoline taxes, driver's license registration fees, frontage levies, tolls, parking lot and payroll taxes have been suggested.

Many of these new revenue streams have merit and are gaining public acceptance. What may assist this decision-making is clearer public understanding of the costs of repair deferral compared to the economic benefits of non-deferral to the community.

It is widely understood that user fees create accountability for the use of services. In many circumstances, they enhance efficiency and eliminate waste. As well, user fees are almost universally accepted by the public as a method for paying for a readily identifiable good or service. The use of this system to pay for public services must be expanded.

Although each of the following requires Provincial approval, Winnipeg City Council has in the past considered the following user fees for dedication to street system repair:

- a street frontage levy of $1.00 per frontage foot could raise $10 million
- a motor vehicle registration surcharge of $35 could raise $11.5 million
- a fuel tax of two cents per litre could raise $16 million

In addition, Council may wish to pursue a right-of-way levy for use of space in City-owned rights-of-way. The use of right-of-way funding is a concept that is used in other jurisdictions and may have application here. A right-of-way levy essentially involves charging for the use of the space in the City-owned right-of-way to users, primarily utility companies (either private or public).

It is our belief that the above funding vehicles are viable, required and could receive public support if properly articulated and the funds appropriately dedicated. Earmarking of funds to ensure that they are not diverted to general revenues is critical to the successful implementation of new funding sources.

While many witnesses were emphatic that the trust funds must come from the existing tax base, there were some who were prepared to see the imposition of a new dedicated gasoline tax. They believe that the public would be willing to pay, say, an additional 2 cents per litre if it was dedicated and transparent and the Trust Fund was totally secure and could not be raised for other government programs. One witness mentioned that a poll taken in one province a few years ago demonstrated that people would be prepared to pay a new dedicated tax on this basis. (House of Commons Standing Committee on Transportation, "The Renewal of the National Highway System", December 1996)

In addition, this report found that:

There was significant support for the proposal of the Canadian Automobile Association that the Federal government commit 2 cents of the 10-cent per litre Federal excise tax on gasoline with corresponding contributions from the diesel tax and matching funds from the provinces to fund a National Highway Program. This revenue would be dedicated to the NHP and placed in a Trust Fund similar to the U.S. Highway Trust Fund. It would amount to about $1 billion a year and would be sufficient to finance a ten-year national highway program. The Fund would be allocated to the provinces and territories based upon a cost-sharing formula which is fair and reasonable and reflects the needs of all regions of the country. It was noted that based upon recent public opinion polls there is substantial public support for this approach to highway funding.

Clearly, there appears to be widespread public support to diverting more financial resources to infrastructure, provided the approach is rational and principled.

This report recommends that Council's funding policy fundamentally change as it relates to maintenance, repair, rehabilitation and reconstruction of new infrastructure.

Existing maintenance requirements, which serve to allow continued enjoyment of assets (streets, as an example) should, to the extent possible, be funded by user fees and/or dedicated revenues — pay as you go. On the other hand, the funding of intergenerational infrastructure or new construction should in its funding marry appropriate cash and capital financing components.

In order for this shift to be fairly reflected in taxation policy, existing mill rate supported dollars for maintenance should be collected from user fees, and accompanied by a corresponding mill rate reduction. For example, if a new user pay funding source created $12 million/year for street renewal, the existing $4 million/year mill rate supported program would cease, with the net benefit being $8 million/year.

Policy Recommendations:

Shift from Mill Rate to User Fees

14. *Any new user pay funding that relates to property and which replaces existing mill rate supported infrastructure budgets, should be accompanied by a mill rate reduction equivalent to the pre-user fee level of mill rate support.*

Infrastructure Services Renewal Levy

15. *That the City consider developing an "Infrastructure Services Renewal Levy" program which would manage the levying of specific user fees/levies to dedicated infrastructure rehabilitation and renewal programs.*

Pursue Dedicated Levy Legislation

16. *That the City pursue Provincial legislation to allow new funding sources for infrastructure renewal, and that funds raised be dedicated for specific infrastructure purposes only.*

Tax Exempt Bonds

Private sector funding of public projects is a concept of partnering already in use. Even more money for infrastructure investment could become available if the Federal government amended the Income Tax Act to allow tax exemption for interest income on government bonds or other sources of venture capital for designated infrastructure renewal, similar to the case in the United States.

In that jurisdiction investors purchase government issued bonds that carry significantly lower interest rates than commercial paper. They do so because the interest earned on these investments is tax exempt. This has benefits for both the investor and the local government who can price these debentures at much lower than market rates. In doing so, the local government saves on interest costs at the expense of senior levels of government who lose out on the tax revenue. On balance, in our view, the use of interest exempt bonds is an effective way to get more private funds into infrastructure programs which are a public benefit. The government of Canada has been lobbied for many years to initiate this type of program, but has to date resisted.

Policy Recommendation:

Tax Exempt Bonds

17. That the City pursue, with the Province of Manitoba and the Federation of Canadian Municipalities, an amendment to the Income Tax Act to allow tax exempt interest on government bonds raised for designated infrastructure project purposes.

Intergenerational Financing

The issue of cash financing versus debt financing must be carefully thought through. In many jurisdictions, government's current concern with debt and deficit has driven it to the philosophical position of cash financing all capital works. This raises equity issues in that intergenerational projects are being financed for tomorrow's users by today's taxpayers. It is perhaps more appropriate to debt finance some portion of such projects, so that the users of the facilities pay for their costs.

On the flip side, however, debt financing ongoing rehabilitation such as pavement renewals makes little sense. These projects will continue forever and we end up paying debenture debt costs on top of the construction cost — which essentially doubles the cost of the project. More care must be taken in developing financing strategies that match the project life and use patterns to the beneficiaries of the service provided. In this way, use of debt versus cash financing can be better managed.

Policy Recommendation:

Intergenerational Financing

18. That the City should finance infrastructure projects in a manner that properly recognizes project life and replacement patterns.

Cost Shared Programs

Wherever possible, municipalities should take advantage of cost-shared infrastructure renewal programs. The City of Winnipeg is fortunate that the Province has implemented the Urban Capital Project Allocation (UCPA) program. This allows the City to carry out approximately $32 million of capital work per year, using 50 cent dollars. In addition, the Winnipeg Development Agreement (WDA) — a tripartite program — not only creates training and economic development opportunities, but also facilitates upgrading of heritage buildings, riverbanks and neighbourhoods.

Finally, the Canada Infrastructure Works Program (CIWP) was a major benefit to our municipality, in that $87.3 million worth of renewal was accomplished. In *Taking Stock: A Review of the Canada Infrastructure Works Program (Soberman, 1996)* the author reports that the program was a success in that it *"accomplished what it set out to accomplish."* While the program had some weaknesses, the City of Winnipeg, along with other municipalities in Canada, should strongly endorse the development of a second National Infrastructure Program, focusing in part on municipal infrastructure renewal.

Policy Recommendation:

Cost Shared Programs

19. ***That the City join with other Manitoba municipalities and the Provincial Government in lobbying the Federal Government to support implementation of a sustained National Infrastructure Program, focusing in part on municipal infrastructure renewal.***

D.) Alternative Service Delivery Policy Options

Traditionally, infrastructure in Canada has been developed, built and funded by various levels of government. With increasing pressure to minimize deficits and freeze taxes, governments today are seeking innovative methods for financing and alternative service delivery.

The public and private sectors in Canada have long-standing partnering relations in terms of the construction of major municipal infrastructure projects such as roads, bridges and various public facilities. Traditionally, government issued separate design and construction tenders and either cash financed or issued debt to pay for capital works. Alternative Service Delivery (ASD) options are an emerging way for the public sector to provide infrastructure.

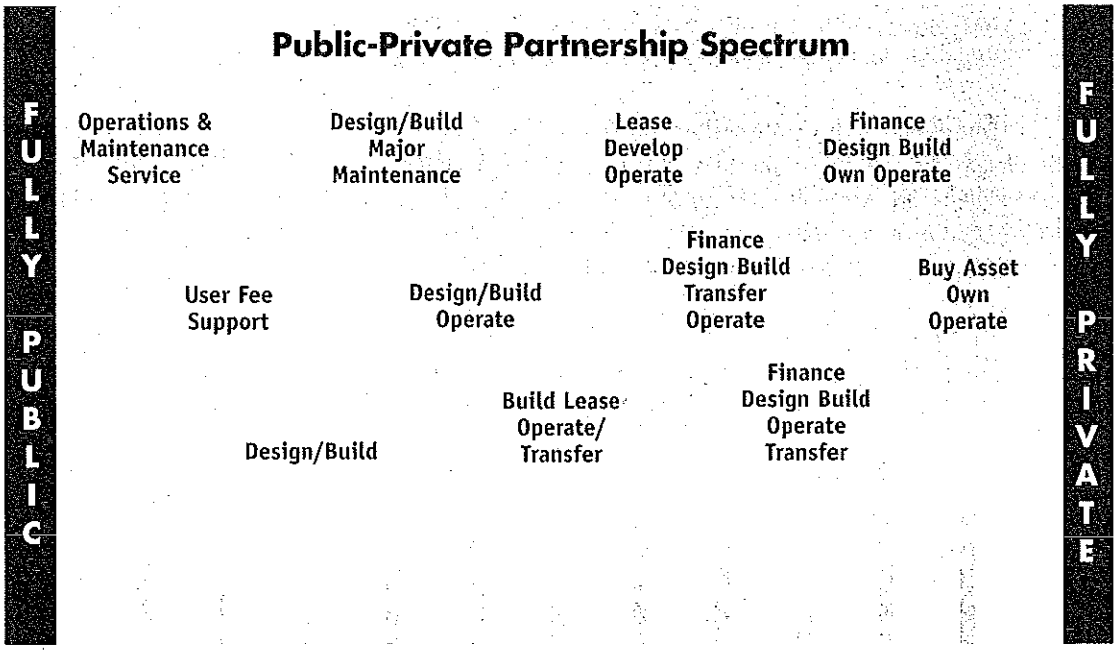
The strengths of the public sector and the efficiencies and know-how of the private sector can be combined in Public-Private Partnerships (PPP's). The public sector assesses need and develops overall guidelines, while the private sector develops and implements the most cost effective solution.

A recent publication entitled *"The 3 Ps of Municipal Infrastructure: How Local Governments Can Use Public-Private Partnerships to Finance, Build and Operate Services" (Shaen, 1997)* sets out many of the concepts and principles of such arrangements. In addition, the City of Winnipeg Audit Report *"Best Practice Review of Frameworks for Alternative Service Delivery" (City of Winnipeg, "Audit Department Report", 1997)* reinforces many of the advantages of public-private partnerships articulated by Shaen. This latter work goes further by suggesting that other alternative service delivery methods are available and should be reviewed.

Conceptual Framework

The potential benefits of adopting a Public-Private Partnership approach to meet our growing infrastructure needs are many and diverse. PPP's are usually associated with large capital works undertakings, and much of their usefulness is associated with the specifics of the individual deal negotiated.

A whole range of strategies exist for governments to pursue involving the use of the private sector. Many of these options can facilitate arrangements that benefit citizens, employees and the private sector. Public-Private Partnerships may take on a variety of forms, sometimes referred to as the PPP spectrum:



In addition to providing important infrastructure, such projects have the added benefit of being labour intensive and therefore good for employment creation in both the public and private sector.

In analyzing the usefulness of Public-Private Partnerships, Council must evaluate them in a policy context. The policy framework for the City is found in a number of key civic policy documents, including the following:

- *Plan Winnipeg...Toward 2010 (June 23, 1993)*
- *City of Winnipeg — Financial Management Plan (May 1995)*
- *City of Winnipeg Audit Department — Best Practice Review of Frameworks for Alternative Service Delivery (September 1997)*
- *City of Winnipeg — Special Operating Agencies Initiative Report (September 1997)*
- *City of Winnipeg — Reshaping Our Civic Government (March 20, 1997)*

Two other recent additions to the literature on public policy considerations discuss the important issues of protecting the public interest: *"Government's New Style" (Zussman, 1997) and "The Politics of Performance Measurement" (Thomas, 1997).* These issues both have important public policy implications.

Another such consideration will be for the City to manage unsolicited private sector proposals. Internal civic as well as external research capacity (perhaps through partnering arrangements with universities) is essential to ensure that taxpayer interests are served to the greatest extent possible.

The conclusion to be reached is that any decisions on the use of alternative delivery strategies must be done using defined processes. Further, emerging trends must be continually monitored to ensure that public policy is sound.

Policy Recommendations:

Implement ASD Options

20. ***That with regard to infrastructure, Council implement its adopted policy on Alternative Service Delivery, as follows:***

    "The City of Winnipeg is committed to providing quality services at an affordable cost on a sustainable basis. To this end, the City will systematically review its programs, services, and delivery mechanisms, and will pursue the most appropriate methods and structures for providing services to achieve the best value for the municipal tax dollar and the optimal balance of overall benefits to the City and its Community."

Public-Private Partnership Research

21. That Council ensure both internal and external research capacity be devoted to monitor and assess PPP trends throughout Canada, and to assist the City in considering local PPP proposals.

PPP Policy Options

As Public-Private Partnerships (PPP's) are an emerging area, there is not yet any standardized terminology that accurately describes the concepts. In our view, there are three broad categories:

- ***Divestiture*** — where the government turns over ownership of the function,
- ***Privatization*** — where the government withdraws from actually delivering a service but remains as a regulator, and,
- ***Partnering*** — where government and private sector act together to jointly provide facilities.

This section is designed to outline policy options for Council to consider in the context of infrastructure rehabilitation and renewal.

• Divestiture Option

The City could adopt a strategy of divesting itself of functions that are not seen to be the core business of government. The Federal Government has divested itself of several areas — including airports, ports, railways and communication systems — which have been turned over to private owners. The new owners cannot afford to jeopardize their investments by neglecting needed upgrades. The result will be a reconfiguration of service delivery and/or the imposition of new user fees.

The decision to divest of an asset is an important, and often irreversible one, and therefore must be carefully contemplated. A thorough study must be conducted that weighs the long-term and short-term costs and benefits to the public. When selling assets, governments must make judicious use of the windfall revenues obtained. These funds should be used to pay down any debts that exist on the asset sold and to acquire new assets. In this way, the inherent value of the asset remains intact for the benefit of future taxpayers. Under no circumstances should government utilize the revenues from asset sales to pay operating costs or finance current expenditures.

• Privatization Option

A variation of divestiture is privatization where government turns over the ownership and operation of facilities to the private sector, yet remains as the regulator in terms of service quality and/or price. In this system, the financial resources and flexibility of the private sector are channeled into service delivery, while the government maintains broad control over service provision. Telephone, cable and natural gas services are good examples.

The use of Special Operating Agencies — which are essentially private sector-like government operations, which run using business approaches and accounting practices — can fit into this category. In addition, the not-for-profit sector can also assume ownership and operation of facilities formerly under government control.

• Partnering Option

The third broad type of arrangement is one of partnering, where the public and private sectors share responsibilities to the mutual benefit of each. Partnerships can exist for the purpose of providing new or improved facilities or for operating existing facilities. Although relatively new to Manitoba, public-private partnerships have been widely used in Europe, the United States and Asia.

A clear indication that partnerships are the way of the future was the May 23, 1997, announcement of *"The Partners in Public Service"* project by the Province and the City. This project is designed to find better ways of providing services to the public, and to ensure that the government at both levels is as affordable and cost-effective as possible.

In Winnipeg, the Charleswood Bridge partnership is an example where the private sector designed, built and financed a twin-span four-lane river crossing and related roadworks, which they will own and maintain for 30 years. The City provided the concept, standards, right-of-way and will lease the project until the expiration, at which time it can either purchase the project or renew the lease. Under this agreement, the taxpayer had no exposure to risk during the construction period and is not responsible for the ongoing maintenance of the project during the lease. While this arrangement may not be suitable in every case, it should be explored for any new capital project the City is considering.

There are an infinite number of variations in terms of divestitures, privatizations and partnering that could offer solutions to infrastructure decline. These policy options are fundamentally designed to ensure that someone is accountable, responsible and committed to keeping the infrastructure elements in question in a satisfactory state of repair.

"The private sector is best able to bring in new technologies and design and construction efficiencies to improve the delivery process for infrastructure projects."

Policy Recommendations:

Pursue Partnering Strategies

22. *That Council pursue partnering strategies for infrastructure works in accordance with the framework of all applicable Council adopted policies.*

PPP Policy Options

23. *That Council adopt as policy, consideration of the entire PPP spectrum as policy options in all large capital projects involving all aspects of infrastructure.*

E.) Winnipeg Transportation Utility Option

In dealing with the policy framework for a sustainable infrastructure system, the SIRP Task Force concluded that a different organizational structure for dealing with transportation systems is worth serious consideration. Similar observations have also been made by others.

Following a comprehensive study of transportation in the Winnipeg Region (herein referred to as the "Capital Region"), *TransPlan 2010* released its final report and recommendations in January 1998. Included was a recommendation to consider an improved decision making model for the management of transportation related assets. Two specific options were presented:

- ***increase government cooperation*** *between the City of Winnipeg, Capital Region municipalities and the Province of Manitoba, or*

- ***create an independent agency*** *with responsibility for transportation matters in the Capital Region.*

While we believe that increased government cooperation is needed, we also believe that new, more proactive approaches are required to make significant progress on the pressing issues of infrastructure renewal.

The creation of an independent agency is of particular interest to the SIRP Task Force. The concept of an independent agency is based in part on the Montreal Metropolitan Transportation Agency created in 1996. The Vancouver Regional District also adopted a similar structure in February 1998 with which to address critical transportation asset management and investment issues.

It is our view, however, that there may be too many obstacles — both political and otherwise — to enable the establishment of an independent agency that would oversee all transportation matters in the Capital Region. The idea of an arm's length agency localized to the City of Winnipeg, however, has merit.

As the previously cited FCM report observed, when infrastructure was funded through the vehicle of a utility, it fared better than when left to the normal budgeting process. City Council, with legislative assistance from the Province, could establish a "Winnipeg Transportation Utility" which would operate much like the City's other utilities. In order to include all facets of transportation and transportation planning, the responsibilities and relationship with Council could include the following:

- managing the financing, development, construction, maintenance and investment in the entire Winnipeg street system, including bridges, structures and transit corridors
- transportation planning
- public transit
- parking authority
- regulation of urban goods movement
- control of access to the street system
- all aspects of budgeting including ability to raise and apply revenues as necessary to deliver services required
- expenditure of funds for these purposes
- implementation of Council-adopted SIRP Task Force recommendations.

It is our view that ultimately the Capital Region concept outlined by TransPlan has merit. The formation of a City of Winnipeg focused utility is a logical initial step to the creation of a more comprehensive solution. Just as Winnipeg's water utility could easily become the regional water authority, so too could a transportation utility be broadened.

Initially, the sources of dedicated revenue could include any of the following, each of which require provincial legislation:

- frontage levy — $1 = approximately $10 million/year
- motor fuel tax — 1¢/litre = approximately $8 million/year
- motor vehicle registration — $35 = approximately $11.5 million/year
- right-of-way levy

There would very likely need to be a transition time — of perhaps five years — for the new utility to move to user fee funding from present sources. As the new fees came on stream, the present mill rate support and provincial grant funding would be phased down. An in-depth business plan would need to be developed to define the details.

In establishing the structure of the "Winnipeg Transportation Utility", Council should be mindful of its Alternative Service Delivery options. The option of creating an SOA for this function, complete with a business plan, is an opportunity worth pursuing.

Policy Recommendation:

Winnipeg Transportation Utility

24. That Council, using its ASD policy, develop a business plan to investigate establishing an arm's length "Winnipeg Transportation Utility", and approach the Province of Manitoba to seek any required enabling legislation.

It should be noted that the issue of revenue sources, funding streams, dedicated levies, frontage levies, user fees, etc., ushers in the spectre of new revenues supplementing existing mill rate supported tax.

This is not necessarily the intention.

The thrust of the fiscal recommendations is to suggest the need to move away from traditional funding sources which are inequitable, inadequate and unsustainable.

There would by necessity have to be a review of taxation in Winnipeg and of the funding relationship between the City and Province. This may be the subject matter of the Committee on Tax Reform, but is not the mandate of the SIRP Task Force.

F.) National Infrastructure Policy (NIP) Option

It is apparent from this report, that resolution to Winnipeg's infrastructure deficit — like that of every other city in Canada — is beyond the financial capability of any municipal government. The fact that the Federal government was able to quickly come to terms with provincial and municipal governments on the need to implement and then extend the Canada Infrastructure Works Program (CIWP) speaks volumes in support of this proposition.

As indicated earlier in this report, we must adopt a more systematic and sustainable approach to infrastructure investment and management. This must be a commitment for participation by all levels of government to address this national problem.

The national debate will soon centre upon the appropriate allocation of the Federal budget surplus. If a national infrastructure program is to become a Federal priority, it must become the subject matter of a concerted Federal/Provincial/Municipal campaign.

Support for Federal Policy

As a major Canadian city and successful participant in the Canada Infrastructure Works Program, Winnipeg can help lead by example. Adopting a comprehensive SIRP is but one step in the process — albeit a very important one. Of equal significance is assisting in the effort to influence the Federal government to adopt as Federal policy a transparent national infrastructure policy.

"Municipal governments... cannot rectify the infrastructure problem on their own."

Attached to this report as Appendix "D" is a Recommended National Infrastructure Policy (NIP) which supports the 1996 and 1997 Annual Premiers' Conference communiqués, and the proposed Guidelines (Appendix "E"), in which the Premiers called for a new NIP. Winnipeg City Council could assist in further lobbying senior levels of government by adopting a resolution endorsing the positions outlined in Appendices "D" and "E".

Policy Recommendation:

National Infrastructure Policy

25. *That the City and Province partner to lobby the Federal Government to enter into a sustainable infrastructure agreement consistent with the recommended National Infrastructure Policy (NIP), as set forth by the ICM (Appendix "D") and the "Proposed Guidelines for a New National Infrastructure Program", as adopted by the Premiers at the 1996 and 1997 Annual Premiers' Conferences (Appendix "E").*

G.) Sustainable Infrastructure Development Policy Options

Developing policy options that result in sustainable solutions to the issue of infrastructure deterioration will have a positive impact on the City of Winnipeg. While many of these initiatives will require cooperation and support from more senior levels of government, all those involved will share in the benefits.

Employment Training Program

As part of the CIWP, Winnipeg conducted a Community Services Infrastructure Renewal Program of $10 million. This program was designed to rehabilitate and/or reconstruct deteriorated street, sidewalk and back lane infrastructure, with a focus on utilizing — in part — a workforce of people presently on social assistance programs.

The result was meaningful employment for an additional 218 persons on social assistance, plus substantial savings to the three levels of government in social assistance costs. In fact, when assistance payment reductions and income taxes were considered, the program essentially cost the Federal government nothing and only marginally more for the province. Programs such as this should form part of any overall approach to infrastructure renewal. A more detailed account of the success of the 1995 Social Assistance Works Program can be found in the publication *"Working: An Infrastructure Renewal Demonstration Project" (City of Winnipeg Social Services Department, 1995).*

In 1997, as a result of the success of the first initiative in the Canada Infrastructure Works Program, a further $4 million was allocated to a social assistance works program under an extension to the CIWP.

While the foregoing discusses the cost-shared social assistance program, it could easily be broadened to encompass other groups. These types of programs can provide useful training and employment skills, and at the same time, replace deteriorated systems.

Policy Recommendation:

Employment Training Program

26. That the City propose to senior levels of government, the delivery of infrastructure programs whose aim in part would be to provide useful training and employment skills development to various target groups.

Capital Region Infrastructure Strategy

It is apparent that infrastructure investments represent a significant ongoing financial commitment, regardless of the level of government. It should also be obvious that any investment decisions made may have implications that exceed jurisdictional boundaries.

Residential and industrial development outside the City's boundaries — in an area commonly referred to as the Capital Region — has implications for Winnipeg and vice versa. Investments in infrastructure must be service and cost-efficient. Accordingly, they should be referenced against publicly developed and adopted planning and development strategies.

The recent public debate around the supply of water by Winnipeg to adjacent municipalities is but one example of where infrastructure funding may be better viewed on a regional basis. We believe adjacent municipalities can make better use of existing infrastructure by sharing facilities and using regional services. These decisions are sustainable, in that they maximize economies of scale and eliminate duplication of services and facilities. Governments that have sustainable development policies must respect them, as they are sound — both philosophically and practically.

The Capital Region Committee and the Province have approved a Capital Region Strategy to support the sustainable economic development of the region. This strategy includes policies and actions for achieving sustainable infrastructure.

A Capital Region strategy that considers all aspects of development, expansion, land use and infrastructure planning is crucial to the City, the Capital Region municipalities and the Province as a whole.

The Provincial government has recently announced the formation of an independent panel to provide recommendations to implement the Capital Region Strategy. This decision has received the support of the Capital Region Committee. The panel is to comprise individuals with expertise in urban and rural planning, as well as municipal government, who will meet with elected officials and hold public consultations. It is hoped that a major item to be considered by this independent panel will be the important question of the supply and delivery of infrastructure in an environmentally responsible and sustainable manner.

Policy Recommendation:

Capital Region Infrastructure Strategy

27. ***That the City pursue — with its neighbours and the Provincial Government — implementation of the Capital Region Strategy that recognizes the importance of the supply and delivery of infrastructure in an environmentally responsible and sustainable manner.***

Cost/Benefit Analysis

The issue of constructing new facilities versus the rehabilitation of existing facilities must be done in an intergovernmental policy context. New facilities should only be constructed after a proper cost benefit analysis has been done. This analysis must include the ongoing costs for operation and preventative maintenance.

With a growing backlog of infrastructure rehabilitation that needs addressing, achieving a balance between new strategic infrastructure needs and infrastructure rehabilitation must occur. We believe that economic benefits must accrue to the community that offset the capital and operating costs of a new facility. Expanding systems and shrinking budgets are not compatible. Looking at new construction in this way is truly sustainable development.

Finally, the regulatory framework can be a useful tool of government to ensure sustainability through better use of existing facilities. For example, water conservation programs will ensure that existing facilities last longer, and are therefore better utilized. Recycling regulations remove materials from waste disposal sites — which extends their life and at the same time creates opportunities for the development of new products and services from the recycled materials.

Policy Recommendation:

Cost/Benefit Analysis

28. That any new publicly-funded infrastructure project be accompanied by a cost/benefit analysis which establishes need and sustainability to clearly justify its construction.

Sustainable Infrastructure Development Policy (SIDP)

There are many ways in which the government and the private sector can and should work together to address the infrastructure deficit, as described earlier in this report. Similarly, the various levels of government must work together to ensure that decisions made at one level do not impact other levels in an unfair and unsustainable way. In the end, there is only one taxpayer to pay the bill for the decisions taken by any level of government.

For example, senior levels of government often create regulations that require junior levels of government to put in place expensive new or upgraded facilities. This is particularly prevalent with respect to environmental issues. However, a proper cost benefit analysis is not always conducted by the senior government to determine if the outcome of the regulation is sustainable.

Any new policy approach with respect to infrastructure should be premised upon the basis of sustainability. Prudent management of intergenerational assets must take into account the principles of sustainability. Earlier, we spoke of the principles and guidelines developed as a result of the Manitoba Round Table on the Environment and Economy (MRTEE) *(Appendix "A")*, and their importance in developing infrastructure policies that are sustainable into the future. In developing the recommendations for this report, we have attempted to follow a number of principles which we developed and are set out in Appendix "B" of this report. We believe these principles should be referred to whenever sustainable infrastructure policy-based decisions are being considered.

Policy Recommendation:

Sustainable Infrastructure Development Policy (SIDP)

29. That the City endorse the principles and guidelines of the MRTEE, and adopt the SIRP Principles for Sustainable Infrastructure Development, as set out in Appendix "B".

Implementation Plan & Recommendation Summary

The Task Force believes this report has made the case for a Strategic Infrastructure Reinvestment Policy. We believe citizens expect government to take steps to protect the public's investment in infrastructure. We also believe Council should be prepared to make the following commitments to:

- Dedicate both financial and human resources to implement the recommendations in this report
- Adopt potentially difficult positions in the short-term to accomplish longer-term goals
- Draw upon private sector resources — including the universities — to assist staff as they have the necessary time to develop innovative, coherent and workable solutions
- Be prepared to make departures from conventional municipal operational and organizational configurations to make progress.

SIRP Implementation Committee

The City should ensure that adopted policy recommendations are implemented. The Task Force recommends establishing a SIRP Implementation Committee as a first step.

This Committee should be chaired by the Chairperson of the Standing Policy Committee on Public Works. The Committee could be a combination of City and industry members and would pick up where this report leaves off, following the process through to completion.

Policy Recommendation:

SIRP Implementation Committee

30. ***That the City establish a SIRP Implementation Committee — headed by the Chairperson of the Standing Policy Committee on Public Works and appropriately resourced through the office of the CAO — with a mandate to implement adopted policy options within 12 months of its appointment.***

Recommendation Summary

The recommendation summary of this report is in two parts. The first restates policies already adopted by Council. In developing future priority plans and budgets, Council should be mindful of its stated policies regarding infrastructure and endeavour to be consistent with its approved policies.

The second part presents the new ideas and directions developed during our review. To assist Council with the difficult task of implementation, we have outlined what we believe should be the action next to each policy recommendation.

Existing Council Policies

Plan Winnipeg... Toward 2010

Our regional services and facilities represent a major investment of public funds. It is important that this investment be protected. The overall cost of orderly maintenance and reconstruction programs is less than deferral, which eventually requires expensive catch-up work.

Plan Winnipeg Policy 5C-01— Maintain Existing Infrastructure

The City shall maintain the existing capacity of regional street, bridge, and public transit systems as its highest priority item for expenditure of funds when developing the yearly and five-year transportation capital programs.

Plan Winnipeg Policy 5C-36 — Provide Infrastructure Maintenance and Renewal

The City shall endeavour to provide basic maintenance and renewal of its infrastructure of pavements, sewers and watermains.

Financial Management Plan — 10 Goals for a Stronger Financial Future

...help the City balance its spending priorities with its available resources so that it can meet its obligations while improving Winnipeg's economic position.

The City will develop a detailed list of total infrastructure liabilities with priorized plans to repair them and identified funding sources during the next term of Council.

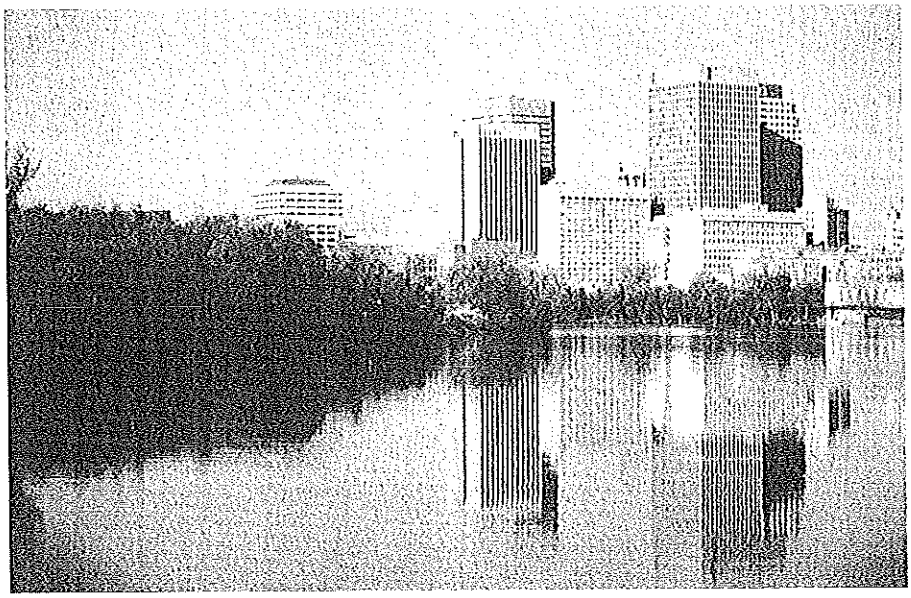
Priorities for Winnipeg — Building Toward the 21st Century

"Managing our Investment in Infrastructure" identifies five specific areas for attention:

- *developing a residential streets renewal program*
- *investing strategically in new infrastructure*
- *re-investing in hydro and water quality*
- *extending the life of the aqueduct*
- *committing to long-range planning.*

Alternative Service Delivery

The City of Winnipeg is committed to providing quality services at an affordable cost on a sustainable basis. To this end, the City will systematically review its programs, services, and delivery mechanisms, and will pursue the most appropriate methods and structures for providing services to achieve the best value for the municipal tax dollar and the optimal balance of overall benefits to the City and its Community.



Policy Option/Implementation Plan Summary

Management, maintenance and investment recommendations are all based on a "knowledge/ consequence" premise. Knowledge of the facts and consequences of decisions made or failed to be made is, in the final analysis, the most important contribution of these recommendations. Decisions on these recommendations are always the prerogative of elected officials.

A.) Infrastructure Maintenance Policy Options

Policy Option	Implementation Plan
Life Cycle Costing 1. That all capital programs for new or rehabilitated infrastructure be subjected to life cycle costing analysis to determine the most cost effective options for consideration.	A Steering Committee be established to develop a standardized life cycle costing protocol for the City, drawing upon the work already done, as cited in this document.
Minimize Deferred Maintenance 2. That ideally, maintenance for existing infrastructure should only be deferred if the impact on the life expectancy and life cycle of the asset is documented to be minimal.	Departments be instructed to develop for Council properly documented maintenance requirement needs, priority schedules, along with impact analyses.
Factor Maintenance into Initial Costs 3. That when new or upgraded facilities are proposed, they be accompanied by resulting incremental maintenance costs, linked into a parallel maintenance budget.	The capital budget process be modified to include a link to the current budget to include maintenance costs.
Computerized Maintenance Management Systems (CMMS) 4. That civic department preventative maintenance programs be funded by Council to be information current, and supported by Computerized Maintenance Management Systems (CMMS).	Where no CMMS exist, Council request the subject department to develop a fully costed proposal.
Management of Asset Data 5. That the CAO Secretariat be assigned and resourced to coordinate the City's infrastructure asset data management.	That the recommendation be referred to the CAO for implementation.

B.) New Technology Policy Options

Policy Option	Implementation Plan
Advanced Techniques & Technologies 6. That the City encourage the application of "intelligent" technology, new methodologies and innovative products such as ACMs in infrastructure renewal, rehabilitation, construction or preventative maintenance programs.	That the City host an annual technology transfer workshop for staff, consultants, contractors, and academia.
Improved Practices 7. That the City encourage the use of advanced techniques, improved technologies, better materials and best practices in all infrastructure programs, and participate in the technical guide for infrastructure initiative.	Preliminary engineering budgets should recognize the need to explore new and innovative techniques, technologies and materials.
Update Construction Specifications 8. That the City's standard construction specifications and general conditions be reviewed to encourage use of innovative practices, technologies and materials. The academic, engineering and construction communities should be involved in this review.	That the structure and objectives of the existing Standard Specification Committees be reviewed and modified, as necessary.
Commitment to Strategic Research & Innovation 9. That the City partner with academia to strategically fund research aimed at identifying new or improved materials, technologies and techniques having broad infrastructure application.	The City should annually budget $0.5 million beginning in 1998, and direct these funds to new technologies research.

C.) Financial-Based Policy Options

Policy Option	Implementation Plan
Urban Infrastructure Financing Plan 10. That the City create and adopt an urban infrastructure financing plan, based on the principles outlined in Appendix "C" of this report.	That the recommendation be referred to the CAO for implementation.
Accrual Accounting System 11. That the City adopt a system for showing depreciation on its capital assets and begin the process of accounting for deferred maintenance.	That the recommendation be directed to the CAO for implementation.
Fully Costed Services 12. That the City apply full cost accounting principles to all government services, and that pricing of services should reflect the full true costs of service provision.	That the recommendation be directed to the CAO for implementation.
Application of User Fees 13. That the City implement properly structured user fees where the user and the service delivered can be identified.	Examine all possible user fees and their applications.
Shift from Mill Rate to User Fees 14. Any new user pay funding that relates to property and which replaces existing mill rate supported infrastructure budgets, should be accompanied by a mill rate reduction equivalent to the pre-user fee level of mill rate support.	Refer to the CAO for report on impact.
Infrastructure Services Renewal Levy 15. That the City consider developing an "Infrastructure Services Renewal Levy" program which would manage the levying of specific user fees/levies to dedicated infrastructure rehabilitation and renewal programs.	Refer to the CAO for report back on implementation.

Policy Option	Implementation Plan
Pursue Dedicated Levy Legislation 16. That the City pursue Provincial legislation to allow new funding sources for infrastructure renewal, and that funds raised be dedicated for specific infrastructure purposes only.	That the City and Province jointly consider a strategy of adopting legislated levies dedicated to infrastructure renewal.
Tax Exempt Bonds 17. That the City pursue, with Province of Manitoba and the Federation of Canadian Municipalities, an amendment to the Income Tax Act to allow tax exempt interest on government bonds raised for designated infrastructure project purposes.	That the City pursue Provincial support to lobby the Federal government for such a change.
Intergenerational Financing 18. That the City should finance infrastructure projects in a manner that properly recognizes project life and replacement patterns.	That the recommendation be implemented.
Cost Shared Programs 19. That the City join with other Manitoba municipalities and the Provincial Government in lobbying the Federal Government to support implementation of a sustained National Infrastructure Program, focusing in part on municipal infrastructure renewal.	That the City approach the Province of Manitoba, UMM, MAUM, and FCM to jointly coordinate efforts to implement this recommendation.

D.) Alternative Service Delivery Policy Options

Policy Option	Implementation Plan
Implement ASD Options 20. That with regard to infrastructure, Council implement its adopted policy on Alternative Service Delivery, as follows: *"The City of Winnipeg is committed to providing quality services at an affordable cost on a sustainable basis. To this end, the City will systematically review its programs, services, and delivery mechanisms, and will pursue the most appropriate methods and structures for providing services to achieve the best value for the municipal tax dollar and the optimal balance of overall benefits to the City and its Community."*	That the recommendation be implemented.
Public-Private Partnership Research 21. That Council ensure both internal and external research capacity be devoted to monitor and assess PPP trends throughout Canada, and to assist the City in considering local PPP proposals.	That the recommendation be implemented in the context of the Alternative Service Delivery framework.
Pursue Partnering Strategies 22. That Council pursue partnering strategies for infrastructure works in accordance with the framework of all applicable Council adopted policies.	That the recommendation be implemented in the context of the Alternative Service Delivery framework.
PPP Policy Options 23. That Council adopt as policy, consideration of the entire PPP spectrum as policy options in all large capital projects involving all aspects of infrastructure.	That the recommendation be referred to the CAO for implementation pursuant to the ASD policy.

E.) Winnipeg Transportation Utility Option

Policy Option	Implementation Plan
Winnipeg Transportation Utility 24. That Council, using its ASD policy, develop a business plan to investigate establishing an arm's length "Winnipeg Transportation Utility", and approach the Province of Manitoba to seek any required enabling legislation.	That the recommendation be referred to the CAO for implementation.

F.) National Infrastructure Policy (NIP) Option

Policy Option	Implementation Plan
National Infrastructure Policy 25. That the City and Province partner to lobby the Federal Government to enter into a sustainable infrastructure agreement consistent with the Recommended National Infrastructure Policy (NIP), as set forth by the ICM (Appendix "D") and the "Proposed Guidelines for a New National Infrastructure Program", as adopted by the Premiers at the 1996 and 1997 Annual Premiers' Conferences (Appendix "E").	That the City approach the Province of Manitoba, UMM, MAUM, and FCM to jointly coordinate efforts to implement this recommendation.

G.) Sustainable Infrastructure Development Policy Options

Policy Option	Implementation Plan
Employment Training Program 26. That the City propose to senior levels of government, the delivery of infrastructure programs whose aim in part would be to provide useful training and employment skills development to various target groups.	That the City approach the Province to assist in implementing this recommendation.

Capital Region Infrastructure Strategy 27. That the City pursue — with its neighbours and the Provincial Government —implementation of the Capital Region strategy that recognizes the importance of the supply and delivery of infrastructure in an environmentally responsible and sustainable manner.	That the City pursue with the Capital Region Strategy Panel the implementation of this recommendation.
Cost/Benefit Analysis 28. That any new publicly-funded infrastructure project be accompanied by a cost/benefit analysis which establishes need and sustainability to clearly justify its construction.	That the recommendation be implemented.
Sustainable Infrastructure Development Policy (SIDP) 29. That the City endorse the principles and guidelines of the MRTEE, and adopt the SIRP Principles for Sustainable Infrastructure Development, as set out in Appendix "B".	That the recommendation be implemented.

Implementation Plan Policy Option

Policy Option	Implementation Plan
SIRP Implementation Committee 30. That the City establish a SIRP Implementation Committee — headed by the Chairperson of the Standing Policy Committee on Public Works and appropriately resourced through the office of the CAO — with a mandate to implement adopted policy options within 12 months of its appointment.	That the recommendation be implemented.

Conclusion

The SIRP Task Force mandate was both challenging and necessary for the City's future. Like all major cities in Canada, the reality facing Winnipeg is that it can no longer defer infrastructure financial planning and investment decisions. The absence of infrastructure policies across Canada in the past has resulted in a national infrastructure deficit that could balloon to $200 - $300 billion in as little as five to 10 years if sound decisions are not made *(Mirza, "Canada's Deteriorating Infrastructure", 1997).*

As a society, we have agreed to subscribe to the principles of sustainability related to the use of natural resources, social and economic development. These same principles — which underpin the recommendations of this Task Force — are no less important in their application to infrastructure management and investment decisions.

This report demonstrates the connection between infrastructure and our local and national economies. It lays out a systematic approach to asset management and investment decision-making. It provides a framework within which decisions can be made. It allows for a reasonable transition from debt to cash financing, where appropriate. It recognizes the importance of appropriate beneficiary share allocation. It provides a platform for the assembly and use of key asset data, essential to informed decision-making. It identifies opportunities implicit in showcasing Canadian-developed infrastructure-related technologies.

From the Task Force perspective, it is imperative that there not be any delay in either dealing with the recommendations or in implementing them once adopted.

Given the magnitude of the infrastructure challenge, and the opportunities implicit in addressing it, every effort should be made to implement the recommendations within a 12-month period.

In the final analysis, this report provides a knowledge and consequence framework for Council — with the support of the public — to make informed choices. It provides the tools with which decisions can be made. It cannot however, make those decisions — that prerogative remains with our elected civic leaders.

The choice to make knowledge and consequence-based decisions within the context of a strategic infrastructure reinvestment policy, now lies squarely with City Council.

Appendices:

"A" Manitoba Round Table on Environment and Economy
Principles and Guidelines of Sustainable Development

"B" SIRP Task Force —
10 Principles for Sustainable Infrastructure Development

"C" SIRP Task Force —
Urban Infrastructure Financing Principles

"D" Recommended National Infrastructure Policy (NIP)
Infrastructure Council of Manitoba

"E" Proposed Guidelines for a New National Infrastructure Program
1996 Premiers' Conference

"A" Manitoba Round Table on Environment & Economy Principles & Guidelines for Sustainable Development

Sustainable Development Principles

Principles and guidelines of sustainable development *a principle from Manitoba Round Table on Environment and Economy, MRTEE*

Citation: *Manitoba Round Table on Environment & Economy. "Schedule 1: Principles and guidelines of sustainable development." - p. 13. In A discussion paper for a sustainable development act. Winnipeg: Manitoba Round Table for Environment & Economy, 1994.*

Principles

1. INTEGRATION OF ENVIRONMENTAL AND ECONOMIC DECISIONS: requires that we ensure economic decisions adequately reflect environmental impacts including human health. Environmental initiatives shall adequately take into account economic consequences.

2. STEWARDSHIP: requires that we manage the environment and economy for the benefits of present and future generations.

Stewardship requires the recognition that we are caretakers of the environment and economy for the benefit of present and future generations of Manitobans. A balance must be struck between today's decisions and tomorrow's impacts.

3. SHARED RESPONSIBILITY: requires that all Manitobans acknowledge responsibility for sustaining the environment and economy, with each being accountable for decisions and actions, in a spirit of partnership and open cooperation.

4. PREVENTION: requires that we anticipate, prevent or mitigate significant adverse environmental (including human health) and economic impacts of policy, programs and decisions.

5. CONSERVATION: requires that we maintain essential ecological processes, biological diversity and life-support systems of our environment; harvest reusable resources on a sustained yield basis; and make wise and efficient use of our renewable and non-renewable resources.

6. WASTE MINIMIZATION: requires that we endeavour to reduce, reuse, recycle and recover the products of our society.

7. ENHANCEMENT: requires that we enhance the long term productive capability, quality and capacity of our natural ecosytems.

8. REHABILITATION AND RECLAMATION: requires that we endeavour to restore damaged or degraded environments to beneficial uses.

Rehabilitation and reclamation require ameliorating damage caused in the past. Future policies, programs and developments should take into consideration the need for rehabilitation and reclamation.

9. SCIENTIFIC AND TECHNOLOGICAL INNOVATION: requires that we research, develop, test and implement technologies essential to further environmental quality including human health and economic growth.

10. GLOBAL RESPONSIBILITY: requires that we think globally when we act locally.

Global responsibility requires that we recognize there are no boundaries to our environment, and that there is ecological interdependence among provinces and nations. There is a need to work cooperatively within Canada, and internationally to accelerate the merger of environment and economics in decision making and to develop comprehensive and equitable solutions to problems.

Guidelines

1. EFFICIENT USE OF RESOURCES: we shall encourage and support development and application of systems for proper resource pricing, demand management, and resource allocation together with incentives and disincentives to encourage efficient use of resources and full environmental costing of decisions and developments.

2. PUBLIC PARTICIPATION: we shall establish appropriate forums which encourage and provide opportunity for consultation and meaningful participation in decision making processes by all Manitobans. We shall endeavour to ensure due process, prior notification and appropriate and timely redress for those affected by policies, programs, decisions and developments.

3. UNDERSTANDING AND RESPECT: we shall be aware that we share a common physical, social and economic environment in Manitoba. Understanding and respect for differing social and economic views, values and traditions and aspirations is necessary for equitable management of these common resources. Consideration must be given to the aspirations, needs and views of various regions and groups in Manitoba.

4. ACCESS TO ADEQUATE INFORMATION: we shall encourage and support the improvement and refinement of our environmental and economic information base and promotion of the opportunity for equal and timely access to information by all Manitobans.

5. INTEGRATED DECISION-MAKING AND PLANNING: we shall encourage and support decision making and planning processes that are open, cross-sectoral, incorporate time horizons relevant to long-term implications and are efficient and timely.

6. SUBSTITUTION: we shall encourage and promote the development and use of substitutes for scarce resources where they are both environmentally sound and economically viable.

5. SHARED RESPONSIBILITY AND ACCOUNTABILITY

- user fees
- public-private partnerships
- privatization

6. STEWARDSHIP

- manage infrastructure development needs in a safe, environmentally sound, and economically sustainable manner
- balance between today's decisions regarding stabilizing/reducing infrastructure deficit and tomorrow's impact on economic growth and quality of life

7. ENVIRONMENTAL MANAGEMENT

- demonstrate "due diligence"
- improve environmental performance
- safe and sound environmental practices
- increase environmental awareness
- voluntary accreditation

8. POLLUTION PREVENTION

- encourage and promote the development and use of substitutes for scarce resources where they are both environmentally sound and economically viable

9. UNDERSTANDING AND RESPECT

- equitable management of infrastructure investment benefits
- deal with the most urgent infrastructure issues in a consistent and thoughtful manner

10. SUSTAINABILITY

- all infrastructure development projects (public and private sectors) should be sustainable
- all organizations (public and private sectors) should implement their own sustainable development policy

"C" SIRP Task Force — Urban Infrastructure Financing Principles

The goals of an Infrastructure Financing Plan should be to provide adequate and secure funds to deliver an infrastructure investment program that supports new visions and moves towards a sustainable future. The new plan should be based upon the following principles:

1. **Stable and Predictable:** Capital, operating and maintenance funding should be stable over time, predictable in magnitude, and provide long-term financial commitment to a new vision.

2. **Open:** The sources and allocation of funds should be open, clearly presented, and easily understood by decision makers and the public to ensure accountability and fairness.

3. **Fully Costed:** The City should apply full cost accounting principles to all current or new utility operated infrastructure services sustained by user fees.

4. **Least Cost:** The model should foster an infrastructure operating at the least possible total cost to the environment, society and economy.

5. **Debt Financing:** Debt Financing strategies for intergenerational infrastructure should portion project life and use patterns between benefiting generations.

6. **Cash Financing:** Regular ongoing, preventative maintenance programs should be cash financed so as to proportionately allocate cost to beneficiary.

7. **Simple:** The process should not be administratively complex.

8. **Adequate Funding:** When senior levels of government assign additional infrastructure responsibilities or standards onto municipal governments, access to adequate revenues should be provided at the same time.

9. **User Pay:** Funds should be increasingly derived from users, with many of the services provided by infrastructure to be treated as a utility where the user is charged based on consumption or use.

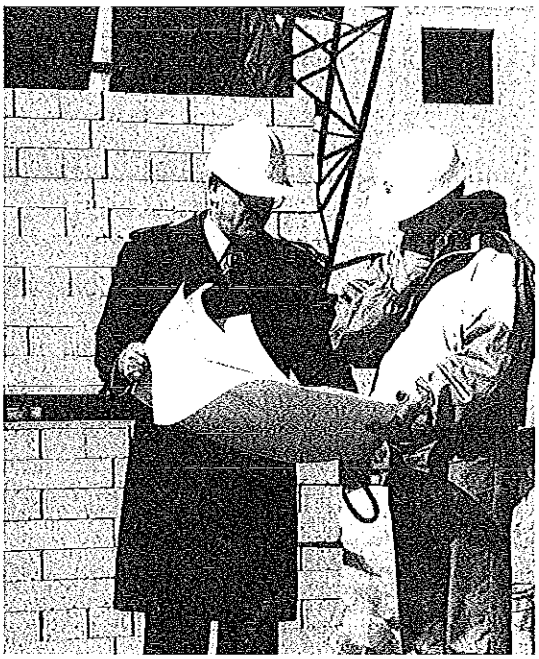
10. **Dedicated:** Revenues derived from user pay methods should be dedicated by law to specific improvements, or projects that support the overall infrastructure plan.

11. **Public Involvement:** Public involvement in the design, financing and implementation decisions for the model, resulting from information and consultation programs, should be an integral part of the process.

12. **New Technology:** Promote the application of new technologies which improve life cycle costs and help protect the environment.

13. **System Optimization:** Funding should be applied where practicable to optimize the existing infrastructure.

14. **Measurable Results:** Performance indicators should be used to measure progress and report to decision makers and the public.



"D" Recommended National Infrastructure Policy (NIP)

(as prepared by the Infrastructure Council of Manitoba-ICM)

National Infrastructure Policy (NIP) - Recommendation

To address Canada's growing infrastructure deficit, the federal government must adopt as a matter of good governance, a *National Infrastructure Policy (NIP)*. Its objective should be to address municipal infrastructure, the national highways system and strategic infrastructure investments, in a sustainable manner which levers matching contributions from other levels of government and/or the private sector.

Federal Deficit

The current federal government has made the reduction and elimination of the federal deficit a national goal. Balancing the nation's finances to set a competitive economic platform is an important objective.

The *"Infrastructure Deficit"*

If the above approach is supportable, then the federal government cannot ignore a second deficit, namely the ***"infrastructure deficit".*** This is defined as the ***gap between what we as a nation invest as compared to what we ought to invest in our infrastructure to optimize long run national wealth productive capacity and economic efficiency.*** Canada's infrastructure deficit is staggering, it is growing and like the balance sheet deficit, it ***cannot be ignored.***

The 1996 ***Federation of Canadian Municipalities/McGill University*** report conservatively estimates a ***$44 billion municipal infrastructure deficit*** to sustain what we now have in this country.

The Transportation Association of Canada (TAC) reports adopted by the federal and provincial governments, identified a *national highways system* strategically important to east/west competitiveness, and to the north/south movement of goods and services to take full advantage of NAFTA and FTA trade opportunities. The estimated investment dependant upon the approach taken — ***$12-18 billion*** over a 10 year period.

Federal Fiscal Dividend

The federal government has committed itself to applying 50% of the surplus towards national debt reduction, and the remaining 50% towards enhancing existing programs and/or funding new programs. If a National Infrastructure Policy is to become a part of the new fiscal priority, now is the time to make the case.

National Infrastructure Policy (NIP)

Fiscally Responsible and Strategically Focused

No Parliamentarian supports the notion of allowing the nation's infrastructure to deteriorate to the point where it fails to service Canadian needs. That being the case, ***the question therefore is not whether to adopt a National Infrastructure Policy, but rather at what level and under what arrangements.***

The Policy - Target Areas

The *National Infrastructure* Policy should target three (3) broad areas:

a) ***municipal infrastructure*** which must be rehabilitiated in order to sustain existing levels of commerce and attract new opportunities. This program would target the ***$44 billion "municipal infrastructure reinvestment deficit";***

b) ***national highways system*** to address east/west and north/south trade, commerce and tourism opportunities. This would target the ***$12 - 18 billion "national highway systems deficit";*** and

c) ***strategic infrastructure investments*** which serve to generate new areas of economic activity and therefore new wealth.

Application of New Technologies

The application of new hard and soft Canadian technologies, that realize cost savings and positive life cycle benefits to infrastructure, and that enable more efficient use of infrastructure, should be encouraged. This allows Canadians to showcase their application to the rest of the world, address national problems, create new export opportunities and lower user costs. *This approach is both practical and strategic in nature.*

Duration

Given ***"Canada's Infrastructure Deficit"*** a National Infrastructure Policy must be sustained over an initial ten (10) year period. The longer we delay dealing with the failing infrastructure, the greater the cost and the more real is the risk of losing our edge as a leading industrialized country. Studies have consistently shown a direct relationship between an economy's performance and the level of investment made in infrastructure.

Size

Simply suggesting more money does not address the budgetary dilemma. An annual level of $600 million over a ten (10) year plan matched by the provincial and municipal governments would mark an excellent beginning to rebuilding Canada's municipal infrastructure. This amount is consistent with the 1997 CIWP level of funding.

In the context of National Highways, the federal government has divested itself of *"cost centres"* and transferred them directly to the user. It is no longer involved in rail, air, marine and air traffic control having transferred them to the private sector were the user foots the bill. This divestiture and cost elimination notwithstanding, the federal treasury has kept the annual $4.2 billion income (approximate) generated from road use fuel excise taxes.

An annual commitment of $600 million (approximate revenue from the 1.5 cent per litre increase in the excise tax on road use gasoline levied in February 1995), matched by the provincial governments over a ten (10) year period would be an appropriate initial funding level. This tax increase instituted as a deficit reduction measure, should be returned to highway users now that the deficit reduction targets have been exceeded.

Governments should also examine non-traditional forms of funding infrastructure investment through ***Public Private Partnerships (PPP).*** Considerable work has been done in this field by the ***Canadian Construction Association, Canadian Council on Public Private Partnerships*** and the ***Standing Committee on Transportation*** Report of February 1997. The notion of PPP is well advanced in some jurisdictions in Canada and many throughout the United States. We should take serious note of their success and failures and learn from them.

Policy Impact

A National Infrastructure Policy (NIP) combined with already announced government initiatives to increase investment in Research and Development, University Infrastructure, expansion of the Network of Centres of Excellence Program, Youth Training Initiatives, continuation of the Team Canada approach to soliciting new business for Canadian enterprise, along with other initiatives, allows for the following:

**no new money is added.* The annual $600 million investment in municipal infrastructure continues the existing CIWP commitment. Further, it levers an additional annual contribution of $1.2 billion from municipalities, the provinces and/or the private sector;

**enhanced infrastructure and national highways generates economic expansion* by facilitating the expansion of commerce. This *creates higher employment and therefore larger tax revenues to government* as a result of increased economic activity;

the National Highway System component is funded from within an existing revenue flow, which still generates a net $3.6 billion (approximate) to the federal treasury after the proposed annual NHS allocation, an amount in excess of 1994/95 road use excise tax revenues. It focuses the investment and levers a matching $600 million annually from the provinces. The investment also serves to protect and enhance the estimated 4.16 million jobs now sustained through Canada's export industries;

**strategic infrastructure investments* would be funded from within the two (2) primary program components, namely municipal and national highways;

the **Canada Infrastructure Works Program (CIWP) recently extended, attained or exceeded many of its objectives. A sustained program can only build upon a good start already made;

**the above initiatives can be shown to be a plan aimed at *"rebuilding Canada"* providing new jobs, a hope of economic opportunity, confidence in the future, building upon Canada's strength as a nation and positioning Canada to take advantage of the FTA and NAFTA accords.

Conclusion

The ***"infrastructure deficit"*** can no longer be ignored. A clear, transparent ***National Infrastructure Policy*** is no less important to the nation's future than its needs related to health, education, research, youth training, safety net and debt/deficit management. It addresses an undeniable national need, sharpens Canada's ability to compete, and enables enhanced and new job opportunities on a sustained basis.

The *National Infrastructure Policy* must reflect and respect the principles of sustainable development. To perpetuate the infrastructure deficit by under investing today contravenes the most fundamental principle of sustainable development: that we should meet current infrastructure needs and not impair the ability of future generations to meet their needs by *"living on our capital."*

Failure to address this issue will result in an unsustainable infrastructure unable to support our competitiveness domestically or internationally, unable to sustain our existing quality of life, and unable to allow Canadian enterprise to fully take advantage of the NAFTA/FTA accords. It will leave as a legacy to future generations, an ***infrastructure deficit*** the size of which will be financially unmanageable.

— November 1997

"E" Proposed Guidelines for a New National Infrastructure Program

(as adopted by Premiers and Territorial Leaders at the 1996 Premiers' Conference)

Scope and Focus

A new national infrastructure program should:

- Focus on strategic provincial-territorial infrastructure priorities which offer substantial long term economic benefits; these priorities may be of one type (eg. highways) or of several types (eg. highways, telecommunication, ports).

- Have a value of no less than the current infrastructure program.

Financing

The funding arrangements for the new program should:

- Be consistent with current fiscal frameworks.

- Include a review of the federal allocation formula used in the current program.

- Include the discretion for flexible partnerships on individual projects (eg. federal-provincial/territorial, federal-provincial/territorial-municipal and federal-provincial/territorial-private); this discretion for flexible partnerships does not prevent partnerships of one type only (eg. federal-provincial/territorial).

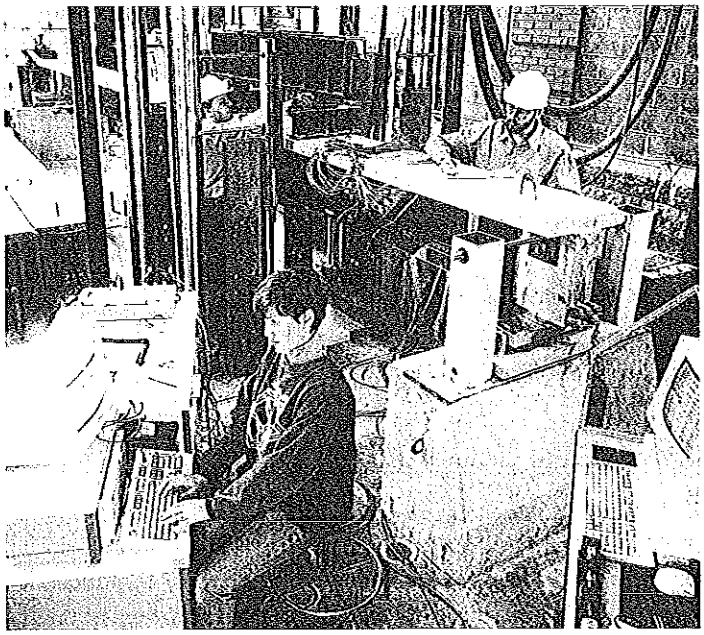
- In cases of federal-provincial/territorial partnerships, the federal contribution will be no less than one-half; in cases where there is a third partner, the federal contribution will be no less than one-third.

Development, Timing and Administration

A new national infrastructure program should:

- Incorporate the best operational and administrative features of the current program.

- Be developed by Ministers of Finance with a final report and recommendations to First Ministers by November 1996 with a view to implementation by April 1, 1997 with a term of approximately three years.



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SIRP

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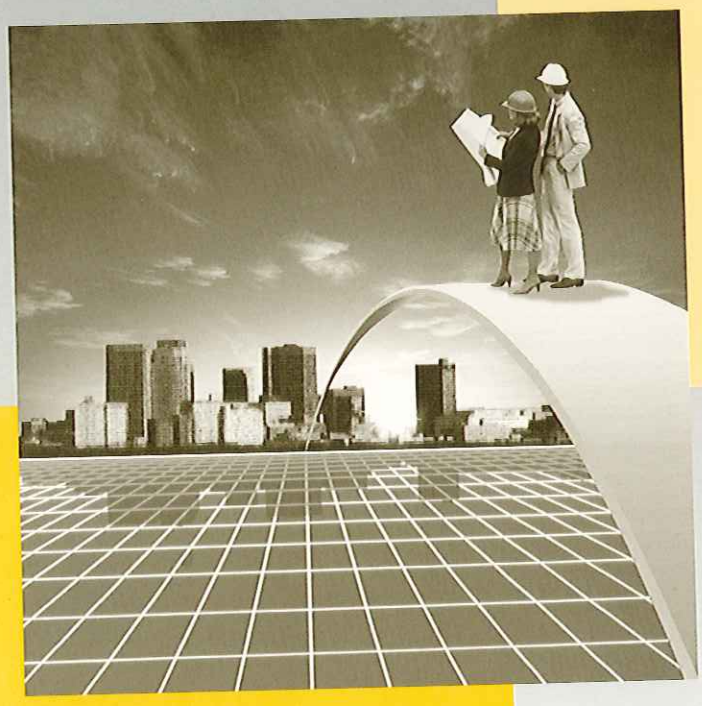

Implementation Committee Report

May 26/2000

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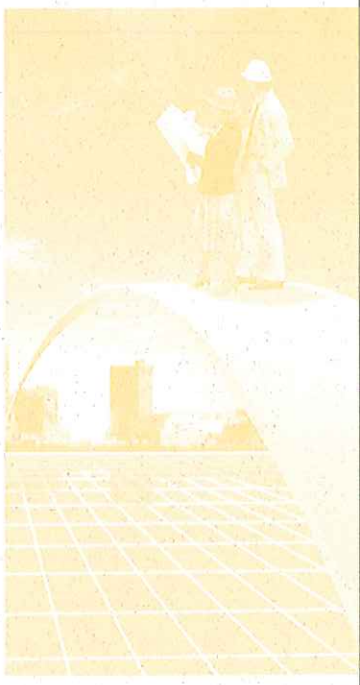


SIRP

SIRP Implementation Committee

The Strategic Infrastructure Reinvestment Policy (SIRP) Report was released May 15, 1998. The Report was considered by the Standing Policy Committee on Public Works June 29, 1998, Executive Policy Committee July 7, 1998, and approved by Winnipeg City Council on July 22, 1998.

The final of the 30 recommendations contained in the SIRP Report was:

That the City establish a SIRP Implementation Committee – headed by the Chairperson of the Standing Committee on Public Works – with a mandate to implement adopted policy options within 12 months of its appointment.

This Implementation Committee was created in September 1998, consisting of government, business and labour representatives. The Implementation Committee then established seven Sub-Committees, chaired by the following:

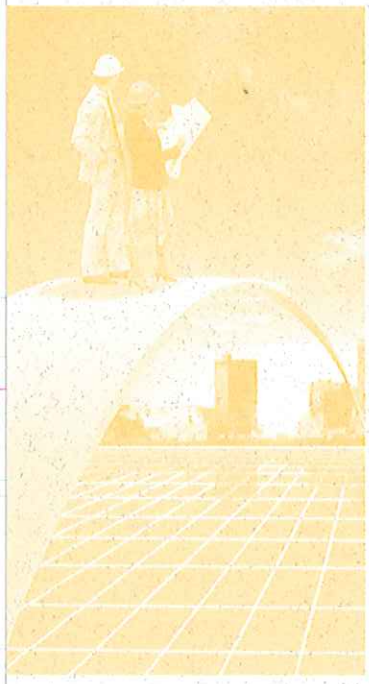
• Maintenance	**Bruce McPhail**, P. Eng. Manager of Streets Maintenance	Public Works Department
• Technology	**Bill Larkin**, P. Eng. Manager of Engineering	Public Works Department
• Financial	**Keith Dowdall** Director of Corporate Finance	Corporate Finance
• ASD	**Betty Holsten Boyer** Manager of Financial & Business Initiatives	Corporate Finance
• Transportation Utility	**Kenn Rosin**, P. Eng. Manager of Transportation	Public Works Department
• National Infrastructure Program	**Brent Rosnowski** Intergovernmental Affairs Coordinator	EPC Secretariat
• Sustainable Development	**Mike Sterdan** Manager of Economic Initiatives	CAO Secretariat

Chairpersons of each Sub-Committee became members of the Implementation Committee.

Following the October 1998 election, **Councillor Peter De Smedt** was named Chairperson of the Standing Policy Committee on Public Works, and subsequently, Chair of the Strategic Infrastructure Reinvestment Policy Implementation Committee. His Co-Vice Chairs are **Jim Thomson**, P. Eng., Director of Public Works, and **Chris Lorenc**, B.A., LL.B., President of the Infrastructure Council of Manitoba.

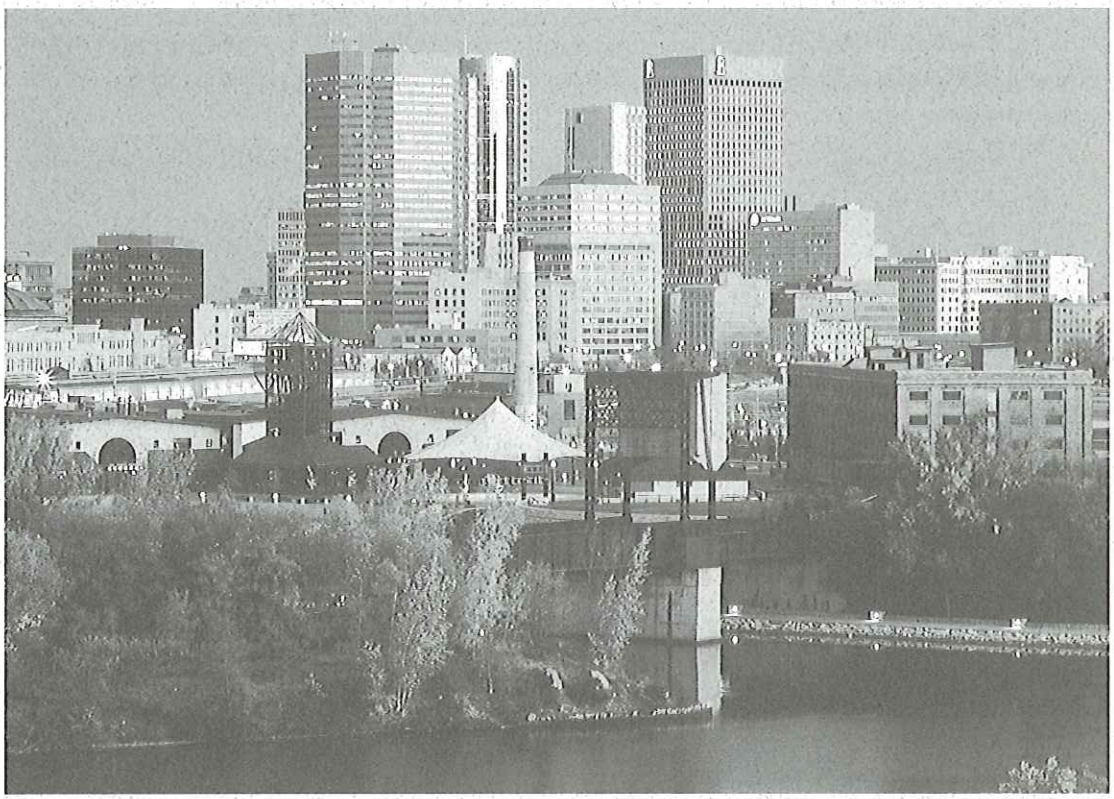
Sub-Committee Chairs were to establish their own working groups and bring back the recommendations of their Sub-Committees to the Implementation Committee for consideration by September 1999. The magnitude of this task was greater than anticipated, and thus was completed in March 2000.

Report Purpose



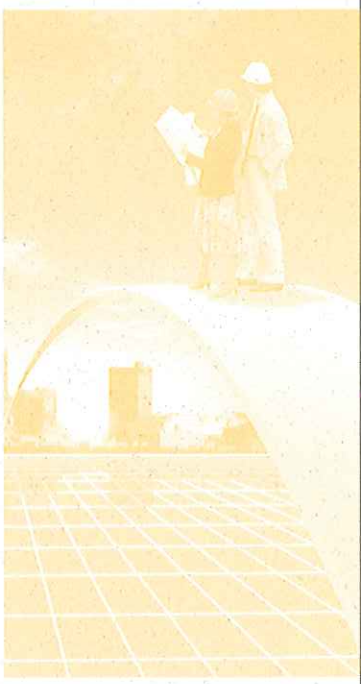
This document is a summary of the seven individual SIRP Implementation Sub-Committee Reports, as of March 2000. It is important to note that this remains very much a work in progress – that just as the state of the City's infrastructure has evolved over time, so too will the measures designed to improve it.

To reference the complete, final reports of each Sub-Committee, please visit the City's website at **www.city.winnipeg.mb.ca**, or contact the City Clerk's Department by mail at Council Building, 510 Main Street, R3B 1B9, by phone at (204) 986-2171, or by fax at (204) 986-3452.



Background

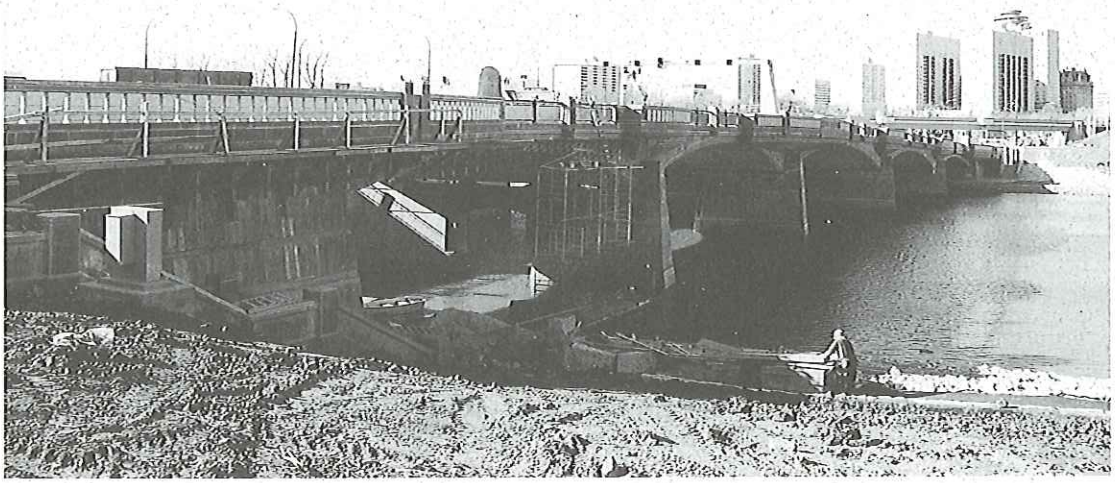
In April 1995, the Committee on Works and Operations recognized the need to adopt a Strategic Infrastructure Reinvestment Policy (SIRP) for Winnipeg, and established a volunteer task force comprising a cross-section of participants from government, business, labour and academic communities.

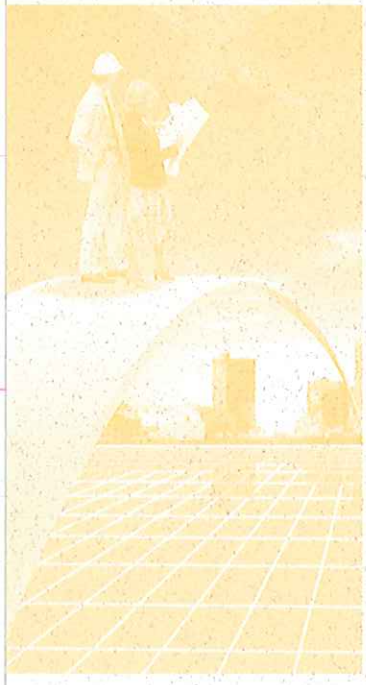


The SIRP Task Force was charged with the responsibility of drafting a plan with the following goals:

- document the current infrastructure condition
- identify investment needed for upgrade and strategic investment
- establish a plan to fund infrastructure investment
- identify such legislative and other amendment(s) required to facilitate implementation of the financial plan, and
- recommend a "Strategic Infrastructure Reinvestment Policy".

Winnipeg has a large infrastructure deficit — that is, the difference between *what is currently being invested in infrastructure maintenance and renewal, and what needs to be invested.* It is estimated that the state of the City's bridges, streets, alleys, sidewalks, water and sewer mains, parking structures, buildings, swimming pools, solid waste and electric utility components combined represents an accumulated infrastructure deficit exceeding $750 million, as of 1998 – and continuing to grow at an estimated rate of $81.7 million per year *(see chart on page 4).*
Such a condition is common to most North American cities.





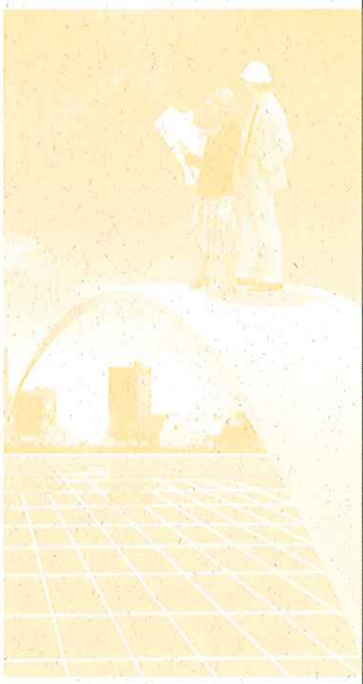
Infrastructure Capital Expenditures[1]

(in millions of dollars)

Infrastructure Element	Replacement Value [2]	Required Annual Need	Average Annual Budgeted Expenditure[3]	Average Annual Investment Deficit	Present City Source of Funding	Expenditure Type
Bridges & Structures	$ 987	$19.7	$13.7	$6.0	Mill Rate[4]	Debt
Regional Streets	1000	25.0	14.8	10.2	Mill Rate[4]	Debt
Residential Streets	2600	30.0	2.5	27.5	Mill Rate	Debt
Back Lanes	373	5.0	1.8	3.2	Mill Rate	Debt
Sidewalks	163	2.0	0.9	1.1	Mill Rate	Debt
Watermains	1080	10.8	6.3	4.5	Frontage Levy	Cash
Shoal Lake Aqueduct	500	6.0	3.8	2.2	Surcharge	Cash
Other Waterworks & System Funding[5]	250	5.0	1.5	3.5	Water Rate	Debt
Sewers	2900	29.0	17.5	11.5	Frontage Levy	Cash
Sewage Interceptor/ Lift Stations	250	2.5	2.5	0.0	Sewer Rate/ Surcharge	Cash (Reserve) 34% Cash (Rate) 66%
Sewage Treatment Plants	600	6.0	7.5	(1.5)	Sewer Rate/ Surcharge	Cash (Reserve) 47% Cash (Rate) 53%
Land Drainage Systems	1700	2.0	2.0 [3]	0.0	Mill Rate	Debt
Power Plants & Dams[6]	550	7.3	11.5	(4.2)	Electricity Rate/ Retained Earnings	Debt 81% Cash 19%
Transmission Lines	90	1.2	5.9	(4.7)	Electricity Rate/ Retained Earnings	Debt 81% Cash 19%
Substations & Distribution Systems	560	16.0	9.4	6.6	Electricity Rate/ Retained Earnings	Debt 81% Cash 19%
Civic Buildings	229	9.5	4.1	5.4	Mill Rate	Debt
Parkades	58	1.7	0.2	1.5	Mill Rate	Debt
Parks & Recreation[7]	246	9.8	1.2 [2]	8.6	Mill Rate	Debt
Transit Buses	180	10.0	10.9	(0.9)	Transit Rate[4]	Debt 11% Cash 89%
Transit Plant & Equipment	85	3.2	2.0	1.2	Transit Rate	Debt
TOTAL (millions)	**$14,401**	**$201.7**	**$120.0**	**$81.7**		

[1] All numbers supplied and verified by respective civic departments.
[2] Replacement value in 1997 dollars.
[3] From 1998 capital budget and five-year (1998 - 2003) forecast — except Land Drainage Systems and Parks and Recreation, which are from the 1997 capital budget and five-year (1997 - 2002) forecast.
[4] These activities receive Provincial UCPA funding.
[5] Does not include water treatment plant cost of $204 million which will be 67% cash financed via a surcharge.
[6] Does not include reserve funds being accumulated for Power Plant Refurbishment.
[7] Does not include community center unheated spaces, hockey pens, or lighting systems, the zoo, conservatory, and hard and soft landscaping.

It is worthy to note that also as of 1998, Winnipeg's infrastructure represents a cumulative public investment of approximately $14.4 billion.



The infrastructure deficit facing Winnipeg can be attributed to a number of significant factors:

- old infrastructure
- severe climate and soil conditions
- inadequate maintenance
- inadequate and non-uniform standards
- changing growth patterns
- exurban development
- financial restrictions
- cash accounting methods
- insufficient analysis
- absence of a sustainable investment policy.

Upon reviewing Winnipeg's infrastructure condition and the reasons for it, the SIRP Task Force concluded that there are three key issues:

1) we must invest more into infrastructure

2) we must make strategic investments with the dollars we do have, and

3) we must find ways to reduce the magnitude of the infrastructure deficit problem.

It is essential that infrastructure spending be seen as an investment and not a cost. Infrastructure investments must be sustainable, strategic in nature, balanced in approach, and based on sound cost benefit and life cycle analyses.



Policy Option/Implementation Recommendation Summary

Implementation of Life Cycle Costing to be reported upon annually.

The following section identifies the Policy Options presented in each of the SIRP Report's seven categories, briefly addresses the issues involved, and states the Implementation Recommendations from the respective Sub-Committees.

A.) Infrastructure Maintenance Recommendations

The City's existing infrastructure represents a huge in-place investment, and it is critical that proper stewardship protects and enhances this investment. This can only happen if the City optimizes its investments in infrastructure preservation activities.

Policy Option — Life Cycle Costing

1. ***That all capital programs for new or rehabilitated infrastructure be subjected to life cycle costing analysis to determine the most cost effective options for consideration.***

Life Cycle Costing Analysis is an economic analysis tool that allows for the comparison — on a project specific basis — of various design alternatives that offer varying initial costs, and maintenance and rehabilitation requirements over the expected lifetime of the facility. It encompasses not only initial design and construction, but also repair, rehabilitation, reconstruction, retirement and removal over an infrastructure's lifetime.

The Maintenance Sub-Committee has developed standard Life Cycle Costing Parameters for City roads, bridges, watermains, waste water sewers, and land drainage sewers. To evaluate the suitability and implementation of these standards over time, it is recommended that a volunteer Task Force be established consisting of a cross-section of participants from the City, construction and consulting communities. This Task Force would meet at minimum on an annual basis, and report annually to an Internal Steering Committee (as referred to in Policy Option # 2) in a fashion consistent with its mandate.

The Maintenance Sub-Committee also recommends a phased transition into Life Cycle Costing Analysis, beginning with a focus on projects where a significant return is easily identified. The proposed transition is as follows:

Year 1 New facilities and $1M+ rehabilitations of existing infrastructure
Year 2 Include $.5M+ rehabilitations of existing infrastructure
Year 3 Include all projects

As well, Life Cycle Costing Standards must be incorporated into any Asset Management System that is currently under development in the City.

Implementation Recommendations:

- *That Life Cycle Costing Analysis be phased-in over a three-year period, beginning with new facilities and $1M+ rehabilitations of existing infrastructure.*

- *That once the three-year transition is complete, Life Cycle Costing Analysis be completed whenever the City is considering a new project or upgrading any existing infrastructure.*

- *That a volunteer Task Force be established to annually (at minimum) evaluate Life Cycle Cost Parameters utilized and implemented by the City.*

- *That this Task Force report to an Internal Steering Committee (see Policy Option #2) on its activities and any recommendations on an annual basis.*

For every dollar invested in preventative maintenance programs, savings of six to eight dollars can be realized.

Policy Option — Minimize Deferred Maintenance

2. ***That ideally, maintenance for existing infrastructure should only be deferred if the impact on the life expectancy and life cycle of the asset is documented to be minimal.***

In the budget process, the long-term impact of deferred maintenance must be considered. Short-term savings by deferring maintenance result in higher long-term costs of repair, as well as a decreased life cycle of the infrastructure. For example, cost-effective preventative maintenance programs such as joint sealing or thin bituminous overlay (TBO) extend pavement life. For every dollar invested in preventative maintenance programs, savings of six to eight dollars in more costly rehabilitation and reconstruction projects can be realized. Deferring maintenance and incurring future costly liabilities is totally inconsistent with the sustainable infrastructure concept identified in the SIRP Report.

Implementation Recommendation:

- *That an Internal Steering Committee be established to ensure that the Asset Management Systems currently under development in the Public Works and Water and Waste Departments include a consistent approach in determining maintenance requirement needs, priority schedules and impact analysis of deferring infrastructure maintenance.*

Prior to 1990, annual budget adjustments for inventory growth and inflation were incorporated.

Policy Option — Factor Maintenance into Initial Costs

3. ***That when new or upgraded facilities are proposed, they be accompanied by resulting incremental maintenance costs, linked into a parallel maintenance budget.***

Prior to the budgetary constraints imposed for most of the 1990s, the City addressed incremental maintenance costs through the annual adjustment for inventory growth and inflation. This policy ensured that additional funding to offset any incremental maintenance costs was in place. For example, construction of a new roadway such as the Bishop Grandin Extension would result in an incremental increase in the City's overall street inventory. Infrastructure maintenance budgets would be increased to reflect this additional requirement for maintenance services. An inflationary adjustment would also be made annually.

Implementation Recommendation:

- *That the City's infrastructure maintenance budgets be adjusted on an annual basis to reflect any growth in physical inventory, as well as an inflationary increase to cover rising labour, material and equipment costs.*

Policy Option — Computerized Maintenance Management System (CMMS)

4. ***That Civic Department preventative maintenance programs be funded by Council to be information current, and supported by Computerized Maintenance Management Systems (CMMS).***

A number of City departments are developing information and maintenance management systems to improve the management of our infrastructure, and to utilize limited funding most effectively:

•Corporate	GIS (Geographic Information System)
•Water & Waste	Computerized Work Management System
•Public Works (Infrastructure)	Asset Management
•Public Works (Facilities)	MAXIMO

Establishing a Steering Committee to oversee these efforts would ensure a consistent approach and provide positive cross-pollination of the development.

Implementation Recommendation:

- *That the Internal Steering Committee referred to in Policy Option #2 provide linkages and continuity between the City's information and management systems related to infrastructure, and report annually to the Public Works Department.*

Policy Option — Management of Asset Data

5. ***That the CAO Secretariat be assigned and resourced to coordinate the City's infrastructure asset data management.***

Infrastructure asset data management is a corporate leadership function. It requires long-term support and Council commitment to provide adequate funding and resources.

Implementation Recommendation:

- *That the CAO be tasked to lead and coordinate the City's infrastructure asset data management.*

The CAO must be resourced to coordinate asset management data.



B.) New Technology Recommendations

It is in the City's interest to lead in and facilitate the application of new technologies.

Applying superior technology to the City's infrastructure will result in significant, long-term benefits, such as improved strength, enhanced durability, longer life cycles and reduced maintenance costs. Given that Winnipeg is home to some of the world's leaders in innovative technologies, it is critical that the City play an active role in supporting this industry – both by using and encouraging the use of new technologies that are available, and by partnering in research to discover more.

Policy Option — Advanced Techniques & Technologies

6. ***That the City encourage the application of "intelligent" technology, new methodologies and innovative products such as Advanced Composite Materials (ACMs) in infrastructure renewal, rehabilitation, construction or preventative maintenance programs.***

Implementation Recommendations:

- *That the City facilitate technology transfer by encouraging and, where appropriate, participating in workshops and seminars.*

- *That the City partner with the University of Manitoba, Red River College, other government agencies, engineering consultants, contractors and suppliers in an annual municipal infrastructure technology conference on pavements, water and sewer, bridges and structures.*

Policy Option — Improved Practices

7. ***That the City encourage the use of advanced techniques, improved technologies, better materials and best practices in all infrastructure programs, and participate in the technical guide for infrastructure initiative.***

Implementation Recommendations:

- *That the City participate in the cooperative effort by the National Research Council (NRC), the Canadian Public Works Association (CPWA) and the Federation of Canadian Municipalities (FCM) to develop a Technical Guide for Urban Infrastructure for Canada.*

- *That the City carry out field trials on promising technologies.*

Policy Option — Update Construction Specifications

8. ***That the City's standard construction specifications and general conditions be reviewed to encourage use of innovative practices, technologies and materials. The academic, engineering and construction communities should be involved in this review.***

For new technologies to be utilized, they must be accepted and incorporated into standard specifications. Product supplier partners for the City must be identified, and certification criteria for specialized suppliers and contractors must be established.

Implementation Recommendation:

- *That through Specification Committees the City successfully implement new technology into City standards for pavement, water and sewer, bridges and structures.*

Policy Option — Commitment to Strategic Research & Innovation

9. ***That the City partner with academia to strategically fund research aimed at identifying new or improved materials, technologies and techniques having broad infrastructure application.***

Strategic research is a critical component of new technology. To keep on top of the latest advances in techniques and technologies, the City must play an active role in research. One such example is the Maryland Bridge. The use of Advanced Composite Materials (ACMs) in the repair of the structure will help establish the performance of the product before the complete rehabilitation is undertaken. In return for the City's $140,000 investment, anticipated capital savings are estimated to be in the range of $2 million.

Partners for candidate research from universities and the construction industry must continue to be identified, and a complete proposal process must be established to carry out City-funded research.

Implementation Recommendations:

- *That targeted Working Groups be structured to identify and prioritize areas for strategic research, and identify partners for strategic research from universities and the construction industry.*

- *That the City commit $500,000 in 2001 to strategic municipal infrastructure research, and 0.5% of the annual construction budget thereafter.*

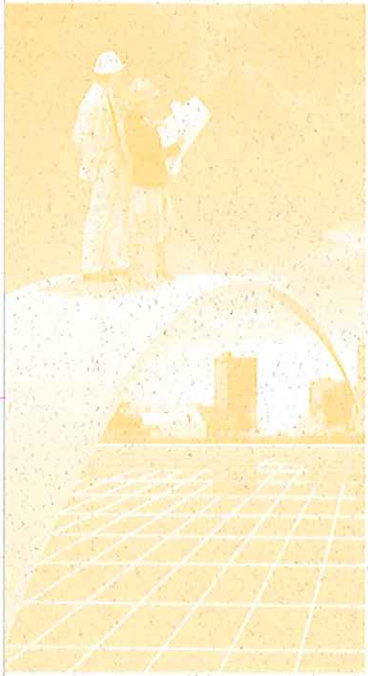
  - *That included in this commitment, the City encourage post-secondary education in intelligent infrastructure renewal by supporting students who are undertaking research and technology transfer initiatives on an applied research basis.*

- *That the City support the establishment of an Internet-accessible database on worldwide infrastructure technology at the University of Manitoba, Faculty of Engineering.*

- *That the City cost-share in the creation of a faculty position in urban infrastructure renewal at the University of Manitoba, Faculty of Engineering.*

The City must commit to strategic research and innovation.

C.) Financial-Based Recommendations



The City's challenge to meet its debt servicing obligations are on the verge of becoming controllable. By following disciplined fiscal measures to control the situation, the current forecast indicates that tax-supported debt and finance charges will peak in 2002 at a level of $141.4 million, and decline thereafter to a level of $88.4 million by 2015.

The City is under pressure to control costs while at the same time provide adequate funding to support an increasing demand for infrastructure investment.

The City has committed to financing tax-supported capital projects on a "pay-as-you-go" basis. This has been a difficult challenge as it requires finding sufficient financial resources to move to "pay-as-you-go" while still paying off past debt. The benefits of "pay-as-you-go" are both real and significant. It can be demonstrated that by eliminating interest payments and adopting a "pay-as-you-go" approach, the opportunity exists to increase capital investments by up to 50 per cent for the same dollar amount — or alternatively — to reduce costs and use those savings to address other priorities.

After the peak of tax-supported debt and finance charges is reached in 2002, the question remains – What should the City do with the savings? Reduce taxes? Offset expenditures? Apply the savings on a pay-as-you-go basis toward the infrastructure deficit?

Options:

With regard to increased funding for infrastructure, four options were explored – applying 100%, 75%, 50% and 25% of the savings to increased capital investment on a pay-as-you-go basis toward the infrastructure deficit. The results are as follows:

(Note: The complete SIRP Finance Sub-Committee Report is included in the Appendices on page 37, including details of all four options.)

(Millions)

	Annual Capital Funding Available in 2015	Pay-As-You-Go Financing Amount	Increase in Funding Over Years	Change in Funding After 2% Inflation
Status Quo Plan: ($61 M. peak in 2004)	$102.1	$61.0	$18.4	– $10.6
Option 1: Apply 100% Savings to Increase Pay-As-You-Go.	$155.1	$114.0	$71.4	$42.5
Option 2: Apply 75% Savings to Increase Pay-As-You-Go.	$141.9	$100.8	$58.2	$29.2
Option 3: Apply 50% Savings to Increase Pay-As-You-Go.	$128.6	$87.5	$44.9	$16.0
Option 4: Apply 25% Savings to Increase Pay-As-You-Go.	$115.4	$74.3	$31.7	$2.7

By 2015, the difference in capital funding available between Option 1 (100%) and Option 4 (25%) is $39.8 million annually.

With the City of Winnipeg's infrastructure investment deficit estimated in 1998 at over $750 million – and continuing to grow at approximately $81.7 million each year — applying 100% of the savings to pay-as-you-go capital investment on infrastructure will ***only begin to address the issue***. Therefore, the SIRP Implementation Committee strongly recommends that Option 1 be pursued.

Applying 100% of the savings to pay-as-you-go capital investments on infrastructure IS STILL NOT ENOUGH.

The 100% option will only address half of the infrastructure deficit. Additional measures must be identified to thoroughly eliminate this infrastructure investment deficit, to reduce the long-term detrimental impact of deferral on the City, and to protect the significant investment that our infrastructure represents.

Policy Option — Urban Infrastructure Financing Plan

10. ***That the City create and adopt an urban infrastructure financing plan, based on the principles outlined in Appendix "C" of the SIRP Report – Urban Infrastructure Financing Principles.***

These principles address the need for adequate and secure funds to deliver an infrastructure investment program that supports new visions and moves toward a sustainable future.

Implementation Recommendations:

- *That the City continue to reflect its decisions against all of the Urban Infrastructure Financing Principles outlined in Appendix "C" of the SIRP Report when preparing capital budgets.*

- *That following the peak in 2002, it is essential that the City apply 100% of the savings derived from reduced tax-supported debt and finance charges to increased capital investment toward infrastructure, on a pay-as-you-go basis.*

Policy Option — Accrual Accounting System

11. ***That the City adopt a system for showing depreciation on its capital assets and begin the process of accounting for deferred maintenance.***

The City has capitalized its fixed assets on the basis of any related debenture or internal debt that has been incurred to finance these assets. All assets that are acquired with no related debt are expensed in the year. Depreciation expense is calculated based on the annual principal repayment requirements of all debt outstanding in the City. The City does not consistently account for the cost or net book value of its capital assets in sub-ledgers, and does not account for deferred maintenance liabilities.

Commitment to an Urban Infrastructure Financing Plan is essential.

New systems — such as the Asset Management System — are being implemented to provide decision makers with the appropriate information on depreciation and maintenance costs to allow informed decisions when considering the priorities and spending in the capital and current budgets.

In addition, regulating bodies both in Canada and the U.S. are currently reviewing the generally accepted accounting principles applicable to municipal government, related to accounting for infrastructure. The City will be implementing accounting policies to be compliant with principles adopted.

Implementation Recommendation:

- *That the City of Winnipeg continue to develop the appropriate systems and adopt the accounting principles which would provide decision makers with the appropriate level of information to make informed decisions.*

Policy Option — Fully Costed Services

12. That the City apply full cost accounting principles to all government services, and that pricing of services should reflect the full true costs of service provision.

Over the past few years, the City has allocated employee benefits, facilities charges and debt and finance costs to departments to determine the full true cost. The City now employs the Management Reference Model (MRM) to define and describe its programs and services. This model provides invaluable information that will be used for full costing services. Similarly, the City's controllership group struck a committee to review general government charges and their allocations to the utilities.

Implementation Recommendation:

- *That the City continue to pursue these initiatives to further refine service costing such that the pricing of services reflects the full, true cost of service delivery.*

Policy Option — Application of User Fees

13. That the City implement properly structured user fees where the user and the service delivered can be identified.

Winnipeg already has many user fees such as water, sewer, and hydro. In addition, other fees are collected that are directly related to the expenditure incurred — such as many of our recreation or regulatory programs.

As noted in the SIRP Report, municipal governments that charge user fees are better able to maintain their infrastructure than others. Our own sewer and water levy – in place since the 1980's — demonstrates the value of such dedicated funding. Having the funds available to invest in the system on an annual, ongoing basis makes it possible to improve the condition of Winnipeg's sewer and water system compared to other infrastructure assets.

In the current business planning process, all departments are considering opportunities where the "user pay" philosophy can be implemented. For infrastructure, there are a number of "user pay" areas that could be considered, including:

- Motive fuel tax
- Tolls
- Infrastructure Renewal Levy

Implementation Recommendation:

- *That the City continue to examine the feasibility of user fees to pay for infrastructure costs. For large capital projects, consideration should be given to the applicability of a user fee to finance the project, as opposed to the general property tax.*

Full cost accounting is an essential financial management tool.

Policy Option — Shift from Mill Rate to User Fees

14. ***Any new user pay funding that relates to property and which replaces existing mill rate supported infrastructure budgets, should be accompanied by a mill rate reduction equivalent to the pre-user fee level of mill rate support.***

In the event that user fees are collected and applied to infrastructure maintenance, a corresponding mill rate reduction would result. This method more clearly links the user to the service and creates better public understanding than the current general revenue method.

Implementation Recommendation:

- *That in the preparation of current budgets, the impact on the mill rate associated with the introduction of any new user fee related to property be identified.*

Dedicated revenues allow for sustained and sustainable investment in Winnipeg's infrastructure.

Policy Option — Infrastructure Services Renewal Levy

15. *That the City consider developing an "Infrastructure Services Renewal Levy" program which would manage the levying of specific user fees/levies to dedicated infrastructure rehabilitation and renewal programs.*

The City does not currently have the power to levy a frontage fee for street renewal, but has considered this option. In fact, Executive Policy Committee approved a proposed amendment to the City of Winnipeg Act – Utilization of Frontage Levy Monies February 16, 2000, and forwarded the motion to Council.

This proposed amendment would permit the current frontage levy designated for watermain renewal and sewer line renewal to be applied to other areas, as determined by Council.

A frontage levy for the renewal of bridges would require legislative authority and therefore an amendment to the existing legislation by the Province.

Implementation Recommendation:

- *That the Province of Manitoba be requested to amend The City of Winnipeg Act to allow the expenditure of frontage levy monies for the renewal, repair and replacement of residential streets and sidewalks as well as watermain renewal and sewer line renewal.*

Policy Option — Pursue Dedicated Levy Legislation

16. *That the City pursue Provincial legislation to allow new funding sources for infrastructure renewal, and that funds raised be dedicated for specific infrastructure purposes only.*

As part of its overall revenue strategy, it is the City's intention to request the Province remit a share of gasoline tax to municipalities. The revenue from this source would be directed to transportation infrastructure and be used to replace existing funding derived from property taxation. This would result in a property tax reduction.

The Province of Alberta has recently adopted such legislation with great success. In addition, both Montreal and Vancouver apply revenues from gasoline tax (as well as other sources) to fund agencies that manage their transportation infrastructure.

Implementation Recommendations:

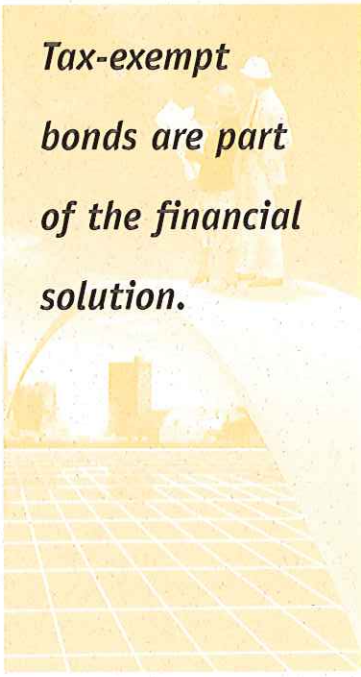
- *That the City of Winnipeg and the Association of Manitoba Municipalities (AMM) request the Province of Manitoba to amend The Gasoline Tax Act to allow all the municipalities in Manitoba to benefit from an appropriate share of the Provincial tax on gasoline, gasohol, diesel and propane fuels used in motor vehicles.*

  - *That the specific amount be the subject of negotiations to reflect usage and the required dedicated revenue stream.*

  - *That the tax collected by the Province of Manitoba be distributed to each municipal government, pro rated on the percentage of motor vehicles registered within each municipality.*

  - *That the amount remitted to municipalities be designated to fund transportation-related infrastructure priorities identified by each municipal government.*

Tax-exempt bonds are part of the financial solution.



Policy Option — Tax Exempt Bonds

17. ***That the City pursue, with the Province of Manitoba and the Federation of Canadian Municipalities, an amendment to the Income Tax Act to allow tax exempt interest on government bonds raised for designated infrastructure project purposes.***

Currently, the Government of Canada does not provide the legislation necessary to have tax-exempt municipal bonds. There would be a cost to the Federal Government and change would be needed at the political level. The Corporate Finance department has had several discussions with capital markets representatives on this issue, and the Federal Government remains unreceptive.

The Investment Dealers Association of Canada has lobbied the Federal Government on behalf of municipalities on this subject, most recently during times of high interest rates in the late 70s and early 80s. The Federal Government expressed concern at that time that artificially lower borrowing rates would encourage increased borrowing.

Implementation Recommendation:

- *The City will continue to pursue this issue with the Provincial Government and the Federation of Canadian Municipalities.*

Intergenerational financing recognizes life cycle benefits and shared responsibilities.

Policy Option — Intergenerational Financing

18. That the City should finance infrastructure projects in a manner that properly recognizes project life and replacement patterns.

As the City continues to move toward "pay-as-you-go" financing for tax supported projects, these projects can be funded in the year they are authorized. In some cases, this means that intergenerational projects would be financed for tomorrow's users by today's taxpayers. To avoid this, some major investments may still be financed over time through the General Reserve, reflecting project life and replacement patterns, and benefiting generations.

Implementation Recommendations:

- *That the City put reporting procedures in place to deal with major capital projects, and develop a listing of financing alternatives – including Intergenerational Financing — for consideration each time a major capital project is brought forward.*

- *That capital budgets continue to be scrutinized so that maintenance is funded through operating budgets.*

Policy Option — Cost Shared Programs

19. That the City join with other Manitoba municipalities and the Provincial Government in lobbying the Federal Government to support implementation of a sustained National Infrastructure Program, focusing in part on municipal infrastructure renewal.

Implementation Recommendation:

- *That the City Council continue efforts with the Province of Manitoba, AMM, FCM, and other national, regional and provincial stakeholder organizations to jointly coordinate efforts to implement this recommendation.*

D.) Alternative Service Delivery Recommendations

Alternative Service Delivery (ASD) has been discussed and/or implemented by all levels of government as a means to provide better services at a lower cost to tax payers. Examples of ASD options include:

- Public/Private Partnerships (PPPs)
- Special Operating Agencies
- Contracting Out
- Privatization

The selection and implementation of an ASD option depends on the particular goals, objectives and circumstances of an organization and its stakeholders.

Strategic implementation of ASD can provide significant long-term financial benefits.

Policy Option — Implement ASD Options

20. ***That with regard to infrastructure, Council implement its adopted policy on Alternative Service Delivery, as follows:***

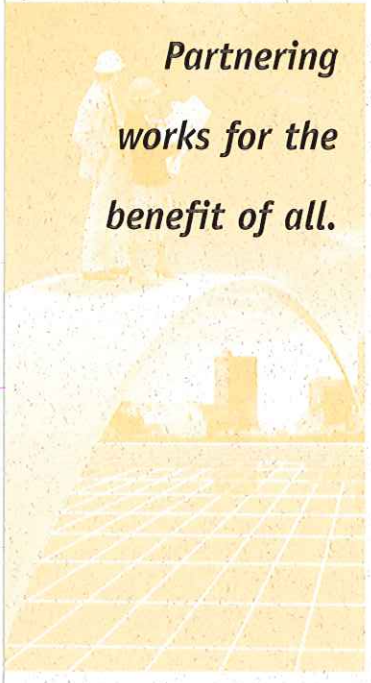
    "The City of Winnipeg is committed to providing quality services at an affordable cost on a sustainable basis. To this end, the City will systematically review its programs, services, and delivery mechanisms, and will pursue the most appropriate methods and structures for providing services to achieve the best value for the municipal tax dollar and the optimal balance of overall benefits to the City and its Community."

On March 25, 1998, Council adopted the Policy and Framework for Alternative Service Delivery for the City of Winnipeg.

Implementation of this policy has proceeded, with the issuance of the organization's first ASD Call Letter on October 22, 1998 by the CAO. Departments submitted responses to the ASD Call Letter and those submissions were analyzed for inclusion in the 1999 ASD Review Agenda. Council approved the first ASD Review Agenda in February 1999, and established an ASD Committee of Council to oversee the ASD process. The ASD Committee, through Executive Policy Committee, will recommend future ASD Review Agendas to Council on an annual basis.

In addition, it is anticipated that multi-year departmental planning will be instrumental in generating discussion and identifying ASD ideas for inclusion in the formal ASD process.

Partnering works for the benefit of all.



Policy Option — Public-Private Partnership Research

21. That Council ensure both internal and external research capacity be devoted to monitor and assess PPP trends throughout Canada, and to assist the City in considering local PPP proposals.

Policy Option — Pursue Partnering Strategies

22. That Council pursue partnering strategies for infrastructure works in accordance with the framework of all applicable Council adopted policies.

Policy Option — PPP Policy Options

23. That Council adopt as policy, consideration of the entire PPP spectrum as policy options in all large capital projects involving all aspects of infrastructure.

This Sub-Committee Report was written with the following objectives:

- To provide an environmental scan on PPPs locally and more broadly
- To identify and define the critical components of building successful PPPs
- To outline a general development process for PPPs
- To portray an accurate picture of the benefits and risks of such arrangements
- To promote PPPs as a viable option for infrastructure reinvestment.

Research has confirmed that there is no "one best method" for PPP. The best results emerge when the method chosen is developed within the context of the environment of the project – including political, economical, sociological and technical factors. All models have advantages and disadvantages, and what works for one project might not work for another.

The success of various Public-Private Partnership projects must be viewed objectively within the context of each project. Appropriate performance measures must be determined to gauge the actual outcome or accomplishments.

PPPs are an option by which the public sector can reinvest in infrastructure in a cost-effective manner. They serve as an innovative strategy for governments to provide quality services to the public within fiscal realities. As this evolution continues, the City will strive to develop "best guidelines" to assist in successful PPPs.

Implementation Recommendations:

- *That the ASD Sub-Committee's report on Public/Private Partnerships be accepted as:*
  - *A preliminary step for outlining principles and guidance on PPPs, and*
  - *Part of the group of reference documents supporting the larger ASD Policy Framework for the City of Winnipeg.*
- *That the above mentioned report be widely shared and feedback encouraged by users and stakeholders. The report is not to be viewed as static, but rather as a document that will continue to evolve as the organization's PPP experience grows.*
- *Where PPPs are brought forward as part of the annual ASD Call Letter process, the formal City ASD process applies.*



E.) Winnipeg Transportation Utility Recommendations

We must challenge ourselves to determine a logical and cost-effective way to manage transportation investment.

The mandate of the Transportation Utility Sub-Committee was to:

- Identify possible alternatives that could be considered to more effectively manage the transportation system and its assets;
- Identify any common elements that would be critical to the success of any of the identified alternatives;
- Review and evaluate the identified alternatives;
- Recommend an alternative or alternatives for further, more detailed assessment and business plan development, if appropriate.

Policy Option — Winnipeg Transportation Utility

24. That Council, using its ASD policy, develop a business plan to investigate establishing an arm's length "Winnipeg Transportation Utility", and approach the Province of Manitoba to seek any required enabling legislation.

The Sub-Committee assumed that any option identified to more effectively manage the transportation system and its assets would require dedicated funding from current and/or new revenue sources. Such dedicated funding would be available as a critical prerequisite for each of the ASD improvement options. The Sub-Committee strongly believes that without such dedicated funding, there is no compelling reason to significantly alter the organizational structure currently in place. In addition to this funding issue, *political will* to change the current structure is also necessary.

Implementation Recommendations:

- *That a preliminary analysis be undertaken to assess the business case for providing Alternative Service Delivery for transportation systems and asset management for the following:*

The Transportation Department Option

Creation of a new Transportation Department responsible for all transportation services, which would function as a civic utility.

The Transportation SSU Option

Creation of a Special Service Unit (SSU) responsible for the delivery of all transportation services, which would function with a CEO and Advisory Committee.

The Transportation Agency Option

Creation of an Agency with the maximum degree of independence possible under the SSU legislation, which would function with a CEO and Board of Directors.

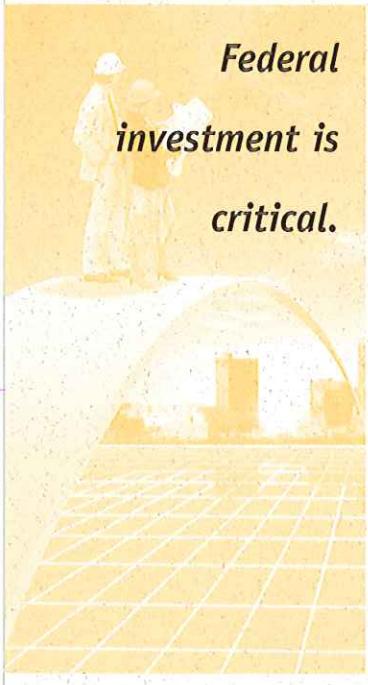
- *That dependent upon the outcome of the preliminary analysis, a more detailed feasibility study be undertaken as part of the ASD process.*

- *That a Steering Committee be established by the CAO to manage the preliminary analysis, and if required, the feasibility study.*



F.) National Infrastructure Policy (NIP) Recommendations

Federal investment is critical.

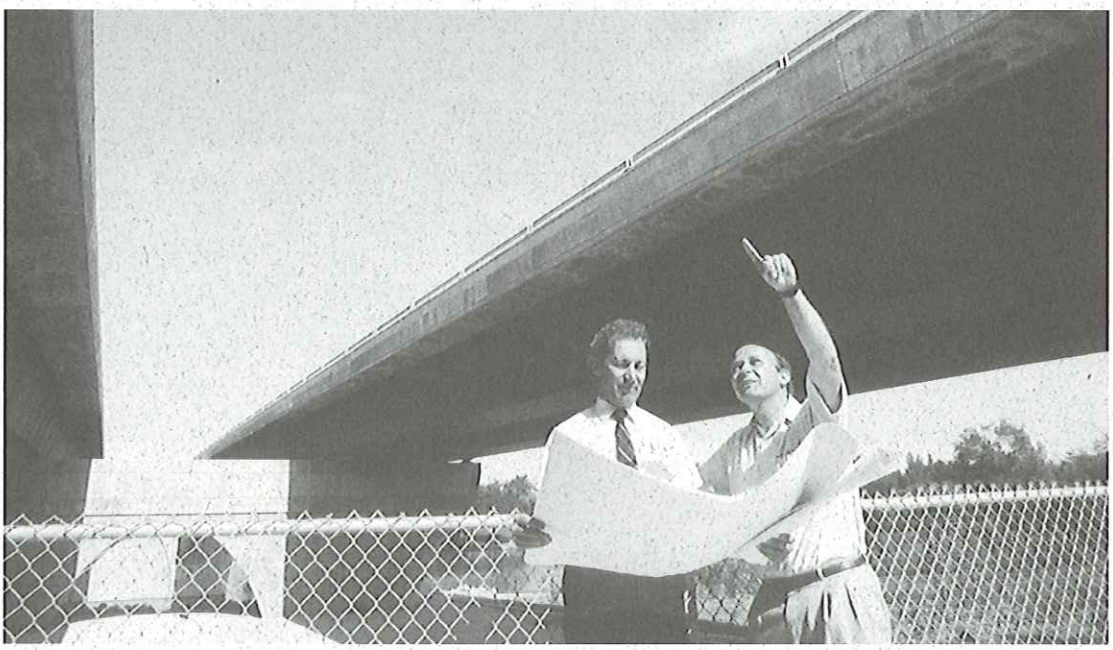


Policy Option — National Infrastructure Policy

25. *That the City and Province partner to lobby the Federal Government to enter into a sustainable infrastructure agreement consistent with the Recommended National Infrastructure Policy (NIP), as set forth by the ICM and the "Proposed Guidelines for a New National Infrastructure Program", as adopted by the Premiers at the 1996 and 1997 Annual Premiers' Conferences.*

Implementation Recommendation:

- *That Council, through strategic lobby initiatives, support efforts seeking federal government leadership and participation in partnered funding of programs addressing core municipal and national transportation infrastructure deficits.*



G.) Sustainable Infrastructure Development Recommendations

Policy Option — Employment Training Program

26. *That the City propose to senior levels of government, the delivery of infrastructure programs whose aim in part would be to provide useful training and employment skills development to various target groups.*

Cost shared infrastructure renewal programs can be designed to provide long-term job skills to target populations, while at the same time replace deteriorated infrastructure. Attrition in the construction industry is projected to be high in upcoming years. Training of replacement workers is critical to sustaining a reasonable skill level within the industry. On-the-job skill enhancement to supplement technical training will ensure a qualified future workforce.

The 1994 Canada Infrastructure Works Program demonstrated that these goals are achievable. Future programs can further improve infrastructure while addressing job training and employment strategies.

Implementation Recommendation:

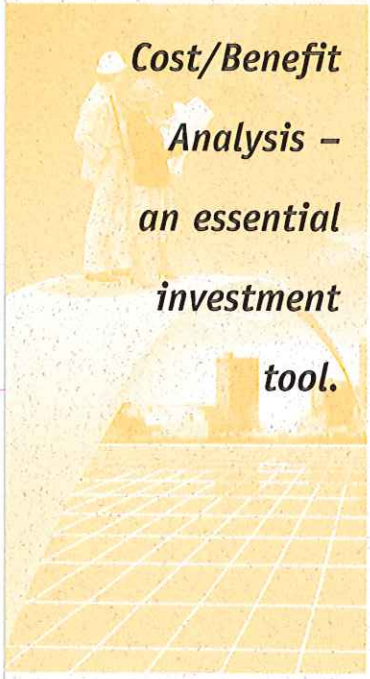
- *That the City of Winnipeg, in partnership with the Province of Manitoba, pursue an aggressive lobby of the Federal Government to fund infrastructure renewal programs that focus in part on skills training for target groups and individuals, with the intent of providing long-term employment.*

Employment and training opportunities form infrastructure investment.

Policy Option — Capital Region Infrastructure Strategy

27. *That the City pursue – with its neighbours and the Provincial Government – implementation of the Capital Region strategy that recognizes the importance of the supply and delivery of infrastructure in an environmentally responsible and sustainable manner.*

Development outside the City boundaries has implications for Winnipeg in a similar way that development in Winnipeg affects outlying areas. Infrastructure investments must take into consideration the needs of the Capital Region through effective strategic planning. The City must be an active proponent of all aspects of development, expansion, land use and infrastructure planning as it relates to the Capital Region Review Committee and its strategy to support sustainable infrastructure development in the Region.



Implementation Recommendation:

- *That City representatives on the Capital Region Committee and Committee of Mayors and Reeves continue to monitor implementation of strategies — as put forward in the Capital Region Review — and emphasize the importance of integrated infrastructure planning with a focus on long-term cost effectiveness and environmental impacts.*

Policy Option — Cost/Benefit Analysis

28. That any new publicly-funded infrastructure project be accompanied by cost/benefit analysis which establishes need and sustainability to clearly justify its construction.

Choosing whether to construct new infrastructure facilities or rehabilitate existing ones requires careful consideration of sustainability. Cost/benefit analysis tools that can establish the need and sustainability of new infrastructure are critical for making informed decisions.

Implementation Recommendations:

- *That the cost/benefit analysis methods employed by other organizations and jurisdictions be assessed, and that a single cost/benefit analysis tool be adopted for the City of Winnipeg, to be used in conjunction with life cycle costing in considering new infrastructure.*

- *That this initiative be reported upon by the Steering Committee referred to in Policy Option # 2.*

Policy Option — Sustainable Infrastructure Development Policy (SIDP)

29. That the City endorse the principles and guidelines of the MRTEE, and adopt the SIRP Principles for Sustainable Infrastructure Development, as set out in Appendix "B" of the SIRP Report.

Infrastructure decisions should be premised upon sustainability. The Manitoba Round Table on the Environment and Economy (MRTEE) adopted a set of principles and guidelines for sustainable development. Similarly, the SIRP Task Force identified 10 Principles for Sustainable Infrastructure Development. Together, these principles and guidelines form the basis for long-term sustainable infrastructure decisions.

Implementation Recommendation:

- *By virtue of Council adopting the SIRP Report, the referenced principles and guidelines have been endorsed by the City. No further action is required.*

Implementation Plan Recommendations

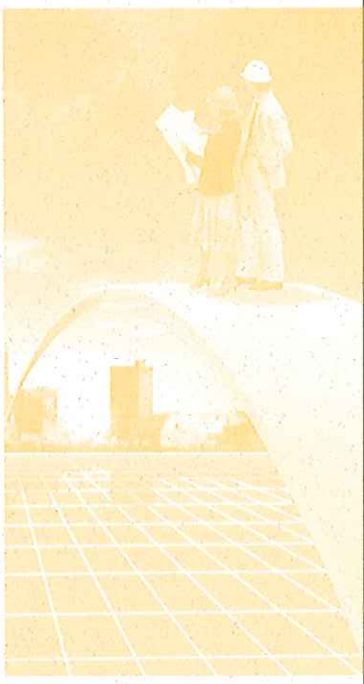
Policy Option — SIRP Implementation Committee

30. ***That the City establish a SIRP Implementation Committee – headed by the Chairperson of the Standing Policy Committee on Public Works and appropriately resourced through the office of the CAO – with a mandate to implement adopted policy options within 12 months of its appointment.***

Implementation Recommendations:

- *That this report demonstrates the accomplishments of the SIRP Implementation Committee to date, and outlines the work that remains to be completed.*

- *That this report and the recommendations outlined herein be adopted by Council for implementation.*

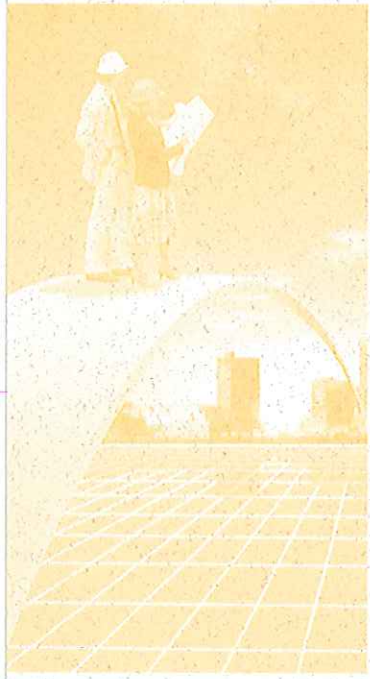


For More Information...

For further details on the information in this summary report, please consult the "Strategic Infrastructure Reinvestment Policy Report & Recommendations" dated May 15, 1998, or a copy of the complete SIRP Implementation Sub-Committee Reports, dated March 2000. These documents are available on the City of Winnipeg website at ***www.city.winnipeg.mb.ca****, or by contacting the City Clerk's Department by mail at Council Building, 510 Main Street, R3B 1B9, by phone at (204) 986-2171, or by fax at (204) 986-3452.*



Appendices:



1. **SIRP Implementation Committee Recommendation Summary & Implementation Cost Estimate**

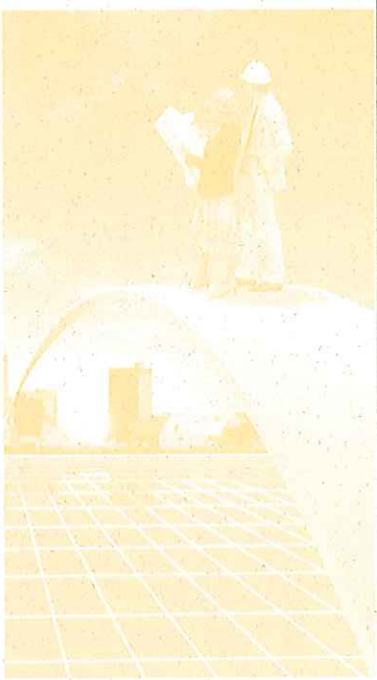
2. **Strategic Infrastructure Reinvestment Policy Financial-Based Policy Options**

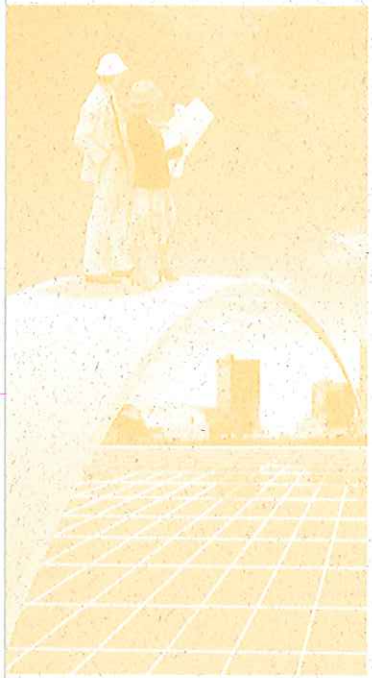
Appendix 1

SIRP Implementation Committee
Recommendation Summary & Implementation Cost Estimate

A.) Infrastructure Maintenance Recommendations

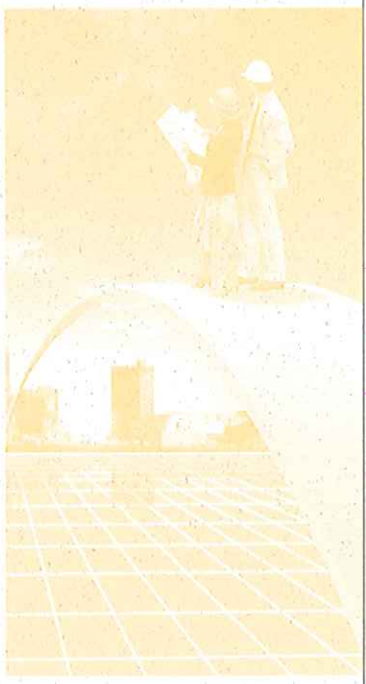
Policy Option	Implementation Recommendations	Estimated Cost
Life Cycle Costing		
1. *That all capital programs for new or rehabilitated infrastructure be subjected to life cycle costing analysis to determine the most cost effective options for consideration.*	• That Life Cycle Costing Analysis be phased-in over a three-year period, beginning with new facilities and $1M+ rehabilitations of existing infrastructure.	• None
	• That once the three-year transition is complete, Life Cycle Costing Analysis be completed whenever the City is considering a new project or upgrading any existing infrastructure.	• None
	• That a volunteer Task Force be established to annually (at minimum) evaluate Life Cycle Cost Parameters utilized and implemented by the City.	• None
	• That this Task Force report to an Internal Steering Committee (see Policy Option #2) on its activities and any recommendations on an annual basis.	• None
Minimize Deferred Maintenance		
2. *That ideally, maintenance for existing infrastructure should only be deferred if the impact on the life expectancy and life cycle of the asset is documented to be minimal.*	• That an Internal Steering Committee be established to ensure that the Asset Management Systems currently under development in the Public Works and Water and Waste Departments include a consistent approach in determining maintenance requirement needs, priority schedules and impact analysis of deferring infrastructure maintenance.	• None
Factor Maintenance into Initial Costs		
3. *That when new or upgraded facilities are proposed, they be accompanied by resulting incremental maintenance costs, linked into a parallel maintenance budget.*	• That the City's infrastructure maintenance budgets be adjusted on an annual basis ($300,000 - $400,000) to reflect any growth in physical inventory, as well as an inflationary increase to cover rising labour, material and equipment costs.	• None

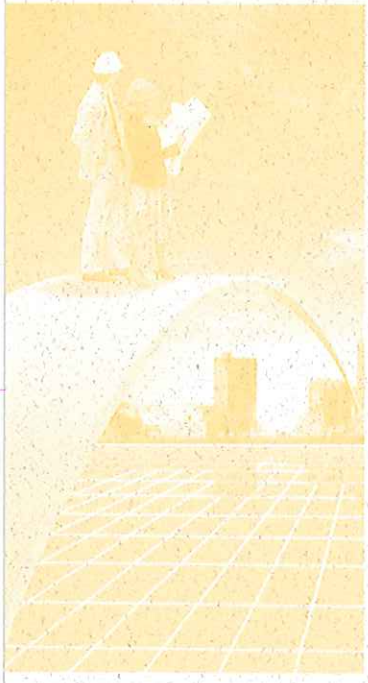




Policy Option	Implementation Recommendations	Estimated Cost
Computerized Maintenance Management System (CMMS)		
4. *That Civic Department preventative maintenance programs be funded by Council to be information current, and supported by Computerized Maintenance Management Systems (CMMS).*	• That the internal Steering Committee referred to in Policy Option #2 provide linkages and continuity between the City's information and management systems related to infrastructure, and report annually to the Public Works Department.	• None
Management of Asset Data		
5. *That the CAO Secretariat be assigned and resourced to coordinate the City's infrastructure asset data management.*	• That the CAO be tasked to lead and coordinate the City's infrastructure asset data management.	• If managed through re-assignment of existing staff, no additional resources required.
B.) New Technology Recommendations		
Advanced Techniques & Technologies		
6. *That the City encourage the application of "intelligent" technology, new methodologies and innovative products such as Advanced Composite Materials (ACMs) in infrastructure renewal, rehabilitation, construction or preventative maintenance programs.*	• That the City facilitate technology transfer by encouraging and, where appropriate, participating in workshops and seminars.	• See Policy Option #9.
	• That the City partner with the University of Manitoba, Red River College, other government agencies, engineering consultants, contractors and suppliers in an annual municipal infrastructure technology conference on pavements, water and sewer, bridges and structures.	• See Policy Option #9.
Improved Practices		
7. *That the City encourage the use of advanced techniques, improved technologies, better materials and best practices in all infrastructure programs, and participate in the technical guide for infrastructure initiative.*	• That the City participate in the cooperative effort by the National Research Council (NRC), the Canadian Public Works Association (CPWA) and the Federation of Canadian Municipalities (FCM) to develop a Technical Guide for Urban Infrastructure for Canada.	• None
	• That the City carry out field trials on promising technologies.	• See Policy Option #9.
Update Construction Specifications		
8. *That the City's standard construction specifications and general conditions be reviewed to encourage use of innovative practices, technologies and materials. The academic, engineering and construction communities should be involved in this review.*	• That through Specification Committees, the City successfully implement new technology into City standards for pavement, water and sewer, bridges and structures.	• None

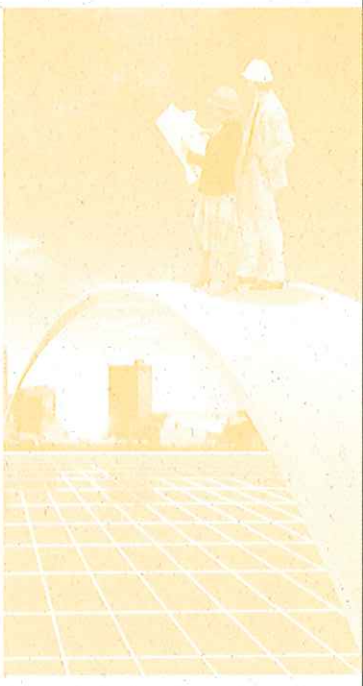
Policy Option	Implementation Recommendations	Estimated Cost
Commitment to Strategic Research & Innovation		
9. *That the City partner with academia to strategically fund research aimed at identifying new or improved materials, technologies and techniques having broad infrastructure application.*	• That targeted Working Groups be structured to identify and prioritize areas for strategic research, and identify partners for strategic research from universities and the construction industry.	• None
	• That the City commit $500,000 in 2001 to strategic municipal infrastructure research, and 0.5% of the annual construction budget thereafter.	• $500,000 in 2001; then 0.5% of annual construction budget
	– That included in this commitment, the City encourage post-secondary education in intelligent infrastructure renewal by supporting students who are undertaking research and technology transfer initiatives on an applied research basis.	• Included in above
	• That the City support the establishment of an Internet-accessible database on worldwide infrastructure technology at the University of Manitoba, Faculty of Engineering.	• Included in above
	• That the City cost-share in the creation of a faculty position in urban infrastructure renewal at the University of Manitoba, Faculty of Engineering.	• Included in above
C.) Financial-Based Recommendations		
Urban Infrastructure Financing Plan		
10. *That the City create and adopt an urban infrastructure financing plan, based on the principles outlined in Appendix "C" of the SIRP Report – Urban Infrastructure Financing Principles.*	• That the City continue to reflect its decisions against all of the Urban Infrastructure Financing Principles outlined in Appendix "C" of the SIRP Report when preparing capital budgets.	• None
	• That following the peak in 2002, it is essential that the City apply 100% of the savings derived from reduced tax-supported debt and finance charges to increased capital investment toward infrastructure, on a pay-as-you-go basis.	• None
Accrual Accounting System		
11. *That the City adopt a system for showing depreciation on its capital assets and begin the process of accounting for deferred maintenance.*	• That the City of Winnipeg continue to develop the appropriate systems and adopt the accounting principles which would provide decision makers with the appropriate level of information to make informed decisions.	• None

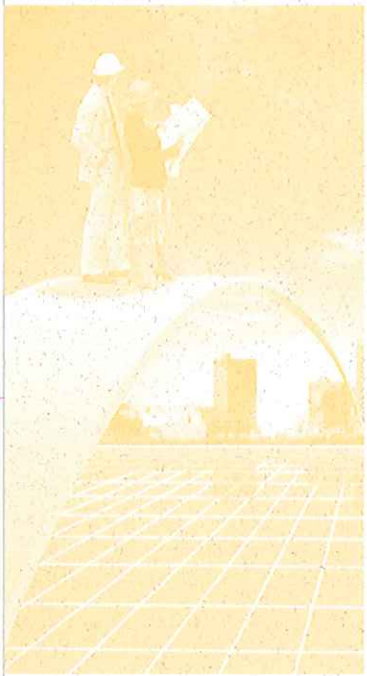




Policy Option	Implementation Recommendations	Estimated Cost
Fully Costed Services		
12. That the City apply full cost accounting principles to all government services, and that pricing of services should reflect the full true costs of service provision.	• That the City continue to pursue these initiatives to further refine service costing such that the pricing of services reflects the full, true cost of service delivery.	• None
Application of User Fees		
13. That the City implement properly structured user fees where the user and the service delivered can be identified.	• That the City continue to examine the feasibility of user fees to pay for infrastructure costs. For large capital projects, consideration should be given to the applicability of a user fee to finance the project, as opposed to the general property tax.	• None
Shift from Mill Rate to User Fees		
14. Any new user pay funding that relates to property and which replaces existing mill rate supported infrastructure budgets, should be accompanied by a mill rate reduction equivalent to the pre-user fee level of mill rate support.	• That in the preparation of current budgets, the impact on the mill rate associated with the introduction of any new user fee related to property be identified.	• None
Infrastructure Services Renewal Levy		
15. That the City consider developing an "Infrastructure Services Renewal Levy" program which would manage the levying of specific user fees/levies to dedicated infrastructure rehabilitation and renewal programs.	• That the Province of Manitoba be requested to amend The City of Winnipeg Act to allow the expenditure of frontage levy monies for the renewal, repair and replacement of residential streets and sidewalks as well as watermain renewal and sewer line renewal.	• None
Pursue Dedicated Levy Legislation		
16. That the City pursue Provincial legislation to allow new funding sources for infrastructure renewal, and that funds raised be dedicated for specific infrastructure purposes only.	• That the City of Winnipeg and the Association of Manitoba Municipalities (AMM) request the Province of Manitoba to amend The Gasoline Tax Act to allow all the municipalities in Manitoba to benefit from an appropriate share of the Provincial tax on gasoline, gasohol, diesel and propane fuels used in motor vehicles.	• None
	– That the specific amount be the subject of negotiations to reflect usage and the required dedicated revenue stream.	• None
	– That the tax collected by the Province of Manitoba be distributed to each municipal government, pro rated on the percentage of motor vehicles registered within each municipality.	• None
	– That the amount remitted to municipalities be designated to fund transportation-related infrastructure priorities identified by each municipal government.	• None

Policy Option	Implementation Recommendations	Estimated Cost
Tax Exempt Bonds		
17. That the City pursue, with Province of Manitoba and the Federation of Canadian Municipalities, an amendment to the Income Tax Act to allow tax exempt interest on government bonds raised for designated infrastructure project purposes.	• The City will continue to pursue this issue with the Provincial Government and the Federation of Canadian Municipalities.	• None
Intergenerational Financing		
18. That the City should finance infrastructure projects in a manner that properly recognizes project life and replacement patterns.	• That the City put reporting procedures in place to deal with major capital projects, and develop a listing of financing alternatives – including Intergenerational Financing — for consideration each time a major capital project is brought forward.	• None
	• That capital budgets continue to be scrutinized so that maintenance is funded through operating budgets.	• None
Cost Shared Programs		
19. That the City join with other Manitoba municipalities and the Provincial Government in lobbying the Federal Government to support implementation of a sustained National Infrastructure Program, focusing in part on municipal infrastructure renewal.	• That the City Council continue efforts with the Province of Manitoba, AMM, FCM, and other national, regional and provincial stakeholder organizations to jointly coordinate efforts to implement this recommendation.	• None
D.) Alternative Service Delivery Recommendations		
Implement ASD Options		
20. That with regard to infrastructure, Council implement its adopted policy on Alternative Service Delivery, as follows: *"The City of Winnipeg is committed to providing quality services at an affordable cost on a sustainable basis. To this end, the City will systematically review its programs, services, and delivery mechanisms, and will pursue the most appropriate methods and structures for providing services to achieve the best value for the municipal tax dollar and the optimal balance of overall benefits to the City and its Community."*	• **Implemented. No further action required.**	• None





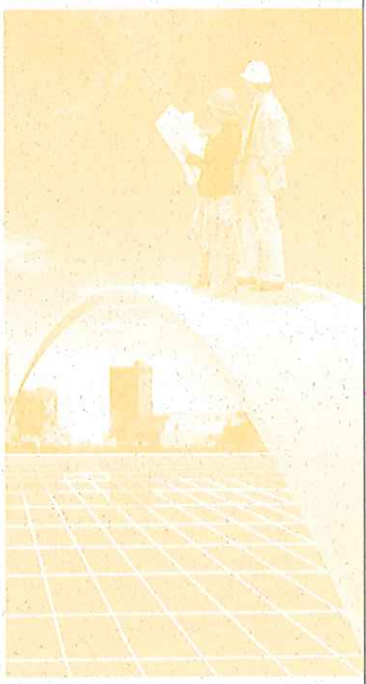
Policy Option	Implementation Recommendations	Estimated Cost
Public-Private Partnership Research		
21. That Council ensure both internal and external research capacity be devoted to monitor and assess PPP trends throughout Canada, and to assist the City in considering local PPP proposals.		
Pursue Partnering Strategies		
22. That Council pursue partnering strategies for infrastructure works in accordance with the framework of all applicable Council adopted policies.	• That the ASD Sub-Committee's report on Public/Private Partnerships be accepted as: – A preliminary step for outlining principles and guidance on PPPs, and – Part of the group of reference documents supporting the larger ASD Policy Framework for the City of Winnipeg.	• None
PPP Policy Options		
23. That Council adopt as policy, consideration of the entire PPP spectrum as policy options in all large capital projects involving all aspects of infrastructure.	• That the above mentioned report be widely shared and feedback encouraged by users and stakeholders. The report is not to be viewed as static, but rather as a document that will continue to evolve as the organization's PPP experience grows.	• None
	• Where PPPs are brought forward as part of the annual ASD Call Letter process, the formal City ASD process applies.	• None

E.) Winnipeg Transportation Utility Recommendations

Winnipeg Transportation Utility		
24. That Council, using its ASD policy, develop a business plan to investigate establishing an arm's length "Winnipeg Transportation Utility", and approach the Province of Manitoba to seek any required enabling legislation.	• That a preliminary analysis be undertaken to assess the business case for providing Alternative Service Delivery for transportation systems and asset management for the following: The Transportation Department Option The Transportation SSU Option The Transportation Agency Option	• $75,000
	• That dependent upon the outcome of the preliminary analysis, a more detailed feasibility study be undertaken as part of the ASD process.	• To be determined, if required
	• That a Steering Committee be established by the CAO to manage the preliminary analysis, and if required, the feasibility study.	• None

F.) National Infrastructure Policy (NIP) Recommendations

Policy Option	Implementation Recommendations	Estimated Cost
National Infrastructure Policy		
25. *That the City and Province partner to lobby the Federal Government to enter into a sustainable infrastructure agreement consistent with the Recommended National Infrastructure Policy (NIP), as set forth by the ICM and the "Proposed Guidelines for a New National Infrastructure Program", as adopted by the Premiers at the 1996 and 1997 Annual Premiers' Conferences.*	• That Council, through strategic lobby initiatives, support efforts seeking federal government leadership and participation in partnered funding of programs addressing core municipal and national transportation infrastructure deficits.	• None

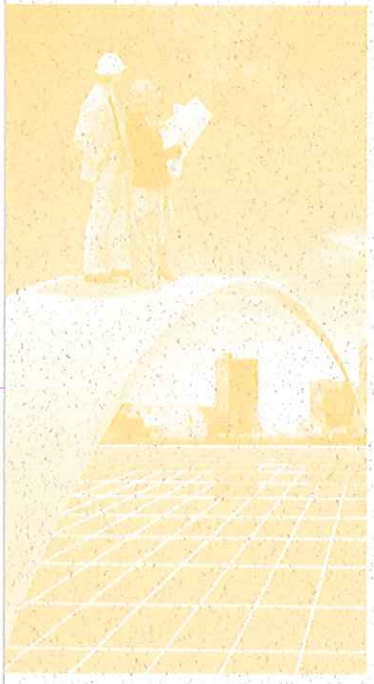


G.) Sustainable Infrastructure Development Recommendations

Employment Training Program		
26. *That the City propose to senior levels of government, the delivery of infrastructure programs whose aim in part would be to provide useful training and employment skills development to various target groups.*	• That the City of Winnipeg, in partnership with the Province of Manitoba, pursue an aggressive lobby of the Federal Government to fund infrastructure renewal programs that focus in part on skills training for target groups and individuals, with the intent of providing long-term employment.	• None
Capital Region Infrastructure Strategy		
27. *That the City pursue – with its neighbours and the Provincial Government – implementation of the Capital Region strategy that recognizes the importance of the supply and delivery of infrastructure in an environmentally responsible and sustainable manner.*	• That City representatives on the Capital Region Committee and Committee of Mayors and Reeves continue to monitor implementation of strategies — as put forward in the Capital Region Review — and emphasize the importance of integrated infrastructure planning with a focus on long-term cost effectiveness and environmental impacts.	• None
Cost/Benefit Analysis		
28. *That any new publicly-funded infrastructure project be accompanied by cost/benefit analysis which establishes need and sustainability to clearly justify its construction.*	• That the cost/benefit analysis methods employed by other organizations and jurisdictions be assessed, and that a single cost/benefit analysis tool be adopted for the City of Winnipeg, to be used in conjunction with life cycle costing in considering new infrastructure.	• None
	• That this initiative be reported upon by the Steering Committee referred to in Policy Option # 2.	• None
Sustainable Infrastructure Development Policy (SIDP)		
29. *That the City endorse the principles and guidelines of the MRTEE, and adopt the SIRP Principles for Sustainable Infrastructure Development, as set out in Appendix "B" of the SIRP Report.*	• By virtue of Council adopting the SIRP Report, the referenced principles and guidelines have been endorsed by the City. No further action is required.	• None

Implementation Plan Recommendations

Policy Option	Implementation Recommendations	Estimated Cost
SIRP Implementation Committee		
30. That the City establish a SIRP Implementation Committee – headed by the Chairperson of the Standing Policy Committee on Public Works and appropriately resourced through the office of the CAO – with a mandate to implement adopted policy options within 12 months of its appointment.	• That this report demonstrates the accomplishments of the SIRP Implementation Committee to date, and outlines the work that remains to be completed. • That this report and the recommendations outlined herein be adopted by Council for implementation.	• None



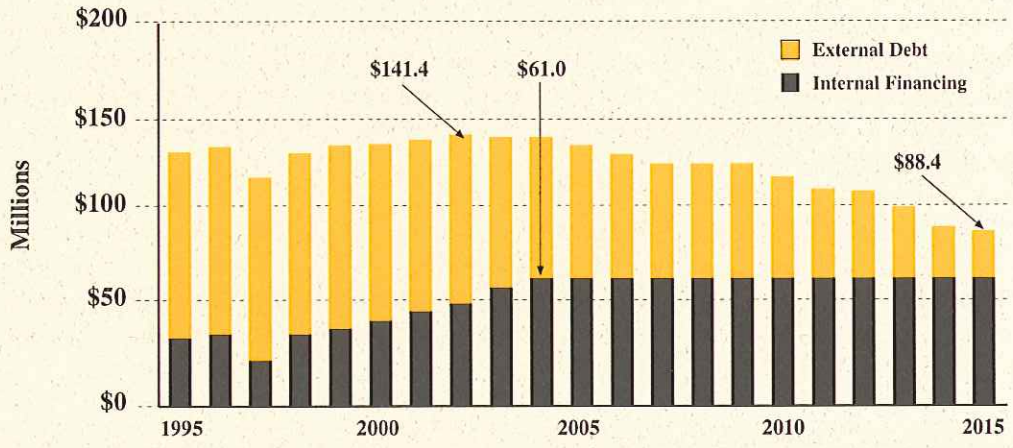
Appendix 2

The City of Winnipeg Strategic Infrastructure Reinvestment Policy Financial-Based Policy Options

Overview

The City continues to be challenged by increasing debt and finance charges as a result of capital expenditure decisions made in prior years. In an effort to control increasing debt and finance charges, Council imposed a cap of $61 million on external and internal financing of new capital expenditures in 1996. For the past three years Council has further reduced this cap to contain debt servicing costs. The current forecast indicates that tax-supported debt and finance charges will peak in 2002 at a level of $141.4 million and decline thereafter to a level of $88.4 million by the year 2015. This assumes that capital expenditures financed through pay-as-you-go will be maintained at the projected level for the next 4 years until they peak in 2004 at $61.0 million.

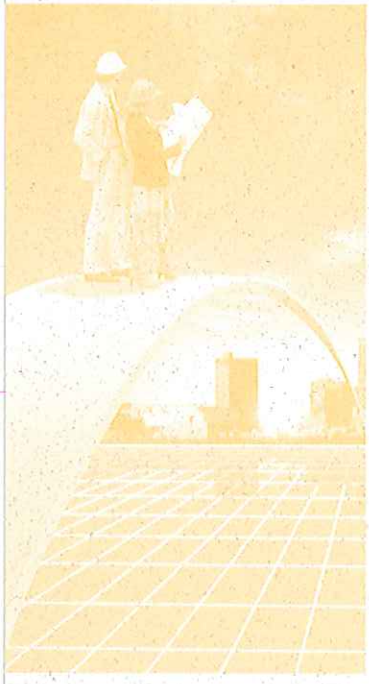
Tax Supported Debt Servicing Costs to Peak in the Year 2000

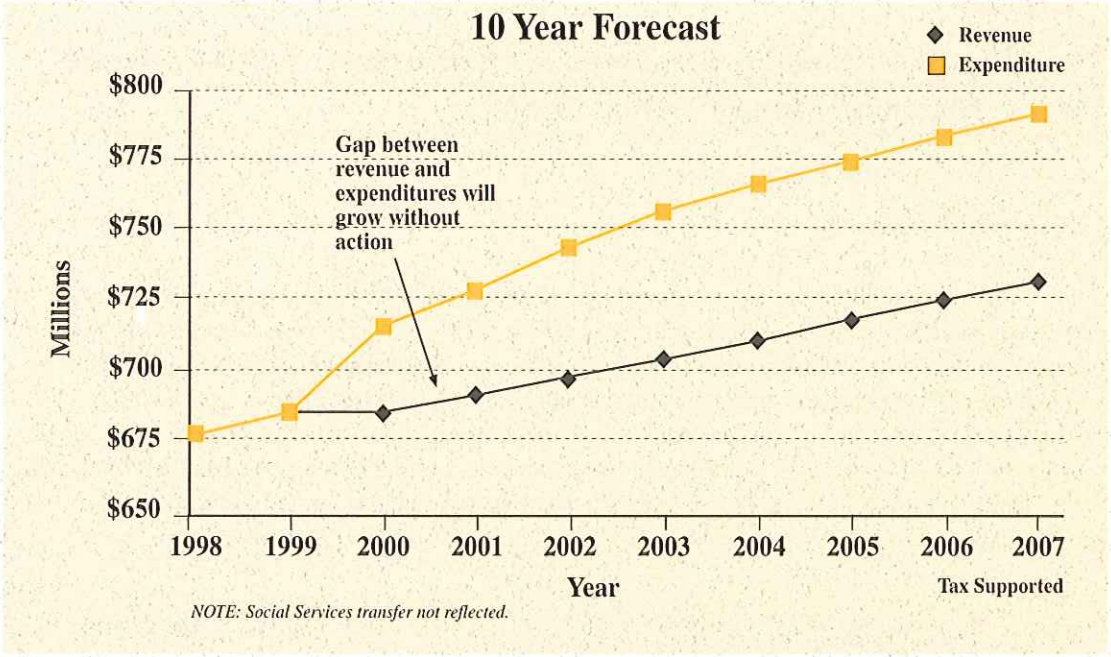


Based on the 1999 Annual Capital Estimates and 2000-2004 Five-Year Capital Forecast capped at $61.0 million per year with revised General Reserve Financing. No new tax-supported debt. Excludes Civic Buildings.

Over the past 10 years, the tax-supported debt costs have increased from approximately $90 million to this year's expected level of approximately $136.6 million and it will be another 2 years before they peak. Further, external debt costs peaked in 1996 which indicates the increasing debt costs are in part a result of the City aggressively moving towards a pay-as-you-go form of financing capital expenditures.

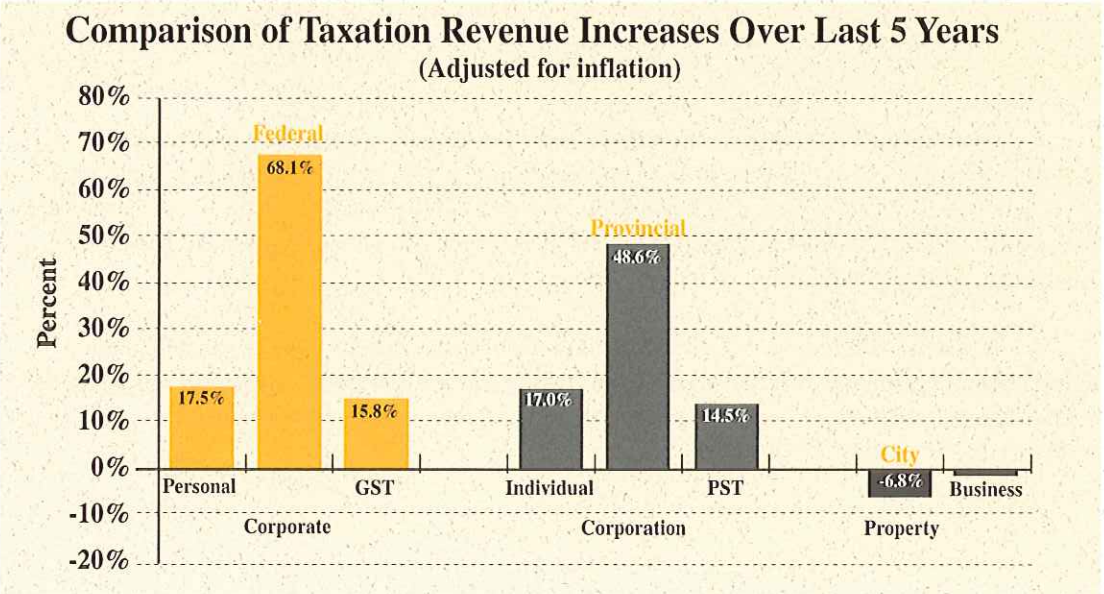
It is important to note that if the City does undertake to spend more on capital than the current plan, then other expenses will likely have to be cut or other forms of revenue will need to be found. This relates to the following chart which indicates the ongoing dilemma faced by the City in trying to match revenues and expenditures.





The above chart assumes that the current policy with respect to new debt will be maintained in future years. That is there will be no new tax-supported external debt approved and the amount available from external debt and pay-as-you-go financing for capital spending will peak and level off at $61 million by the year 2004. It also assumes a rate of inflation of 2% for expenditures and revenue growth of 1%.

The next chart indicates the lack of growth in taxes that the City has experienced in relation to the Federal and Provincial tax situation. As can be seen, the City's taxes have grown substantially less than the rate of inflation over the past 5 years while both the Federal and Provincial governments have enjoyed significant increases in their tax revenues, notwithstanding the fact that their tax rates have remained basically unchanged.

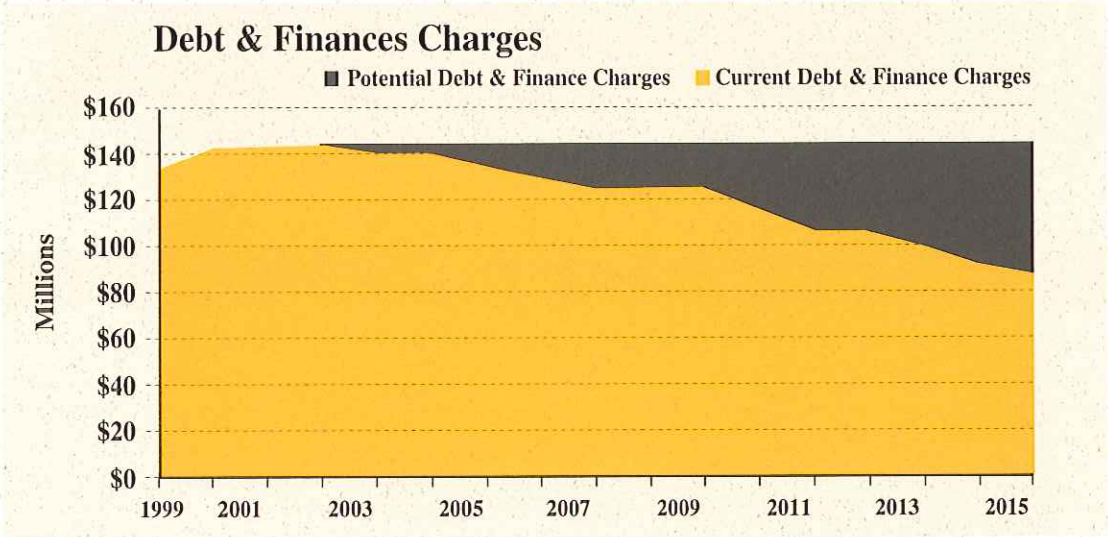


Options for Consideration

A policy that could be considered, instead of using the future reduction in debt and finance charges for tax reductions or an offset to expenditures, is to apply any savings – or a portion of the savings – to infrastructure. A number of options are presented below, each outlining the resulting funding available for infrastructure.

Option 1

The following graphs and accompanying tables reflect the current assumptions with respect to debt servicing costs as discussed above. In addition, the graphs and tables reflect an option which would allow for an increase in the amount of capital spending after 2002 by applying any savings due to a decrease in external debt charges to increase the pay-as-you go financing.



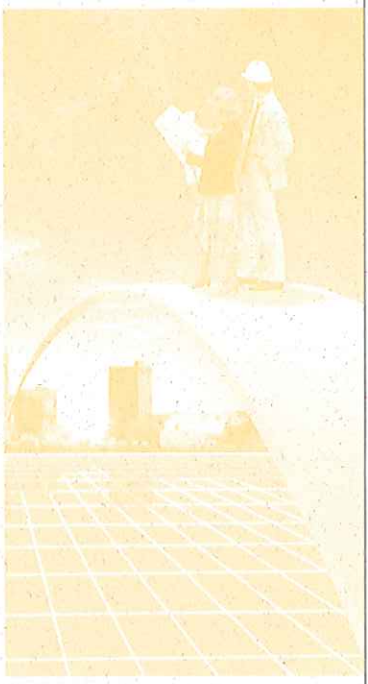
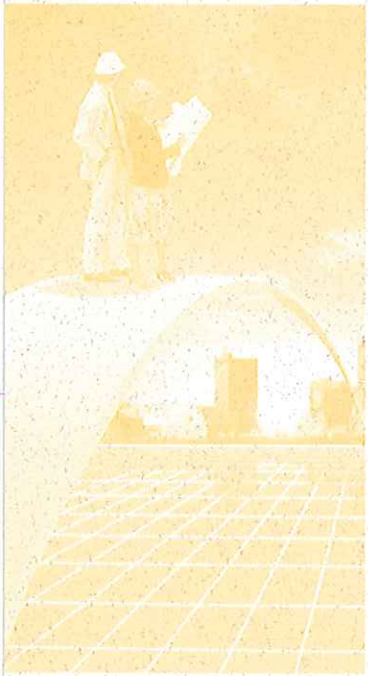


Table 1

Year	Current Debt & Finance Charges (Millions)	Stabilized Debt & Finance Charges (Millions)
1999	$132.5	$132.5
2000	$136.6	$136.6
2001	$138.8	$138.8
2002	$141.4	$141.4
2003	$139.6	$141.4
2004	$139.1	$141.4
2005	$135.5	$141.4
2006	$130.6	$141.4
2007	$126.0	$141.4
2008	$125.7	$141.4
2009	$125.5	$141.4
2010	$116.9	$141.4
2011	$108.3	$141.4
2012	$106.9	$141.4
2013	$99.9	$141.4
2014	$92.3	$141.4
2015	$88.4	$141.4

The stabilized debt and finance charges on the previous graph and table allows for an increase in capital spending after 2002 equal to an amount that would see the debt and finance charges remain constant after they peak at $141.4 million.



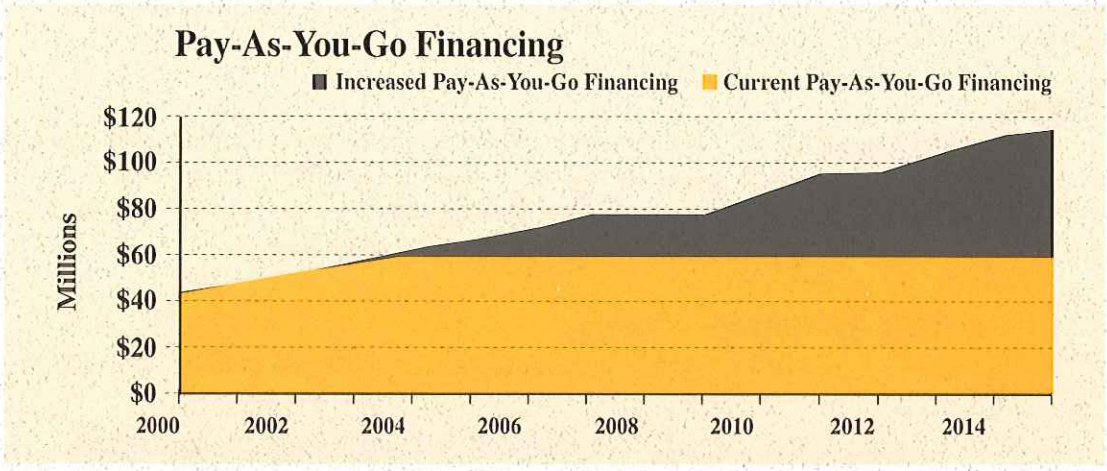


Table 2

Year	Current Pay-As-You-Go Financing (Millions)	Increased Pay-As-You-Go Financing (Millions)	% Increase
1999	$41.5	$41.5	0.0%
2000	$44.8	$44.8	0.0%
2001	$48.4	$48.4	0.0%
2002	$52.2	$52.2	0.0%
2003	$56.4	$58.2	3.2%
2004	$61.0	$63.3	3.8%
2005	$61.0	$66.9	9.7%
2006	$61.0	$71.8	17.7%
2007	$61.0	$76.4	25.2%
2008	$61.0	$76.7	25.7%
2009	$61.0	$76.9	26.1%
2010	$61.0	$85.5	40.2%
2011	$61.0	$94.1	54.3%
2012	$61.0	$95.5	56.6%
2013	$61.0	$102.5	68.0%
2014	$61.0	$110.1	80.5%
2015	$61.0	$114.0	86.9%

Similarly, the above graph and accompanying table indicates the potential increase in pay-as-you-go financing beginning in 2003 and continuing beyond 2004 when the $61.0 million cap is reached. As indicated, there could be additional capital spending of $1.8 million available starting in 2003 and increasing to $53.0 million in 2015, an increase of 86.9%.

This strategy would have the benefit of providing increased pay-as-you-go funding for capital projects at a level above the implied inflation rate without putting additional pressure on the tax-supported budget. It has the disadvantage of not utilizing the benefits of decreased external debt payments to reduce taxes or to offset other expenditure increases.

This graph below and accompanying table indicates the increased amount of funding that would be available for capital projects if the additional capital spending shown in the previous two graphs was implemented with the assumption that all other sources of capital funding remain constant.

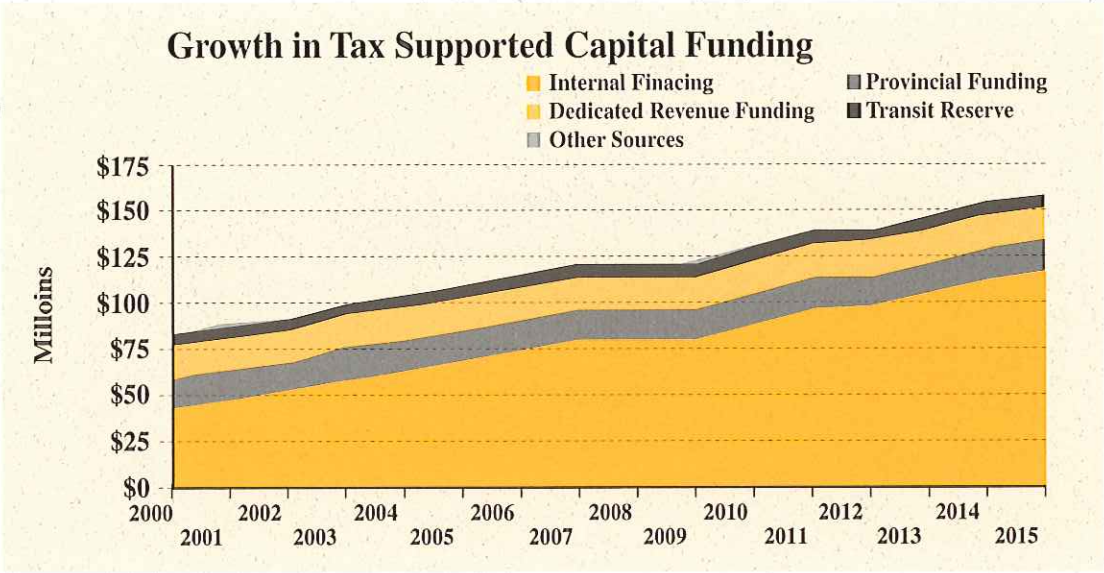
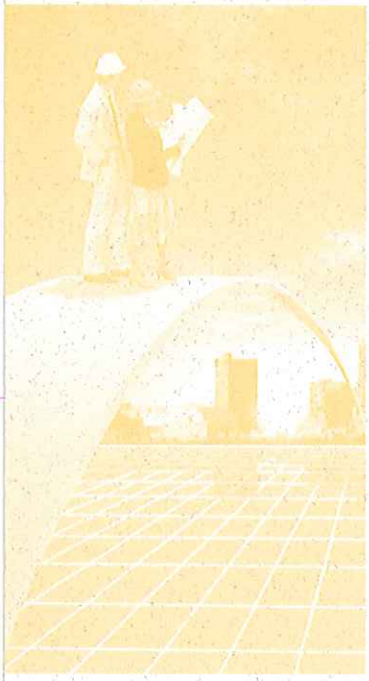


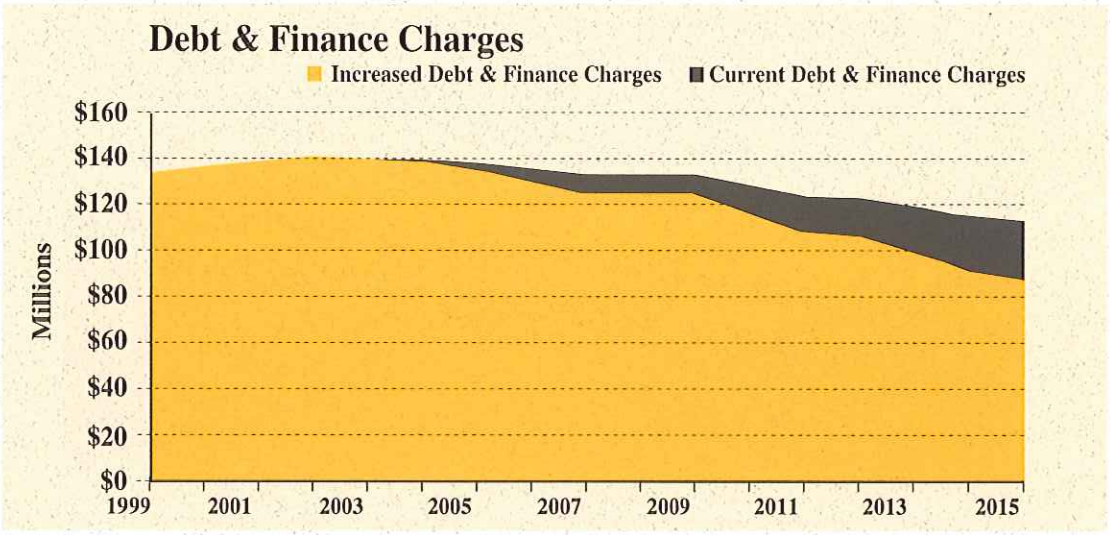
Table 3

Year	Total Capital Funding Available (Millions)
1999	N/A
2000	$83.7
2001	$88.7
2002	$90.9
2003	$98.6
2004	$103.6
2005	$108.0
2006	$112.9
2007	$117.5
2008	$117.8
2009	$118.0
2010	$126.6
2011	$135.2
2012	$136.6
2013	$143.6
2014	$151.2
2015	$155.1

Option 2

A second option to consider is using only half of the difference between the peak in debt and finance costs in 2002 of $141.4 million and the current forecasted debt and finance charges. The graphs and tables below illustrate what would happen under this option:





The increased debt and finance charges indicated on this graph and table allows for an increase in capital spending after 2002 equal to an amount of half the increase in debt and finance charges after they peak at $141.4 million. The amount of new capital financing available would increase from $0.9 million in 2003 up to $26.5 million in 2015.

Table 1a

Year	Current Debt & Finance Charges (Millions)	Increased Debt & Finance Charges (Millions)
1999	$132.5	$132.5
2000	$136.6	$136.6
2001	$138.8	$138.8
2002	$141.4	$141.4
2003	$139.6	$140.5
2004	$139.1	$140.3
2005	$135.5	$138.5
2006	$130.6	$136.0
2007	$126.0	$133.7
2008	$125.7	$133.6
2009	$125.5	$133.5
2010	$116.9	$129.2
2011	$108.3	$124.9
2012	$106.9	$124.2
2013	$99.9	$120.7
2014	$92.3	$116.9
2015	$88.4	$114.9

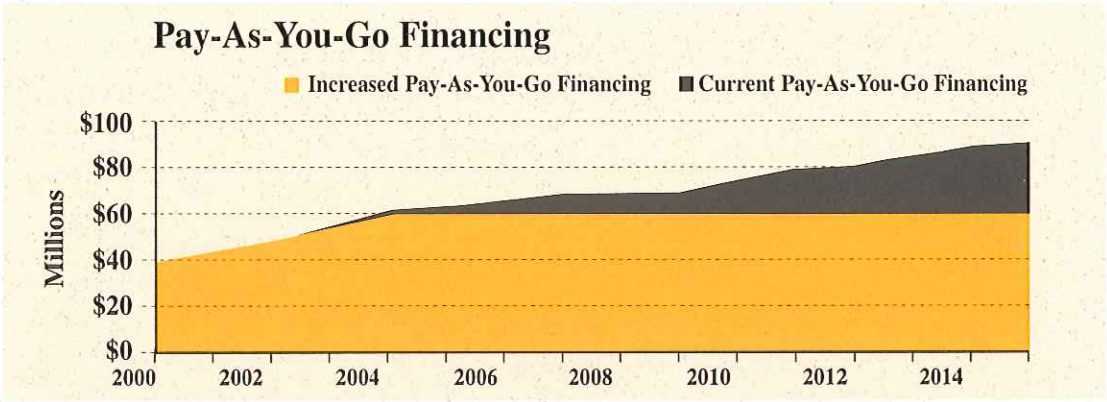
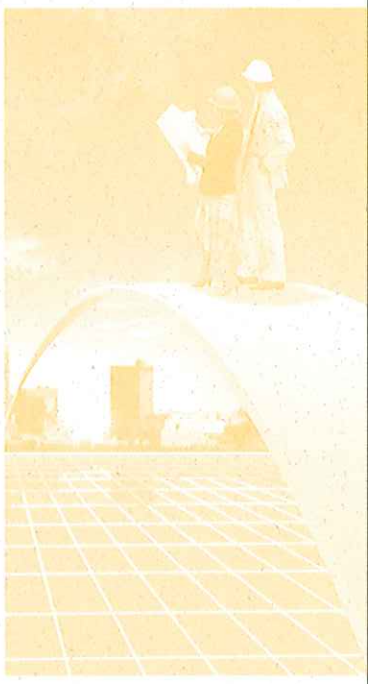
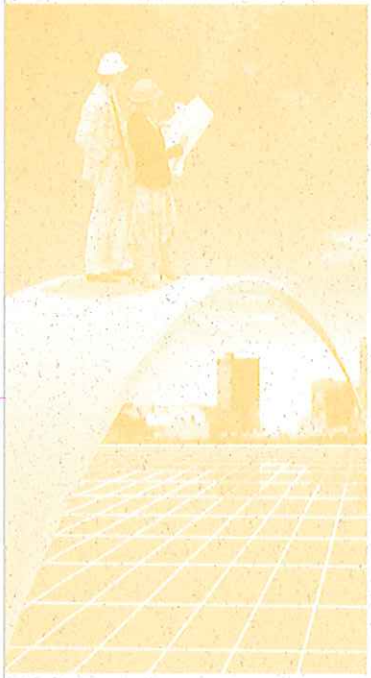


Table 2a

Year	Current Pay-As-You-Go Financing (Millions)	Increased Pay-As-You-Go Financing Millions)	% Increase
1999	$41.5	$41.5	0.0%
2000	$44.8	$44.8	0.0%
2001	$48.4	$48.4	0.0%
2002	$52.2	$52.2	0.0%
2003	$56.4	$57.3	1.6%
2004	$61.0	$62.2	1.9%
2005	$61.0	$64.0	4.8%
2006	$61.0	$66.4	8.9%
2007	$61.0	$68.7	12.6%
2008	$61.0	$68.9	12.9%
2009	$61.0	$69.0	13.0%
2010	$61.0	$73.3	20.1%
2011	$61.0	$77.6	27.1%
2012	$61.0	$78.3	28.3%
2013	$61.0	$81.8	34.0%
2014	$61.0	$85.6	40.2%
2015	$61.0	$87.5	43.4%

Similarly, the above graph and accompanying table indicates the potential increase in pay-as-you-go financing beginning in 2003 and continuing beyond 2004 when the $61.0 million cap is reached. Again, there could be additional capital spending of $0.9 million available starting in 2003 and increasing to $26.5 million in 2015.





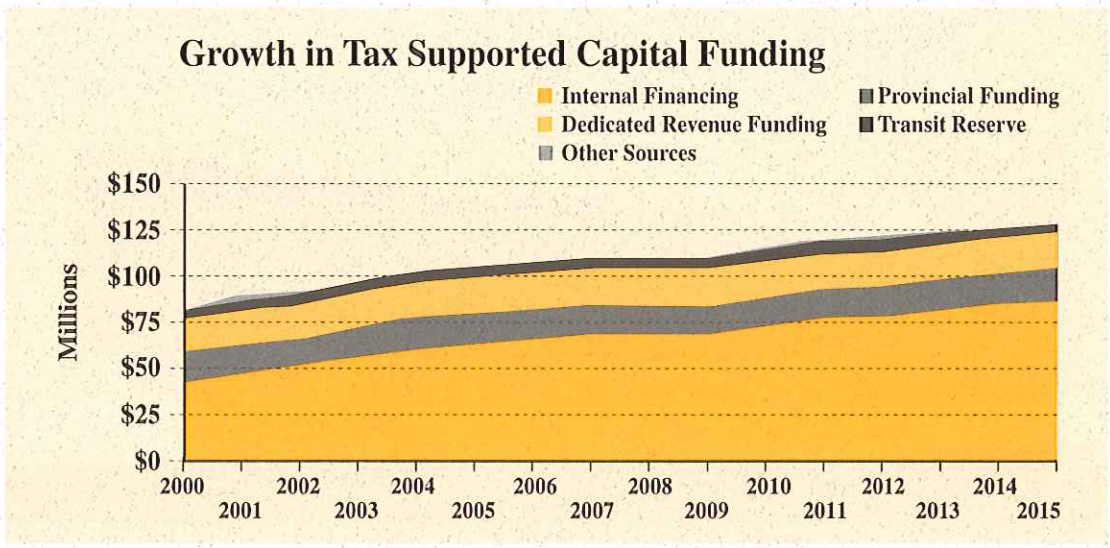


Table 3a

Year	Total Funding Available (Millions)
1999	N/A
2000	$83.7
2001	$88.7
2002	$90.9
2003	$97.7
2004	$102.5
2005	$105.1
2006	$107.5
2007	$109.8
2008	$110.0
2009	$110.1
2010	$114.4
2011	$118.7
2012	$119.4
2013	$122.9
2014	$126.7
2015	$128.6

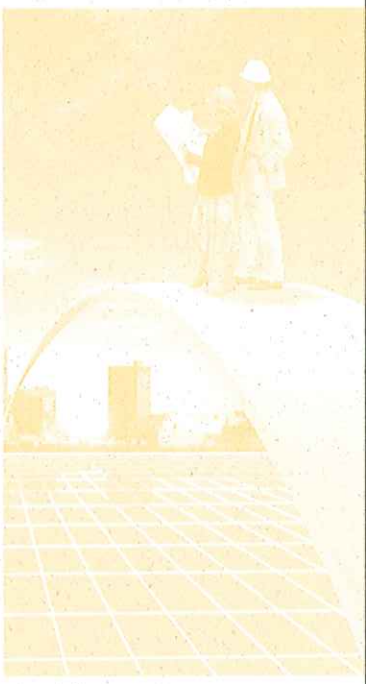
Lastly, the above graph and accompanying table indicates the increased amount of funding that would be available for capital projects if the additional capital spending shown in the previous two graphs was implemented, with the assumption that all other sources of capital funding remain constant.

Options Summary

The following table summarizes the capital funding that would be available in 2015 under four different options. This range of options is presented as follows, with the resulting increase in funds available for increased capital spending compared to an assumed rate of inflation:

(Millions)

	Annual Capital Funding Available in 2015	Pay-As-You-Go Financing Amount	Increase in Funding Over Years	Change in Funding After 2% Inflation
Status Quo Plan: ($61 M. peak in 2004)	$102.1	$61.0	$18.4	-$10.6
Option 1: Apply 100% Savings to Increase Pay-As-You-Go.	$155.1	$114.0	$71.4	$42.5
Option 2: Apply 75% Savings to Increase Pay-As-You-Go.	$141.9	$100.8	$58.2	$29.2
Option 3: Apply 50% Savings to Increase Pay-As-You-Go.	$128.6	$87.5	$44.9	$16.0
Option 4: Apply 25% Savings to Increase Pay-As-You-Go.	$115.4	$74.3	$31.7	$2.7



The difference in capital funding available by 2015, between using 100% of the savings in debt and finance charges after 2002 and only 25%, amounts to $39.8 million annually. Overall capital spending would increase by $71.4 million by 2015 if 100% of the savings were used while the increase would be $31.7 million if only 25% of the savings were used. After considering the effects of a sustained 2% inflation rate until 2015, the amount of increased capital spending that would be available is reduced to $42.5 million if 100% of the savings were used. If only 25% of the savings were used, the increase in capital spending available would be only $2.7 million after considering the effects of inflation.

It is important to note that even if option 1 is chosen it would only address in part the infrastructure deficit (estimated at over $750 million).

New Relationships: A New Order

A balanced approach to funding municipal infrastructure in Manitoba

Prepared by the Infrastructure Funding Council (IFC)

May 2011



Mr. Doug Dobrowolski, President
Association of Manitoba Municipalities
1910 Saskatchewan Ave. W
Portage la Prairie, MB R1N 0P1

His Worship Mayor Sam Katz
City of Winnipeg
510 Main Street
Winnipeg, MB R3B 1B9

Gentlemen:

I am pleased to deliver the report of the Infrastructure Funding Council (IFC) entitled *New Relationships: A New Order, A balanced approach to funding municipal infrastructure in Manitoba.*

I had the great privilege of chairing the IFC for which opportunity I sincerely thank you.

The IFC was mandated with the challenging and complex task of developing recommendations underpinning a comprehensive funding strategy that addresses Manitoba's growing municipal infrastructure deficit, including internal funding options controlled by the municipalities, and external funding options requiring intergovernmental negotiation.

This exercise was clearly a 'Manitoba first' such effort. All Manitobans should be grateful for your leadership and you should be commended for the political courage to launch it.

The challenge for all of us is to develop a framework which addresses the municipal infrastructure deficit amassed over the last 50 years and still permits strategic investments for future growth. The size of the Manitoba's municipal infrastructure deficit is daunting – estimated to reach $13.4 billion in Manitoba within 10 years at current funding levels – but not insurmountable. Just as the problem took time to develop, the solution will require a concerted, sustained and disciplined effort.

The IFC submits that is exactly what Manitobans collectively must do – develop a transparent, accountable, long–term strategy that balances roles and responsibilities for municipal infrastructure amongst the three levels of government.

The IFC proposes 17 recommendations. The approach is three-pronged and proposes a 20-year staged in process, from 2011 to 2030, to implement municipal organizational and efficiency gains, generate the revenue needed to address the infrastructure deficit, and gradually develop new funding relationships. Within this framework, the IFC has identified various revenues sources that could, over the time frame, generate more than $1 billion in annual funding.

Success is dependent upon public support and intergovernmental collaboration. The IFC recognizes that over time, positions on the infrastructure funding policies and approaches may have hardened. The IFC appeals to all Manitobans to open themselves up to the possibilities outlined for public consideration.

By acting now, and with the support from Manitobans, this report can form the basis for a funding blueprint and be a model for all Canadian municipalities seeking resolve and access to sustainable and transparent revenues with which to fund infrastructure. The IFC hopes this report provides a platform for a healthy, vigorous public debate over the mix of measures with which to address Manitoba's municipal infrastructure deficit.

On behalf of the IFC I would like to express appreciation to those who made submissions, presentations or provided insightful advice during the course of our deliberations.

I sincerely thank each IFC members for their time, tireless efforts and countless dedicated volunteered hours to discharge the mandate placed before them. I would be remiss if I did not publicly acknowledge and thank Georges Chartier, Manager of Infrastructure Planning and Tyler MacAfee AMM Director of Policy and Communications, for their indispensible policy and research assistance and to Melodie Richard and John Douglas for their patience as writers in reflecting the IFC thinking and approach.

Respectfully submitted,



Chris Lorenc, B.A., LL.B.,
Chair, Infrastructure Funding Council (IFC)

May 2011

NEW RELATIONSHIPS: A NEW ORDER
A BALANCED APPROACH TO FUNDING MUNICIPAL INFRASTRUCTURE IN MANITOBA

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EXECUTIVE SUMMARY

The challenge of raising the revenues to fund municipal infrastructure projects is not new to Manitoba. To address the current problem, Association of Manitoba Municipalities (AMM) President Doug Dobrowolski and Winnipeg Mayor Sam Katz appointed the Infrastructure Funding Council (IFC) in 2010 to chart a response to the growing infrastructure deficit.

The IFC was mandated with the challenging and complex task of developing recommendations for a comprehensive funding strategy that addresses Manitoba's growing municipal infrastructure deficit, including internal funding options controlled by the municipalities, and external funding options requiring intergovernmental negotiation.

Benchmarks & Objectives
In shaping its report, the IFC relied upon a series of guideposts. Those were the report's Benchmarks and Objectives. Each is outlined in Appendix 'A' for review in advance of considering the report.

Infrastructure Defined
For the purposes of this report, infrastructure means roads (regional, local and lanes), bridges, active transportation facilities, transit facilities, parks, riverbanks, flood protection, buildings (including police, fire paramedic, libraries, pool, arenas, community centers, administration buildings), water and sewage facilities, land drainage facilities, and solid waste facilities. These were further categorized – see Appendix 'C'.

Consultation
The IFC benefited from written submissions and engaged in consultative discussions with a number of organizations and individuals each of which are thanked for their input. They are listed in Appendix 'B'.

Manitoba's Municipal Infrastructure Deficit
The IFC determined that Manitoba's municipal infrastructure challenge is real and not imagined and mirrors in scale that of the rest of the country. The size of the Manitoba's municipal infrastructure deficit is daunting – an estimated to reach $13.4 billion in Manitoba within the next 10 years at current funding levels – but not insurmountable. (See 'Quantifying the Infrastructure Deficit' in Appendix 'C')

Economic Impact
The condition of Canada's municipal infrastructure is one of the keys to underpinning, maintaining and enhancing Canada's economic productivity and competitiveness. Manitoba's municipalities are no exception. A growing Manitoba economy is increasing the pressure on infrastructure that is now servicing populations beyond what they were intended to do.

Urgency
The IFC has developed a series of recommendations that could form a foundation for a comprehensive infrastructure funding strategy. The IFC submits there is an urgent need of a diagnosis of the problem and the development of a "treatment" plan.

The diagnosis is how best we balance the importance of funding infrastructure needed to fuel economic growth in the future, and the need to address the infrastructure deficit of the past.

The IFC offers a series of treatment options for Manitobans to consider. It encourages public consensus and acknowledges there may be a need for a Province-wide referendum on new taxes dedicated to infrastructure.

Manitobans should begin this debate immediately so a final prescription can be determined and implemented within three years.

There is a public policy imperative to devote priority attention to the challenges associated with our municipal infrastructure deficit. The IFC warns that failure to act now saddles the present and future generations with a significant financial burden and unquestionably will lower Manitoba's standard of living and economic growth.

The Approach – Shared, Balanced, Three Pronged, Phased-In

There is no silver bullet to quickly eliminate Manitoba's infrastructure deficit. Based on extensive consultation, submissions from stakeholders and an exhaustive literature search, the IFC proposes 17 recommendations within a three-pronged, staged-in approach to generate organizational and efficiency gains alongside a revenue platform to address the problem.

The IFC report outlines a series of recommendations that, if after broad public consultation are acceptable to Manitobans and decision makers, could improve the situation significantly over a proposed 20 year implementation period between 2011 and 2030. It is a difficult yet realistic approach that challenges municipalities to address efficiencies and practices using existing tools; it suggests redefined fiscal relationships and recommends new revenue streams to help municipalities address their infrastructure deficits ultimately requiring intergovernmental collaboration.

The recommendations are separated into three distinct groups:

1. Recommendations that can be acted upon by municipalities on their own;
2. Recommendations which require provincial agreement, approval and legislation;
3. Recommendations associated with a joint provincial / municipal national strategy to secure the federal government's rightful participation in funding municipal infrastructure investment.

The IFC strongly encourages the following (See 'Summary of Recommendations' on Page 9 for further detail):

1. Municipalities make internal adjustments ranging from maximizing own source revenues, introducing organizational efficiency changes, adjusting delivery models, and implementing related best practices;
2. The Government of Manitoba allocate growth taxes and vacate a further portion of education property taxes dedicated through legislation to municipal infrastruct**u**re; and
3. The Government of Manitoba, the AMM and City of Winnipeg jointly pursue a national strategy petitioning the federal government to a continued and enhanced municipal infrastructure funding role on an **o**ngoing and permanent basis.

Municipalities do not have the legislative capacity to implement a number of the IFC recommendations. Any resolution will inevitably require intergovernmental good will, negotiation and commitment.

Accordingly the IFC recommends that an Implementation Committee appointed by the Government of Manitoba, the AMM and the City of Winnipeg with a mandate to negotiate within one year of its appointment, the terms of a what is referred to in the report as a Manitoba Municipal Infrastructure Funding Agreement (MIFA) based upon this report's recommendations and others arising from such a committee's work.

Looking Forward

The IFC has identified various revenues sources that could, over time, generate more than $1 billion in annual funding – see Appendix 'J'.

The challenge in identifying new revenue streams was to create a virtual circle wherein municipalities are rewarded through their tax structure by focusing on economic growth and decisions that create prosperity, positioning them for the future.

Faced with growing responsibilities, municipalities require additional sources of stable and sustainable revenue. The IFC submits that this can be accomplished by municipalities in part through own source revenues, maximized efficiencies related to their infrastructure planning, focusing on economic growth in their decision making process along with access to growth taxes and an expanded realty tax base.

By shifting the municipal emphasis from generating revenue to generating wealth, the IFC submits that senior levels of governments - Manitoba and the national government in our case - should be more inclined to view municipalities as economic growth partners and provide access to the dedicated revenues needed to fund Manitoba and Canada's municipal infrastructure deficit.

More importantly this paradigm shift will create a simple yet necessary focus upon growing the economy at the municipal, provincial and national levels of government without which, discussions about revenues and revenue sharing, are moot.

Ultimately, the report's recommendations and our collective success in addressing our provincial and national municipal infrastructure deficits are dependent upon broad public consultation, its understanding and support, and intergovernmental collaboration.

One thing is for certain: *the need for this debate is now*. Our infrastructure network is the lifeblood of our economy. It affects our productivity, economic growth, prosperity and our standard of living. Failure to address this issue not only limits the ability of our municipalities to serve a growing population but also creates safety issues to those using our aging infrastructure.

This is a problem born in the past but it must be addressed in the present and the future. An ensuing political, public and stakeholder debate is welcome to move forward a final strategy that will ease the infrastructure burden for future generations. The imperative is to begin the process without further delay.

Respectfully submitted,
Infrastructure Funding Council (IFC)



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SUMMARY OF RECOMMENDATIONS

AREAS FOR MUNICIPAL ACTION

The IFC encourages municipalities to implement the following:

Maximize Use of Existing Financial Tools

1. Continue demonstrating financial commitment to the funding of municipal infrastructure, with borrowing levels consistent with Manitoba Municipal Board Guidelines. (Pg. 22)

2. Apply the notion of 'smart debt' within individual municipal context. This approach means building a consensus around an appropriate and sustainable level of tax-supported debt over the long-term, recognizing that borrowing is a legitimate part of any long-term capital financing plan. (Pg. 22)

3. Consider the application of a special purpose tax (frontage fees) specifically allocated to infrastructure funding (Pg. 22)

4. Review user fee structures and adjust where necessary to ensure that there is a clear link between the fee being paid and the service being provided and that these fees reflect the true cost of the service provided. (Pg. 22)

5. Augment current infrastructure budgets equal to an annual average of the last five years and provide for annual increases equal to the rate of inflation and population growth, utilizing existing municipal sources of revenues. (Pg. 23)

6. Publicly set out a clear detailed strategy for addressing the infrastructure deficit including a time frame for the effort, measurable benchmarks, periodic reviews and public accountability for results. (Pg. 23)

Address Efficiencies, Adopt Best Practices and Reinvest Gains into Infrastructure

7. Adopt Best Practices by:

a. Implementing the recommendations of the 1998 Strategic Infrastructure Reinvestment Policy Report (SIRP) which provides a municipal roadmap to align asset management practices and budgeting – see Appendix 'E' (Pg.23)
b. Phasing in infrastructure asset management processes and systems to better quantify existing and future infrastructure needs (Pg.23)
c. Financing infrastructure projects to properly recognize project life and replacement patterns (Pg. 23)
d. Justifying construction of all new publicly funded infrastructure projects by providing a cost/benefit analysis that incorporates sustainability (Pg.23)
e. Including incremental maintenance costs and a parallel maintenance budget for new or upgraded infrastructure (Pg.23)
f. Incorporating advanced techniques, improved technologies, better materials and best practices in all infrastructure programs (Pg.23)
g. Applying full cost accounting principles to all government services ensuring that the prices for services reflect the true costs of service(s) provided (Pg. 24)
h. Determining the most cost effective options for all capital programs for new or rehabilitated infrastructure by pursuing life cycle costing analysis (Pg.24)

8. Reinvest resulting efficiency gains/financial savings into priority infrastructure projects. (Pg.24)

Adopt Sustainable Development Practices

9. Municipalities should incorporate ongoing and long term municipal infrastructure planning and investment strategies into their sustainable development plans to ensure congruency of objectives. (Pg.24)

Pursue Rural Regional Infrastructure Delivery Strategy

10. Municipalities outside Winnipeg are encouraged to maximize efficiencies and create a regional focus by delivering infrastructure services in partnership with neighboring municipalities consistent with objectives in the Planning Act and the Capital Region Partnership Act objectives. (Pg. 25)

AREAS FOR MANITOBA'S ACTION

The IFC encourages the Government of Manitoba's support in the following areas:

Amend the Municipal Board Act

11. Amend the Manitoba Municipal Board Act to:

a. Enable municipalities to borrow without approval of the Municipal Board, as long as they remain within established borrowing guidelines; (Pg.23)
b. More clearly enable Municipalities to borrow outside the guidelines, with Municipal Board review and approvals, keeping in mind the Province's interest in the long-term financial sustainability of municipalities; and (Pg.23)
c. Expand definition of 'Municipal Revenues' to include Gas Tax Agreement revenues and other like revenues for the purpose of Municipal Board review of municipal access to revenues. (Pg.23)

Allocate Consumption Taxes to Municipalities Dedicated to Infrastructure

12. Apart from the re-allocation of provincial funding sources announced in the 2011 budget, and subject to any required public approval including a referendum if necessary, allocate the equivalent of an additional 1% of the Provincial Sales Tax (PST) and explicitly dedicate through legislation, revenues associated with all such allocations to core and social municipal infrastructure. (Pg.27)

This additional revenue could be generated though any of the following approaches:

- A new and separate Municipal Infrastructure Levy (MIL)
- Over and above the 2011 budget re-allocation, from within the existing PST framework
- By adding 1% to the PST

If a referendum is required, the municipalities and the Province should jointly participate and support any public education campaign.

Vacate Property Education Tax Room Dedicated to Infrastructure

13. Increase provincial education funding to 80% of net operations (as defined in the FRAME Report) in a staged manner over a three year period thereby phasing out approximately $300 million from the current realty education levy and through appropriate legislation enable municipalities to backfill the tax space vacated by the current education levy with a municipal levy dedicated by legislation for application to municipal infrastructure investment. (Pg. 29)

Create an Equity Reserve Account for Smaller Municipalities

14. Create an *'equity reserve account'* from 5% of the funds raised annually from the new MIL (or its equivalent) and establish access criteria for smaller rural municipalities for the purposes of enabling their participation in locally, regionally or multi-partied prioritized infrastructure programs. (Pg. 29)

PROVINCE OF MANITOBA AND MUNICIPALITIES ARE ENCOURAGED TO:

Develop Winnipeg Capital Region Infrastructure Delivery Strategy

15. The Government of Manitoba and the Winnipeg Capital Region municipalities are encouraged to develop a Capital Regional Strategy which recognizes the importance of the supply and delivery of regional core and social infrastructure services in a fiscally and environmentally responsible and sustainable manner by implementing the recommendations of Transplan 2010 and SIRP Reports and following the principles in the Planning Act and the Capital Region Partnership Act[1]. (Pg. 25)

Pursue Sustained Federal Municipal Infrastructure Funding

16. The Government of Manitoba, the AMM and City of Winnipeg are encouraged to work together and within their national networks including the Council of the Premiers, the Big City Mayors Caucus and the Federation of Canadian Municipalities (FCM), to urge the federal government to renew a national infrastructure strategy that:

a. Permanently transfers to municipalities on an ongoing basis the current $2 billion annual federal Gas Tax Fund and indexes annual increases to a minimum of the annual rate of inflation and population growth. (Pg. 26)
b. Transitions over three years the remaining portion of federal gas tax revenues to municipalities using the existing Gas Tax Agreement framework. At its current level, this would result in an additional $3.2 billion being allocated to Canadian municipalities. In Manitoba, this would provide municipalities with approximately $100 million annually. (Pg. 26)
c. Continues tri-level government infrastructure funding agreements on an on-going and permanent basis to address emerging infrastructure needs and shared priority projects. (Pg. 26)

Establish an Implementation Committee

17. Establish an Implementation Committee whose members are jointly appointed by the Government of Province, the Association of Manitoba Municipalities (AMM) and the City of Winnipeg, and whose terms of reference would require it to develop, within 12 months of their appointment, a Manitoba Municipal Infrastructure Funding Agreement (MIFA) that sets out (amongst other things): (Pg. 30)

a. Criteria to be used by municipalities to access new revenue streams that ensures public transparency and accountability (Pg. 30)
b. A description of the new intergovernmental infrastructure funding relationship taking into account competitive constraints, transitional periods and financial capacity (Pg. 30)
c. A protocol that ensures annual public reporting, project audits and five-year public reviews of Manitoba's infrastructure strategy and progress against a 20-year goal. (Pg. 30)

[1] The Capital Region Partnership Act is designed to create a forum for discussion and the development of regional solutions to issues facing capital region municipalities, including infrastructure development and applies only to the 16 Capital Region municipalities, including Winnipeg.

1.0 INTRODUCTION

The challenge of raising the revenues to fund municipal infrastructure projects is nothing new to Manitoba.

Nearly 75 years ago, Winnipeg Mayor F.E. Warriner appeared before the Federal Royal Commission on Dominion Provincial Relations and described what he called ``*the extremely unsatisfactory financial conditions under which Winnipeg operates as a municipality, required by provincial statute to maintain certain services and given only restricted revenues for the purpose of financing said services."* He warned of *"the absolute impossibility of the city being able to continue to function under the existing distribution of responsibilities and revenues."*

Twenty five years later, the 1961 Blake-Goldenberg report on metro financing suggested the 12 municipalities that made up Greater Winnipeg introduce either a metro gasoline tax or a tax on vehicle registrations as an alternative to direct government grants for streets and bridges.

By 1974, greater municipal responsibility for infrastructure works pushed the municipal infrastructure deficit 175% higher than the provincial deficit. The Canadian Federation of Mayors responded by proposing a three point plan that would:

- Reduce the responsibilities of local governments
- Expand transfers from senior governments to the municipalities
- Expand the tax base of local governments

In 2003, then Winnipeg Mayor Glen Murray proposed broadening Winnipeg's access to an array of revenue sources not as a revenue grab, but to shift reliance away from realty taxes to growth based taxes.

Regrettably, notwithstanding the efforts of a succession of mayors over the past 75 plus years, not much has changed relative municipal access to revenue streams. Municipalities are still generally speaking limited to realty and business taxes, user fees, levies and grants from senior levels of government with little or no access to growth based taxation.

IFC Mandate

In light of the above and in an effort to advance the infrastructure deficit debate from size and cost to finding real funding solutions, the Association of Manitoba Municipalities (AMM) President Doug Dobrowolski and Winnipeg Mayor Sam Katz appointed the Infrastructure Funding Council (IFC).

Its mandate was to develop a series of recommendations that could support a comprehensive funding strategy to address Manitoba's growing municipal infrastructure deficit. The IFC was to examine funding options within the control of municipalities and external options requiring intergovernmental negotiation. The IFC was also asked to outline a process for implementing the options.

When developing its recommendations, the IFC balanced the importance of funding infrastructure needed to fuel future economic growth with the need to address the current infrastructure deficit.

Manitoba's Municipal Infrastructure Deficit

For the purpose of this report, the IFC estimates that at current funding levels, Manitoba's combined total municipal infrastructure deficit will grow to $13.4 billion by 2019.

In Winnipeg, the total deficit is $7.4 billion made up of $3.8 billion[2] required to repair or replace existing and aging infrastructure and $3.6 billion[3] to fund new projects. Municipalities outside Winnipeg have a total deficit of $6 billion which includes an estimated $4 billion required now and an addition $2 billion by 2019. (For a full explanation of the deficit, and the underlying problems faced by municipalities, see Appendix 'C').

The IFC is hopeful that this report will help all stakeholders grasp the magnitude of the infrastructure challenge facing Manitoba municipalities and the need to debate the most appropriate options that results in a lasting solution. We look forward to this debate.

2.0 REQUIREMENTS FOR CHANGE

For the better part of a century, municipalities have been required to take on greater responsibility for the restoration and upgrade of existing public infrastructure and finance new infrastructure without corresponding access to revenues. Today, Canada's municipalities have an estimated infrastructure deficit of $238 billion which is comprised of (see Appendix 'C'):

- ***Existing Infrastructure Deficit*** refers to the amount required to rehabilitate or replace 'physically existing' infrastructure assets beyond budgeted levels. Examples include repairing a bridge or rebuilding a road which are unfunded within an existing budget;

- ***New Infrastructure Deficit*** refers to investments in new, projected or anticipated infrastructure assets that do not currently exist or the improvement of existing infrastructure assets, each of which are unbudgeted. This can involve new assets, such as a building, a new park, and/or enhancement of existing assets such as expanding an existing roadway to handle additional capacity; and

- ***Strategic Infrastructure Investments*** refer to unique and unanticipated investment in assets required in special case scenarios to platform new economic strategies or opportunities, such as but not limited to, infrastructure for CentrePort Canada, the Manitoba Theatre Centre (MTC) or the new Winnipeg Football Stadium.

INFRASTRUCTURE AND THE ECONOMY

It is well established that the condition of Canada's municipal infrastructure is one of the keys to underpinning, maintaining and enhancing Canada's economic productivity and competitiveness in North America and internationally.[4]

The World Economic Forum ('the Forum) puts a high priority on infrastructure when developing a competitive national global trading strategy. In its *2010-2011 Global Competitiveness Report*, the Forum said that developing and maintaining an extensive and efficient national infrastructure system was one of the top two priorities for growing a competitive trading economy.

However, after more than 30 years of successfully improving its position relative to its major trading partners, Canada's manufacturing productivity began to decline relative to other G8 countries in the early 1980s. The slide

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[2] Executive Policy Committee, *'Existing Infrastructure Deficit,'* Winnipeg, Manitoba, July 8, 2009.

[3] Executive Policy Committee, *'New Strategic Infrastructure Deficit'* Winnipeg, Manitoba, July 8, 2009.

[4] Brox, James A. "Infrastructure investment: the foundation of Canadian competitiveness." *IRPP Policy Matters*. *9,*2(2008)*:* 3-4 and "Trade, innovation, and prosperity," Institute for Competitiveness & Prosperity (ICAP), September 2010

accelerated over the next 10 years, as leading countries in the Organization for Economic Co-operation and Development (OECD) surpassed Canada.[5] Some research has linked Canada's decline to its failure to maintain its infrastructure.

The link between infrastructure investment and productivity is particularly pronounced when Canada's experience over the last 20 years is compared with the United States. The two countries had similar rates of manufacturing productivity until the early 1990s. However, as infrastructure investment increased in the United States, American productivity continued to improve relative to Canadian rates. By 2008, Canada had fallen significantly behind the United States. Economists now believe that poor infrastructure in Canada has produced transportation delays and reduced national manufacturing productivity rates.

Canadians have enjoyed a consistently high standard of living fueled by strong and sustained economic growth. As a country of traders, the efficient flow of primary and manufactured goods and services to partners outside its borders has been a key factor in Canada's prosperity. This reality not only impacts Canadian trade and tax policies, but also places an even greater importance on maintaining and upgrading a national network of roads, railways and ports. Delays caused by traffic congestion or commodity routing significantly impacts Canada's ability to do commerce and its reputation as a reliable supplier of goods and services.

In its July 2010 report *Public Infrastructure Underinvestment: The Risk to Canada's Economic Growth,*[6] the Residential and Civil Construction Alliance of Ontario predicted that Canada's continued underinvestment in infrastructure will slow economic growth, reduce corporate profitability and cost the average Canadian worker between $9,000 and $51,000 in reduced wages over the course of their career.[7]

Speaking to the National Infrastructure Summit in January 2011, Canadian Construction Association chair Wayne Morsky reported that for every $10 billion invested in municipal infrastructure, 115,000 new jobs were created and Canada's Gross Domestic Product (GDP) expanded by 1.3%.[8]

A 2010 study prepared for the Federation of Canadian Municipalities concluded that Canada's failure to increase investment in infrastructure would reduce future wage increases by half a percentage point annually, and reduce annual real net profits by an average of 0.7%.[9]

While Manitoba's past has relied heavily on the quality of its infrastructure, so too does its future.

Canada is a trading nation with its economy five times more dependent upon trade than that of the United States. Manitoba's is one of Canada's most export-oriented Provinces with manufacturing exports of approximately $13 billion annually accounting for roughly 62% of its economy. Trucking, rail, marine, warehousing, distribution and manufacturing are all dependent upon and support trade and account for roughly 100,000 jobs in Manitoba. And with 64% of the provincial GDP, Winnipeg accounts for the dominant share of trade-related jobs.

While a large part of Manitoba's infrastructure system is nearing the end of its natural life, the need to rehabilitate existing works and build new systems has been compounded by safety concerns and continued

[5] Brox, IRP: August 2009 www.irop.org/pm/archive/pmvol9no2.pdf

[6] Public Infrastructure Underinvestments: The Risk to Canada's Economic Growth, July 2010 http://www.rccao.com/news/files/RCCAO_Report_JULY2010_LOWRES.pdf

[7] http://www.newswire.ca/en/releases/archive/July2010/15/c4517.html

[8] Morsky, Wayne 2011 National Infrastructure Summit http://www.cca-acc.com/news/ccanews/WayneNISReginaSpeech2011.pdf

[9] Risk Analytica, *Public Infrastructure Underinvestment: The Risk of Canada's Economic Growth*, 2010

economic expansion. The recent catastrophic bridge failures in Quebec and Minneapolis and the bridge shut down on Highway #1 immediately east of Portage la Prairie, illustrate the real safety risk municipalities face with aging infrastructure renewal.

A growing Manitoba economy is increasing the pressure on infrastructure that is now servicing populations beyond what they were intended to do.

In Winnipeg for example, after limited population growth in the 1990s and early 2000s, the city has resumed a modest to strong population growth of about 1.2% per year. This has had a significant impact on infrastructure demands both from a residential use as well as an economic needs perspective. Over the past decade, Winnipeg's population as increased by 50,000 people and the capital region is expected to grow by more than 200,000 over the next 22 years.

In order to support this kind of economic expansion, Winnipeg must have a plan to support the renewal and expansion of its infrastructure system that facilitates and supports an efficient economy and economic growth.

How well Canada and Manitoba renew their current infrastructure and finance new construction over the next 10 years will dictate how well they maintain their competitive advantage and grow their economies.

3.0 BRIDGING THE GAP: FEDERAL AND PROVINCIAL INFRASTRUCTURE CONTRIBUTIONS

The recent economic downturn created a focus – and the political will at all levels of government – to increase infrastructure investments in Canada. The economic stimulus benefits of such investments included:

- Every $1 billion invested in municipal infrastructure created 11,500 new jobs
- Each dollar invested in municipal infrastructure returned roughly 35 cents back to governments in the form of sales and income taxes
- A $1 net increase in infrastructure investment generated approximately 17 cents in private sector cost savings.[10]
- An increase in municipal infrastructure investments of $1 billion in 2008 increased the size of the real economy by roughly 0.13 percent or $1.3 billion.[11]

With stimulus funding ending and the federal Building Canada program wrapping up in 2014, the challenge for municipalities is to continue the momentum. What is clear is that municipalities require ongoing partnership with the two senior orders of government. As stated by Winnipeg Mayor Sam Katz, "*We're facing a problem and we need to find a solution at all levels of government. Municipalities cannot do it on their own*."[12]

Federal and provincial contributions toward infrastructure investments in Manitoba communities have significantly increased over the last six years and the improvements are observable. The programs have also leveraged further private sector funding on strategic programs to grow the economy, and improve the efficiency of international cargo by road, rail and ship. In total, $460 million was provided to key projects that included

[10] http://www.statcan.gc.ca/pub/11f0027m/11f0027m2003017-eng.pdf

[11] FCM data cited from AMM, "The Core Challenges for Municipalities" http://www.amm.mb.ca/documents/TheCoreChallengesforMunicipalities.pdf

[12] Agrell, Siri *Canada's big-city mayors are wondering: After the stimulus, what's next*, Globe and Mail, March 17, 2011

CentrePort Canada Way, Port of Churchill, Hudson Bay Rail Rehabilitation, Emerson Highway 75, and Trans-Canada Highway and Yellowhead Highway Interchange.[13]

FEDERAL INITIATIVES

Just seven years ago, federal investment in the country's infrastructure was $125 million. In fiscal 2010, Ottawa expected to dedicate $9 billion to municipal infrastructure.[14] Beginning in 2005, the federal government diversified the sources of infrastructure monies with a three-pronged approach including:

- A 10-year Goods and Service Tax (GST) rebate (valued at $7 billion over its lifetime)
- A five-year Municipal Rural Infrastructure Fund (valued at $1 billion over its lifetime)
- A sharing of Gas Tax revenues (was announced as a five-year, $5 billion program but is now permanently established at $2 billion annually)

The central piece of the federal initiatives has been the Building Canada Plan. When announced, the seven-year plan was to distribute $33 billion to municipalities across Canada through 2014. The plan was augmented by a further $11 billion in 2009 from the Economic Stimulus Fund to help combat the economic impact of the global recession.

In addition to supporting specific projects through its infrastructure programs, Ottawa has also developed initiatives that are helping Manitoba municipalities revitalize infrastructure priorities including:

- A full rebate of all federal GST paid by municipalities. In 2010, this amounted to $22.8 million[15]
- The sharing of the federal gas tax has grown to $66.9 million/year[16]

PROVINCIAL INITIATIVES

The provincial government provided $219 million to Winnipeg and $84 million to municipalities outside of Winnipeg in fiscal 2010[17] through a number of programs to fund infrastructure priorities. A large portion of this funding (in the case of Winnipeg three-quarters) supports ongoing operations and only a portion supports direct infrastructure renewal.

The central piece of provincial support was the Building Manitoba Fund, a unique income and fuel tax sharing program that provided municipalities with limited access to provincial tax revenues that grow with the economy.

The 2010 total financing of $158.5 million through the Building Manitoba Fund was equal to 4.15% of provincial income tax, two cents per litre of provincial gasoline tax, and one cent per litre of provincial diesel fuel tax. The allocation provided Winnipeg with $103.2 million and municipalities outside of Winnipeg with $55.3 million for roads, transit, public safety and other municipal infrastructure priorities.

In addition to the above funding, the provincial government provided matching grants to many of the federal stimulus programs. Municipalities outside Winnipeg received provincial support through the Community Places Program and the Manitoba Water Services Board which funds land drainage and related investments and offers valuable expertise and cost savings in the design and implementation of projects.

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[13] http://www.canadasgateways.gc.ca/docs/centreport-final.pdf

[14] Federation of Canadian Municipalities, *Municipal Infrastructure: The View from Ottawa*, presentation to IFC, July 2010

[15] http://www.cra-arc.gc.ca/gncy/gsthstrbmn/2010/mb-eng.html

[16] Business Council of Manitoba, *Urban Affairs in Manitoba – The Issues*, September 2010

[17] Manitoba Local Government Webpage http://web5.gov.mb.ca/mfas/grants_payments_fund.aspx

Manitoba is the first Province in Canada to enable municipal access to Tax Increment Financing (TIF), an innovative financing tool that redirects incremental property tax revenue to support development and revitalization in municipalities. In jurisdictions outside Canada, TIFs are used as leverage to initiate and finance infrastructure benefitting the community at large that would otherwise not have been possible. When offered at both the municipal and provincial level, a TIF can become a significant financing source to enhance public investment in development.

In its 2011 budget, the Province announced it would provide Manitoba municipalities with revenue equal to a minimum 1% of the existing Provincial Sales Tax (PST) towards municipal infrastructure and transit. This is a repackaging of existing programs and effectively adds very little new funding to existing programs. It does, however, begin to acknowledge the policy imperative for legislatively dedicated, transparent and accountable funding with which to address the municipal infrastructure deficit.

MUNICIPAL COST SHARING CHALLENGES

Given the magnitude of the infrastructure deficit in Manitoba, cost sharing programs are necessary and beneficial. In fact, demand by municipalities for access to funding from some programs such as the Municipal Rural Infrastructure Fund (MRIF) and the Building Canada Fund is typically five times greater than the total pool of funds available.

The temporary nature and changing criteria of provincial programs also create challenges for larger municipalities because there is no certainty that a project will qualify for funding or if the program will even be available when the need is greatest.

In rural Manitoba, smaller municipalities are challenged even more because they are often unable to take advantage of infrastructure programs designed to respond to major initiatives like water and wastewater upgrades or regional recreation complexes. To access most of these programs, each order of government is required to commit one-third of the funding needed for the specific project, and in some cases more. However, current municipal borrowing guidelines can make it difficult for many rural municipalities to raise the required capital to participate.

The 197 municipalities outside Winnipeg currently have an unused borrowing capacity of about $600 million.[18] On the surface this appears significant but the available debt capacity[19] varies across the Province. One community has the capacity to access $35 million in unused borrowing capacity; another is currently over-extended by $5 million.

While borrowing remains a tool to be judiciously used for those municipalities with access to unused debt capacity, the majority of municipalities outside Winnipeg do not have the financial capacity to address their infrastructure needs, stay within borrowing limits and access provincial programs to fund these projects.

Municipalities also have access to financing for capital projects through general borrowing or through a local improvement plan that can be applied to all or part of the municipality. By law, the Manitoba Municipal Board must approve all borrowing,[20] a process which involves additional time and expense to municipalities. Many

[18] As provided by Manitoba Local Government.

[19] There are two measures for capacity – 7% of total assessment or 20% of total revenues. This is a guideline used by the Municipal Board and it is consistent with other jurisdictions.

[20] The Municipal Board's primary consideration is the long-term financial sustainability of municipalities. This recognizes the Province's interest in the long term financial sustainability of municipalities, as the Province would assume responsibility for those municipalities which are not longer financially viable.

municipalities believe that the Municipal Board process has become cumbersome and impedes infrastructure decisions.

Similarly, municipalities are challenged by the timing and costs of engineering assessments, environmental impact studies, and other provincial and federal requirements needed for infrastructure projects to be considered and approved. Currently, all these approvals are requisite for a municipal application to be advanced for national and provincial funding, resulting in hundreds of thousands of dollars in expenditures with no guarantee of successful funding.

4.0 PRINCIPLED DECISION MAKING

Principled decision making - including tough choices - requires transparent criteria and their consistent application. The IFC focuses on options and strategies considered forward thinking and addressed Manitoba's competitiveness needs. The IFC submits that this is best accomplished with a mixture of existing and new tax tools.

Principles of a Good Tax Design
A good tax system must balance various, sometimes competing objectives. The IFC relied upon the following tax principles to guide its discussions and recommendations:[21]

- **An objective of the tax system should be able to generate sufficient revenue** - It should judiciously raise sufficient revenues to reasonably ensure ability to meet obligations.

- **The tax system should be competitive and be perceived to be competitive with other jurisdictions** - Tax competitiveness is an imperative as the national and world economies are increasingly inter-connected, and businesses and people alike can migrate to jurisdictions that provide better economic returns.

- **The tax system should be equitable and levy taxes in a fair manner**. - There are two fairness principles usually applied:

    - Horizontal Equity - persons in similar circumstances should be treated similarly
    - Vertical Equity - persons with a greater ability to pay taxes should pay a proportionately greater amount of taxes (a progressive system).

- **A tax system should be efficient** - An efficient tax system has minimal impact on decision-making whether by businesses or individuals.

- **A tax system should be transparent** - The underlying purpose and principles behind the tax system should be clearly identified. It should be clear what is being taxed, who is liable, and how their liability is calculated.

- **A tax system should be accountable** - The same political entity is responsible both for raising taxation revenues and accountable for their expenditure (either directly or through funding agreements).

[21] Principles were compiled from a variety of sources including those proposed by the Business Council of Manitoba and the Asper School of Business *Tax Commission Report*, February 2010.

- **A tax system should minimize administrative and compliance costs for both the government and the taxpayer** - The tax system should be sufficiently simple so that taxpayers understand the rules and comply with them correctly and in a cost efficient manner.

- **A tax system should encourage sustainable development, resource conservation and support environmental principles including pollution prevention.**

5.0 INFRASTRUCTURE FUNDING – TOOLS AND IFC OVERVIEW

Over the past two decades, municipal governments have increasingly taken on more responsibility for financing, construction, maintaining, rehabilitating and building new infrastructure. Today, as in Canada, more than half of the infrastructure in Manitoba is the responsibility of the province's municipalities.

However, while the municipal role has grown, the municipal revenue tools and fiscal environment has become more constrained. Adding further complication is Manitoba's geographical size and the varied populations of its 198 municipalities which pose a real challenge when developing a new fiscal model and revenue tools. Nearly half of Manitoba's municipalities have fewer than 1,000 residents and some cover land masses larger than entire countries. As a result, solutions must be as diverse as the territory it affects.

The Canada West Foundation report '*New Tools for New Times'* warned governments to resist the temptation to select only one or two revenue tools when looking to fund infrastructure. It suggests that "*if innovative infrastructure finance is to be successful, governments must carefully assess their infrastructure needs, scan the list of available tools, and then put into play those tools that offer the best solutions for financing, funding and delivery*."[22]

The IFC reviewed internal and external revenue options and then utilized the "Principles of a Good Tax Design" to develop the comparative table in Appendix 'D'. The comparative assessment of the tax tools below helped form the basis of our recommendations:

- **Frontage Levy –** A special purpose tax charged separately from other property taxes. Winnipeg's Charter requires Council to state the purpose of the tax. Its calculation is based on the extent to which a property fronts or abuts a street with water or sewer mains.

- **Municipal sales tax –** The Business Council of Manitoba recently proposed a special municipal infrastructure levy equal to adding 1-cent to the PST for a 10 year period. The levy would provide Manitoba's municipalities $238 million (and grow) that could only be used for infrastructure priorities approved by the Province and municipalities. Allocation decisions would be publicly reported.

- **Vehicle Registration Fees** – These act as a generalized benefit tax because the number of vehicles relates to the demand for expenditures on roads, emergency services, and policing. These fees would be above the annual provincial levies applied to all vehicles. A 50% surcharge upon existing fees could generate $64 million to municipal infrastructure programs across Manitoba.

[22] Vander Ploeg, Casey New Tools for New Times: A source book for the finance, funding and delivery of urban infrastructure Canada West Foundation http://www.canadascities.ca/pdf/2006_CWF_New_Tools_for_New_Times.pdf

- **User Fees –** Pricing municipal services provided to citizens should provide a clear link between benefits received and fees paid. User fees have been implemented for water and sewer services, public transit, solid waste collection and disposal as well as public recreation and libraries.

- **Smart Debt Financing –** Smart debt recognizes that borrowing is a valid form of infrastructure financing and provides broad parameters on how municipalities should borrow. It recognizes that not all capital projects are equally well-suited for tax-supported debt financing. Some large projects are difficult to do on a cash basis. But with additional revenues, a component can be used to pay the borrowing costs providing municipalities the ability to build larger projects like a bridge, a rapid transit system or a large building. Smart debt requires municipalities to identify a sustainable borrowing threshold or some notion of optimal debt relative to future operating budgets and anticipated growth.

- **Public Private Partnerships (P3) –** These provide a legal framework between a government and business partners to design, build, manage, operate and maintain an asset and /or the delivery of services. They allocate responsibilities and risks amongst the partners proportionate to capacity and ability. Government remains actively involved throughout the project's life cycle. The private sector is responsible for the more commercial functions such as project design, construction, finance and operations. P3s are increasingly becoming a common financing tool for large infrastructure projects.

- **Tax Increment Financing (TIF)** – TIFs allow for all or a portion of the incremental municipal revenues arising from a defined municipal development to support the investment and community benefit rather than relying on general municipal revenues and its competing priorities. This is usually an option when the revenues generated by the infrastructure investment can be easily understood and predicted.

- **Municipal Property Tax** – Property taxes are levied on property owners. The amount paid is calculated by applying municipal and school mill rates against the portioned uniform assessment of the property. In Winnipeg, a one per cent increase in property taxes generates an additional $4.3 million of revenue. When calculating taxes in Manitoba, one mill represents $1 of taxes for every $1,000 of portioned assessment.

IFC ASSESSMENT OVERVIEW

Frontage Levies, Municipal Sales Tax, Vehicle Registration fees, User Fees
The IFC has assessed that frontage levies, municipal sales tax, vehicle registration fees and user fees respect the stated tax principles and also clearly link the user to the benefit. They are therefore recommended. There is also capacity within the existing measures to upwardly adjust revenues in a transitioned manner. If, for example, frontage levies ($1.00 per front foot), a municipal sales tax and vehicle registration fees were adopted or expanded further, the total revenue that could be generated over time totals more than $300 million.

Smart Debt, P3's, Tax Increment Financing (TIFs), Municipal Property Taxes
There is merit in smart debt financing, P3's, tax increment financing and municipal property taxes. All matched well against the taxation principles and provide sufficient transparency between the infrastructure user and benefit received. There are also limitations and without expansion of the existing realty tax base, these measures were not viewed as favourably as the first group. It is worth noting that each taxation measure has unique attributes that can be favourable to municipalities under the right circumstances.

While TIFs are used extensively in the United States to fund infrastructure projects, they are only now emerging as a viable financing tool in Manitoba. Winnipeg has used TIFs to develop its Exchange District, the Seasons of Tuxedo Development (IKEA) and the new football stadium. The IFC recommends the use of TIFs.

Municipal Borrowing
Municipalities should continue to borrow to fund infrastructure which spans several generations. While some might argue that a city free of debt is good public policy, it is not when the infrastructure that supports a community's current and future economic success is allowed to deteriorate.

User Fees
The IFC encourages municipalities to ensure that user fees reflect the true cost of the service being provided. When they fail to do so, there is no incentive to conserve or modify consumption. Subsidized, inexpensive water, hydro or natural gas encourages overuse and waste. Properly priced services persuade smarter consumption which slows infrastructure deterioration, extends asset life cycles and delays capital expenditures.

Other Tools
The IFC also reviewed an extensive list of alternative or innovative revenue sources considered in a variety of sources and reports - see Appendix 'F' to 'H' inclusive. Many of these are viewed as reasonable secondary sources of revenue with which to augment an existing and expected municipal share as part of the proposed solution, but not the primary ones which form the basis of the IFC's fiscal plan approach.

IFC Preference
The IFC endorses a tax structure which is transparent, serves a defined public purpose(s) and is seen to be accountable. Furthermore, any solution should:

- Be a toolbox of diversified revenue sources to provide individual municipalities with the flexibility to address their unique needs
- Not focus simply on increasing current revenue sources as they will result in only small incremental revenue gains and result in taxpayer fatigue and not address the revenue shortage problem
- Should provide municipalities with access to elastic, growth-based revenue streams inducing a pronounced municipal focus on decisions to grow the economy with increasing reliance on progressive tax measures

The IFC recommendations were also tested against their applicability to Manitoba municipalities.

In the balance of the report, the goal was to develop a toolbox that would have considerable potential to benefit the majority of municipalities by improving efficiencies on one hand and increasing their capacity to access multiple revenue sources on the other.

6.0 INTERNAL INFRASTRUCTURE FUNDING OPTIONS

Funding options cannot focus solely on access to new revenue streams. There should be a clearly accompanied focus on improved practices and methodologies which result in visible gained efficiencies. This should be accompanied by a clear and determined focus by municipalities in their decision making on growing the economy, without which, talk of revenues is moot.

To accomplish this, municipalities are encouraged to re-engineer their internal practices, embrace innovation, welcome regional service delivery models, commit to sustainable development practices, and improve governance in all its related respects to further enhance transparency and accountability to taxpayers.

In short municipalities should:

1. Maximize use of existing municipal infrastructure funding tools
2. Improve internal infrastructure investment management and planning efficiencies
3. Adopt sustainable development plans
4. Pursue regional service delivery efficiencies
5. Focus decision making on growing the economy

Municipal Financial Tools
The IFC recognizes that there are a limited number of financing options for cities, towns and municipalities to respond to the current infrastructure situation including:

- **Retreat –** Municipalities withdraw from existing infrastructure projects and support and focus only on core responsibilities and priorities

- **Pay-as-you-go Financing** – Municipalities put money aside each year within their budget to cover annual capital programs or road maintenance, sidewalk repairs and the upkeep of facilities

- **Debt Financing** – Municipalities issue bonds, debentures or another debt security

- **Taxation Funding** – Municipalities use property tax and capital grants to fund infrastructure needs

- **User Pay Funding** – Municipalities price services that they provide to consumers

- **Private Sector Involvement** – Enhance collaboration strategies with the private sector related to the design, construction, delivery and maintenance of infrastructure assets in a manner which fairly apportions the risk and shares rewards.

IFC RECOMMENDATIONS – Maximize Use of Existing Financial Tools
The IFC recommends that Municipalities:

1. Continue demonstrating financial commitment to the funding of municipal infrastructure, with borrowing levels consistent with Manitoba Municipal Board Guidelines.

2. Apply the notion of 'smart debt' within individual municipal context. This approach means building a consensus around an appropriate and sustainable level of tax-supported debt over the long-term, recognizing that borrowing is a legitimate part of any long-term capital financing plan.

3. Consider the application of a special purpose tax (frontage fees) specifically allocated to infrastructure funding.

4. Review user fee structures and adjust where necessary to ensure that there is a clear link between the fee being paid and the service being provided and that these fees reflect the true cost of the service provided.

5. Augment current infrastructure budgets equal to an annual average of the last five years and provide for annual increases equal to the rate of inflation and population growth, utilizing existing municipal sources of revenues.

6. Publicly set out a clear detailed strategy for addressing the infrastructure deficit including a time frame for the effort, measurable benchmarks, periodic reviews and public accountability for results.

The IFC further recommends that the Province of Manitoba assist in facilitating the maximum use of municipal fiscal tools by taking the following steps:

IFC RECOMMENDATION – Manitoba encouraged to Amend the Municipal Board Act

7. The Government of Manitoba is encouraged to amend the Manitoba Municipal Board Act to:

a. Enable municipalities to borrow without approval of the Municipal Board, as long as they remain within established borrowing guidelines;
b. More clearly enable Municipalities to borrow outside the guidelines, with Municipal Board review and approvals, keeping in mind the Province's interest in the long-term financial sustainability of municipalities; and
c. Expand definition of Municipal revenues to include Gas Tax Agreement revenues and other like revenues.

EFFICIENCY GAINS & BEST PRACTICES

Municipal leaders do and should continue their quest towards improved efficiencies in order to provide better value for the existing tax dollars they collect and invest. Efficiency gains create additional fiscal flexibility and the opportunity to reinvest these "savings" to further infrastructure programs.

The IFC identified a number of best practices which if implemented may enable some municipalities' greater fiscal investment flexibility.

IFC RECOMMENDATIONS –Address Efficiencies, Adopt Best Practices and Reinvest Gains Into Infrastructure

The IFC recommends that municipalities be encouraged to review the manner in which the following practices could be implemented:

8. Adopt Best Practices by:
a. Implementing the recommendations of the 1998 Strategic Infrastructure Reinvestment Policy Report (SIRP) which provides a municipal roadmap to align asset management practices and budgeting – see Appendix 'E'
b. Phasing in infrastructure asset management processes and systems to better quantify existing and future infrastructure needs
c. Financing infrastructure projects to properly recognize project life and replacement patterns
d. Justifying construction of all new publicly funded infrastructure projects by providing a cost/benefit analysis that incorporates sustainability
e. Including incremental maintenance costs and a parallel maintenance budget for new or upgraded infrastructure
f. Incorporating advanced techniques, improved technologies, better materials and best practices in all infrastructure programs

g. Applying full cost accounting principles to all government services ensuring that the prices for services reflect the true costs of service(s) provided [23]
h. Determining the most cost effective options for all capital programs for new or rehabilitated infrastructure by pursuing life cycle costing analysis

9. Reinvest resulting efficiency gains/financial savings into priority infrastructure projects.

MAKING INFRASTRUCTURE MORE SUSTAINABLE

In Manitoba, municipal development plans are required by legislation (under the *Planning Act and The Sustainable Development Act*) to incorporate the principles of sustainable development. Municipalities are required to balance social, economic and environmental costs and benefits when revitalizing existing infrastructure and constructing new infrastructure.

Infrastructure development should incorporate sustainable practices and green technologies that reduce the environmental footprint of municipalities. This balancing of costs and benefits ensures that the needs of today do not come at the expense of future generations.

IFC RECOMMENDATION–Adopt Sustainable Development Practices

The IFC recommends that:

10. Municipalities should incorporate ongoing and long term municipal infrastructure planning and investment strategies into their sustainable development plans to ensure congruency of objectives.

PURSUING REGIONAL INFRASTRUCTURE EFFICIENCIES

The notion of regional collaboration is not new to municipal thinking but its importance should take on a greater sense of policy priority and urgency. Winnipeg on an increasingly frequent basis now engages in discussions with capital region neighbors on the delivery of services.

Across Manitoba, the AMM has invested time encouraging municipalities to work regionally. It has supported this initiative with a *"Tools for Change"* program in partnership with the Province, aimed at encouraging regional thinking. [24]

Key stakeholders recognize the value of regional service delivery. As an example, a 2010 transportation and infrastructure brief prepared by the Winnipeg Chamber of Commerce pointed out that "a regional approach to transportation and infrastructure planning (that) will provide a capital region plan that leverages regional investment and provides more efficient outcomes.''[25]

The Manitoba Planning Act[26] authorizes boards or councils of two or more planning districts or municipalities to develop a regional strategy covering the area within their jurisdiction. The purpose of a regional strategy is to improve and co-ordinate land use and development in the region and promote co-operation between planning districts and municipalities in the delivery of services and development of infrastructure in the region.

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[23] See '*ND Lea, Cost Benefit Analysis for Waverly West, 2004'* provides a good framework around which principles in items 3, 4, 5, 7 and 8 can be developed.

[24] (http://www.amm.mb.ca/res_tools.html)

[25] Winnipeg Chamber of Commerce, *Transportation and Infrastructure*, October 2010

[26] http://web2.gov.mb.ca/laws/statutes/ccsm/p080e.php

This approach better coordinates and unifies approaches within a geographic area and can provide better tax value because municipalities can accelerate investment opportunities. It reduces costs by sharing resources and improving efficiencies through a uniform approach. Municipalities can then tackle larger scale projects by pooling financial and human resources.

IFC RECOMMENDATION – Pursue Rural Regional Infrastructure Delivery Strategy
The IFC recommends that:

11. Municipalities outside Winnipeg are encouraged to maximize efficiencies and create a regional focus by delivering infrastructure services in partnership with neighboring municipalities consistent with objectives in the Planning Act and the Capital Region Partnership Act objectives.

IFC RECOMMENDATION - Develop Winnipeg Capital Region Infrastructure Delivery Strategy

12. The Government of Manitoba and the Winnipeg Capital Region municipalities are encouraged to develop a Capital Regional Strategy which recognizes the importance of the supply and delivery of regional core and social infrastructure services in a fiscally and environmentally responsible and sustainable manner by implementing the recommendations of Transplan 2010 and SIRP Reports and following the principles in the Planning Act and the Capital Region Partnership Act[27].

7.0 EXTERNAL INFRASTRUCTURE FUNDING OPTIONS

FEDERAL AND PROVINCIAL GOVERNMENT ROLES
It is well established that that the condition of Canada's municipal infrastructure is one of the keys to underpinning, maintaining and enhancing Canada's economic productivity and competitiveness in North America and internationally. Municipalities host much of Canada's economic engines.

It is therefore clearly in the national and provincial interests for the federal and provincial governments to institute permanent and sustainable programs in partnerships involving the municipalities with which to address reinvestment in Canada's municipal infrastructure.

In such a tri-level partnership, municipalities should at the outset be involved in federal-provincial funding decisions impacting local municipal infrastructure. The IFC supports bi-level and tri-level agreements that include defined roles and responsibilities for each partner.

While this report focuses primarily on the ability by municipalities – alone and with the assistance of the Province – to generate the revenues needed to fund their infrastructure deficits, the IFC submits that there is a necessary place and role for further federal funding on a national basis and in partnership with the other two levels of government.

Public opinion research shows that Canadians understand that the condition of the country's infrastructure can impact its competitiveness, growth and the standard of living that its citizens enjoy. In fact, most Canadians

[27] The Capital Region Partnership Act is designed to create a forum for discussion and the development of regional solutions to issues facing capital region municipalities, including infrastructure development and applies only to the 16 Capital Region municipalities, including Winnipeg.

believe Ottawa should be part of the infrastructure deficit solution, and want this to be a federal priority over the next 10 years. Research shows: [28]

- Most Canadians believe that Canada's infrastructure investment is falling behind other countries and that this will threaten their personal prosperity in the future
- Canadians believe that two areas should be protected from federal spending cuts – health care and municipal infrastructure
- Canadians believe that improving local infrastructure (57%) would have a greater impact on their quality of life than tax cuts (45%)
- Two thirds of Canadians would support an increase in the GST if it were dedicated to local infrastructure
- Canadians believe that the country's aging infrastructure is as big a national issue as the federal deficit

As the state of the country's infrastructure represents a key barometer of the country's economic strength, Canadians want a strong federal government that provides leadership and direction.

IFC RECOMMENDATION– Pursue Sustained Federal Municipal Infrastructure Funding

The IFC recommends the following:

13. The Government of Manitoba, the Association of Manitoba Municipalities (AMM) and City of Winnipeg are encouraged to work together and within their national networks including the Council of the Premiers, the Big City Mayors Caucus and the Federation of Canadian Municipalities (FCM), to urge the federal government to renew a national infrastructure strategy that:

a. Permanently transfers to municipalities on an ongoing basis the current $2 billion annual federal Gas Tax Fund and indexes annual increases to a minimum of the annual rate of inflation and population growth.
b. Transitions over three years the remaining portion of federal gas tax revenues to municipalities using the existing Gas Tax Agreement framework. At its current level, this would result in an additional $3.2 billion being allocated to Canadian municipalities. In Manitoba, this would provide municipalities with approximately $100 million annually.
c. Continues tri-level government infrastructure funding agreements on an on-going and permanent basis to address emerging infrastructure needs and shared priority projects.

As is the case with the federal *Gas Tax Agreement*[29] the IFC submits that federal funds should be dispersed primarily on a per capita basis without ignoring larger strategic needs. Accountability should be ensured through annual municipal reporting on how the funds invested and what outcomes were achieved. These programs should be subject to periodic arms length "value-for-dollar" reviews.

Provincial Government's Role

If municipalities are to be empowered to address their infrastructure needs then the current revenue streams provided by existing provincial legislation respectfully are inadequate.

For example, if municipalities were to use property taxes to raise the funds needed to address their infrastructure deficits, municipal property tax bills in Manitoba would likely need to triple.

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[28] *The Strategic Counsel survey of 2,168 Canadians proportional to the adult population in all regions completed in January 2010 and reported in Cities, Communities and the Federal Budget Deficit*, http://www.fcm.ca//CMFiles/SurveyReportJan192010EMBARGOED1JBG-1202010-2986.pdf

[29] The AMM cited the Gas Tax Agreement program administration is well accepted and embraced by Manitoba's municipalities.

In identifying pools of revenue that could help municipalities address their infrastructure deficits, the IFC recognized a number of challenges including:

- The political and economic ramifications of major changes to the tax system
- The complexity of transitioning existing revenue levies from one jurisdiction to another
- The challenges of introducing new taxes

To bridge these challenges, the IFC submits that any new revenue streams be transparent, accountable to the public and dedicated by legislation only to municipal infrastructure investment. They should also be transitioned and done so only after broad public consultation or public referendum led by municipal and provincial leaders.

Allocate Consumption Taxes to Municipalities

Taxes based upon growth and consumption, such as corporate and personal income, sales and the goods and services taxes, are progressive. They are a more equitable way to achieve the vertical and horizontal fairness objectives in a properly structured tax system. They provide access to the benefits of economic growth and encourage a focus on growing the economy.

An over-reliance on grants and transfers has left municipalities struggling to meet the growing infrastructure demand. Transfers also do not provide the transparency taxpayers need to hold their municipalities accountable.

In Manitoba, the current PST raises roughly $238 million for each point of tax. Since being introduced in 1991, the federal GST it has been reduced twice leaving room for either the Provinces, or by agreement, the municipalities to access this tax space.

In its February 2011 budget submission to the provincial finance minister, the Business Council of Manitoba called for a 1% sales tax to fund infrastructure construction for a period of 10 years. The Council said this new support should be incremental to existing infrastructure funding that municipalities receive. The Business Council undertook to support the change should a Province-wide referendum be required.

Last year, the Winnipeg Chamber of Commerce recommended a fiscal realignment that included "some consumption tax room to allow for the establishment of a city sales tax. The City sales tax should be dedicated to fund certain elements of the infrastructure strategy."[30]

Public opinion research suggests that infrastructure is a major priority for nine-in-ten Manitobans [31] and that more than half (54% of Manitobans and 51% of Winnipeggers) would support a 1% Municipal Infrastructure Levy (MIL) that was dedicated to infrastructure renewal projects. An MIL collected in the same manner as the PST must be approved in legislation by the Province, as municipalities do not have the authority into introduce this type of tax.

IFC RECOMMENDATION – Allocate Consumption Taxes to Municipalities Dedicated to Infrastructure

The IFC recommends that the Government of Manitoba address the following:

14. Apart from the re-allocation of provincial funding sources announced in the 2011 budget, and subject to any required public approval including a referendum if necessary, allocate the equivalent of an additional 1% of

[30] Transportation and Infrastructure Brief, Winnipeg Chamber of Commerce, October 2010

[31] Association of Manitoba Municipalities survey, 2008 http://velocitybranding.com/mhca/images/reportsarticles_pdf/probereportinfrastructure.pdf

the Provincial Sales Tax (PST) and explicitly dedicate through legislation, revenues associated with all such allocations to core and social municipal infrastructure.

This additional revenue could be generated through any of the following approaches:

- A new and separate Municipal Infrastructure Levy (MIL)
- Over and above the 2011 budget re-allocation, from within the existing PST framework
- By adding 1% to the PST

If a referendum is required, the municipalities and the Province should jointly participate and support any public education campaign.

Vacate Property Education Tax

Education falls under provincial jurisdiction but Manitoba's municipalities collect $669 million in net property tax on its behalf each year (see Figure 1). This structure does not provide the transparency to taxpayers in that there is no link between what is being taxed and who is accountable for its expenditure.

Figure 1: Total Net Education Property Tax

2009 Budget, Dollars in Millions	**FRAME Report All MB**	**City of Winnipeg**	**Rest of Manitoba Municipalities**
Provincial Education Support Levy	$127	$76	$51
School Division Property Tax	$703	$399	$305
Total Gross Education Property Tax	**$830**	**$474**	**$356**
		57%	**43%**
Minus Provincial Education Tax Credit	$161	$108	$53
Total Net Education Property Tax	**$669**	**$367**	**$303**
		55%	**45%**
2009 Budget, $ in millions			
Total Net Revenue from Education Property Tax	$669	$367	$303
Current Municipal Property Tax Revenues	$715	$429	$287
Total Funding from Property Taxes on Net Basis	**$1,385**	**$795**	**$590**

Sources: Manitoba Education, the Financial Reporting and Accounting in Manitoba Education (FRAME Report) http://www.edu.gov.mb.ca/k12/finance/frame_report/index.html and the City of Winnipeg's 2009 Annual Financial Report

Currently a number of Provinces – Prince Edward Island, New Brunswick and Newfoundland – have eliminated education tax from municipalities' residential property tax[32] . Saskatchewan has also been reducing its education portion on the municipal property tax bill year annually.

[32] Edmonton Property Tax and Utility Charges survey, produced by the City of Edmonton

The Manitoba government announced in 2007 that it was committed to increasing provincial funding to 80 per cent of total public schools education expenditures.[33] The IFC wants to clearly distinguish the difference between the adjusted total cost of public education which would include capital and other pension related costs and the net operations budget as mentioned above.[34]

The IFC submits by increasing provincial funding to 80% of the net education operations budget (FRAME operating budget) over a staged multi-year period; Manitoba municipalities can access that tax room over time until it reaches approximately $300 million annually. Legislation should require municipalities to dedicate the new funding to municipal infrastructure programs. This calculation assumes that school divisions have a 20% reliance on property taxes. The recommendation also assumes the Province will identify just over $300 million from another revenue source to fund school divisions. Whether the Education Property Tax Credit is affected by this recommendation is a matter for the provincial government.

IFC RECOMMENDATION - Vacate Property Education Tax Room Dedicated to Infrastructure
The IFC recommends that the Government of Manitoba:

15. Increase provincial education funding to 80% of net operations (as defined in the FRAME Report) in a staged manner over a three year period while phasing out approximately $300 million from the current realty education levy. Then, through legislation enable municipalities to backfill the tax space vacated by the current education levy with a municipal levy dedicated by legislation for application to municipal infrastructure investment.

IFC RECOMMENDATION - Create an Equity Reserve Account for Smaller Municipalities
The IFC recommends that the Government of Manitoba, as part of the revenue stream allocation, enshrine the following principle:

16. Create an *'equity reserve account'* from 5% of the funds raised annually from the new MIL (or its equivalent) and establish access criteria for smaller rural municipalities for the purposes of enabling their participation in locally, regionally or multi-partied prioritized infrastructure programs.

IFC Approach – A summary
In summary then, the IFC proposes a three-pronged approach to generate the revenue platform needed to address the infrastructure deficit. This staged approach co-ordinates change at several levels.

1. Municipalities make the required internal changes noted earlier. These changes range from maximizing own source revenues, introducing organizational changes, adjusting current service delivery models, and implementing related best practices.

2. Province allocates an additional one per cent of existing PST revenues or adds an additional point to the PST along with vacating the education property tax as hereinafter provided over a three year period (the specifics of such an arrangement would be the subject of discussion and agreement between Manitoba and the municipalities). These two new revenue streams could be the foundation for a new fiscal strategy dedicated to addressing the $1.3 billion annual infrastructure need.

[33] Province of Manitoba news release, *Budget 2007 Highlights*, http://news.gov.mb.ca/news/index.html?archive=2007-4-01&item=1417
[34] http://www.edu.gov.mb.ca/k12/finance/frame_report/2009-10_frame_budget.pdf page 42

3. A partnership between Manitoba and its municipalities to jointly pursue a national strategy that would provide sustained federal funding of Canada's municipal infrastructure.

IMPLEMENTING EXTERNAL FUNDING OPTIONS

In order to build public support for new revenue sources, the IFC submits there is a need for an implementation plan that provides the transparency and accountability that taxpayers will demand in return for new revenues. The IFC offers the following implementation framework as a starting point to build public confidence.

IFC RECOMMENDATION – Establish an Implementation Committee

The IFC recommends that the Government of Manitoba, AMM and the City of Winnipeg commit to the following:

17. Establish an Implementation Committee whose members are jointly appointed by the Government of Manitoba, the Association of Manitoba Municipalities (AMM) and the City of Winnipeg, and whose terms of reference would require it to develop, within 12 months of its appointment, a Manitoba Municipal Infrastructure Funding Agreement (MIFA) that sets out:

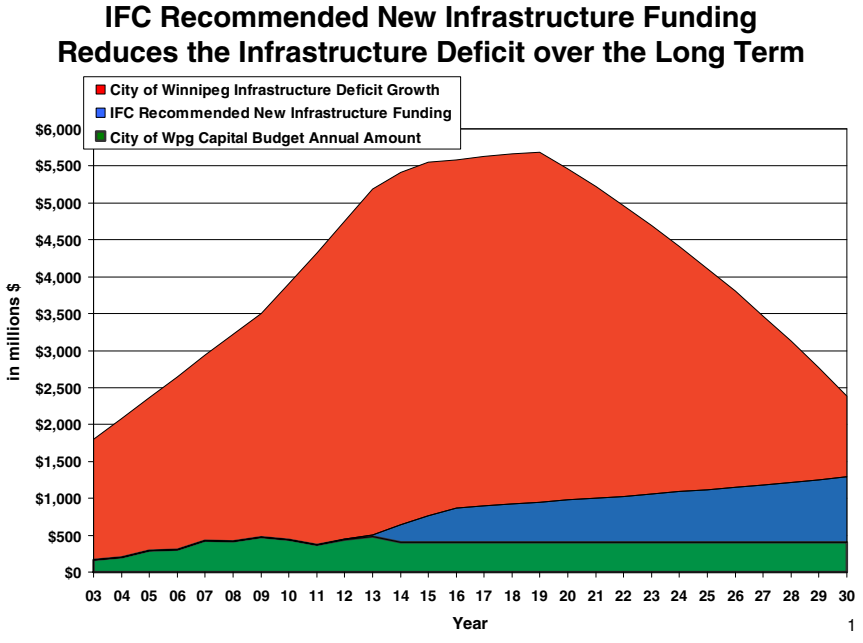
a. Criteria to be used by municipalities to access new revenue streams that ensures public transparency and accountability
b. A description of the new intergovernmental infrastructure funding relationship taking into account competitive constraints, transitional periods and financial capacity
c. A protocol that ensures annual public reporting, project audits and five-year public reviews of Manitoba's infrastructure strategy and progress against the 20-year goal.

IMPACT OF A FINANCIAL PLAN – FINANCIAL MODELING

The magnitude of the challenge, which demonstrates the imperative of sustained decisions, discipline and intergovernmental collaboration, is reflected in the 2011-2030 Financial Plan and Financial Modeling (See Appendix 'J'.)

As stated, the total municipal infrastructure deficit in Manitoba is projected to reach $13.4 billion within 10 years at current funding levels. The amount of additional budget to address the deficits hovers in the vicinity of $1.3 billion annually.

The IFC Financial Model assumes that effective 2012 municipalities begin the renewal with annual increases to their infrastructure budgets from existing revenue sources, tied to the rate of inflation and population growth increases.



The additional revenues contemplated from vacated education tax room; an additional point under the existing, or new PST or new MIL; and federal contribution, are assumed to be transitioned in commencing 2014 – see 'IFC Recommended New Funding' chart below.

To help better understand the impact of a sustained 20-year effort, the IFC has prepared a financial model based on the recommendations in this report,

It is offered as a tool for Manitobans to use and help understand the long-term impact of any plan that is ultimately put in place. The measures may change as might the timeframe for achieving different municipal goals, and the model can be adjusted to reflect these decisions needed in the development of a plan.

IFC Recommended New Funding available to address $13.4 Billion of Infrastructure Deficit

in $ millions									5 Year						5 Year
For City of Winnipeg	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**subtotal**	**2019**	**2020**	**2021**	**2022**	**2023**	**subtotal**
Vacated Education Property Taxes	-	-	-	63	129	197	201	205	**796**	210	214	218	222	227	**1,091**
Additional Federal Fuel Tax	-	-	-	11	43	65	65	66	**249**	66	67	68	69	69	**339**
Municipal Infrastructure Levy	-	-	-	135	141	146	152	158	**732**	164	171	178	185	192	**891**
Municipal Additional Funding	-	12	24	37	50	64	78	92	**357**	107	122	138	154	170	**690**
Wpg Sub-Total	**-**	**12**	**24**	**246**	**362**	**472**	**496**	**521**	**2,134**	**547**	**574**	**601**	**630**	**659**	**3,011**
Remaining Municipalities	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**		**2019**	**2020**	**2021**	**2022**	**2023**	
Vacated Education Property Taxes	-	-	-	49	100	154	157	160	**621**	163	167	170	173	177	**850**
Additional Federal Fuel Tax	-	-	-	7	27	41	41	41	**156**	42	42	43	43	43	**213**
Municipal Infrastructure Levy	-	-	-	123	128	133	138	143	**664**	149	155	161	168	175	**808**
Municipal Additional Funding	-	6	12	19	25	32	39	46	**178**	53	61	69	77	85	**345**
Remaining Municipalities Sub-Total	**-**	**6**	**12**	**197**	**280**	**359**	**375**	**391**	**1,620**	**408**	**425**	**443**	**461**	**480**	**2,216**
Total Province wide	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**		**2019**	**2020**	**2021**	**2022**	**2023**	
Vacated Education Property Taxes	-	-	-	112	229	351	358	366	**1,417**	373	380	388	396	404	**1,940**
Additional Federal Fuel Tax	-	-	-	17	69	105	106	107	**405**	108	109	110	112	113	**552**
Municipal Infrastructure Levy	-	-	-	258	268	279	290	302	**1,396**	314	326	339	353	367	**1,699**
Municipal Additional Funding	-	18	37	56	75	96	116	138	**535**	160	183	206	231	255	**1,035**
Province Wide Sub-Total	**-**	**18**	**37**	**443**	**642**	**831**	**871**	**912**	**3,754**	**955**	**999**	**1,044**	**1,091**	**1,139**	**5,227**

The 'IFC Recommended New Funding' chart summarizes the results of financial modeling based upon IFC's recommendations. It illustrates the impact of new revenue sources over time for Manitoba municipalities.

Initially, new funding to municipalities starts small but builds through annual growth and the compound affect of time.

As shown to the table to the right, the IFC is urging all levels of government to participate in providing additional revenues to help fund municipal infrastructure. By 2023, $1.139 billion of new funding would be available:

IFC Revenue Sharing Summary Plan to address $13.4 Billion Infrastructure Deficit			
(in millions of dollars)	By 2023	% of total revenues	
Vacated Education Property Tax	$404	35%	Provincial
Additional Federal Gas Tax	$113	10%	Federal
1% Municipal Infrastructure Levy	$367	32%	MIL
Additional Municipal Revenue equal to inflation plus growth	$255	22%	Municipal
Total Additional Revenue	**$1,139**		

- $404 million by the Provincial Government by reducing education property tax and funding school divisions directly from their general revenues;

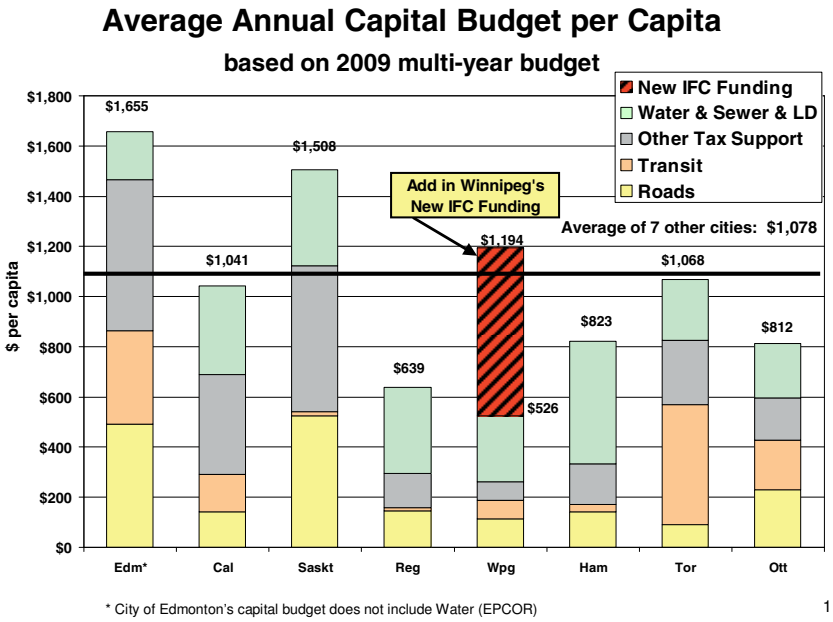
- $113 million from the Federal Government by transferring all of its Fuel tax it currently collects to municipalities;

- $367 million from a province wide new 1% sales tax called the Municipal Infrastructure Levy; and

- $255 million from municipalities to increase their base capital budget by the rate of inflation plus population growth using their current revenue tools such as property tax, frontage levies, and user fees.

Although the revenues generated by the new measures appear to be significant, the IFC submits the response is proportional to the scale of the problem.

To illustrate this point, Winnipeg's share of the new revenues (shown in red) has been added to the city's current capital budget plan and compared with current capital budgets of other Canadian cities. The result is that the total funding level only increases slightly above the existing average large Canadian city.



The above financial modeling also assumed cash funding of infrastructure projects. With this kind of new infrastructure revenue there is also the alternative of using Smart Debt which could also be used to fund large inter-generational projects such as a large bridge project, an additional leg of rapid transit and other projects.

A portion of the new revenues would need to be dedicated to the Smart Debt in order to make the 30 years of annual financing payments. For example, $75 million of annual cash payments for 30 years could leverage $1 billion of construction projects immediately. In addition, the Smart Debt approach should be in sync with the municipality's overall debt strategy.

As noted by the year 2023, or 12 years out, the additional revenues total $1.139 billion – see 'IFC Revenue Sharing Summary Pan' chart. The cumulative impact is that Winnipeg's infrastructure deficit is reduced from its projected $7.4 billion to $4.6 billion, and for municipalities outside Winnipeg, from its projected $6 billion to $3.6 billion.

By 2030, at the end of the 20 year plan, those deficits drop further to $2.3 billion and $2.4 billion respectively. (See chart at Appendix 'J.')

With this report and recommendations the IFC is urging Manitobans and governments alike that it is time to put a stake in the sand and start to address the infrastructure deficit by making the necessary decisions, creating a plan and implementing it. Success will flow from this decision – with the required patience, discipline, and commitment to the purpose.

9.0 CONCLUSION

Manitoba can begin to address its infrastructure investment deficit in a balanced, disciplined and lasting way. How and over what time frame we achieve this goal is up to Manitobans.

The IFC hopes that *New Relationships: A New Order: A balanced approach to funding municipal infrastructure in Manitoba* ignites a vigorous public debate in this Province about the best approach and mix of revenue tools to address Manitoba's infrastructure deficit.

One thing is for certain: the need for this debate is now. Our infrastructure network is the lifeblood of our economy. It affects our productivity, economic growth, prosperity and our standard of living. Failure to address this issue not only limits the ability of our municipalities to serve a growing population but also creates safety issues to those using our aging infrastructure.

The challenge before municipalities in Manitoba – and the challenge for municipalities throughout Canada – is developing a revenue framework that addressing the immediate infrastructure need without compromising efforts to grow the economy with new works.

This is a problem born in the past but it must be addressed in the present and the future. We must summon the courage to make the necessary decisions to create a visionary plan and then have the patience and discipline to implement it.

In this report, the IFC identifies a number of revenue tools for public consideration. Together we must develop a plan that uses our tax structure to create a virtuous circle where municipalities are rewarded for focusing on economic growth and making spending decisions that invest in creating prosperity in order to better position them for the future. Part of the solution, the IFC submits, is to provide municipalities' access to growth taxes.

The IFC submits that Manitobans understand the need to take action on the Province's infrastructure and are prepared, under the right conditions, to financially support it. Public opinion research shows:[35]

- 94% of Manitobans see infrastructure as a high priority
- 54% of Manitobans, including 51% of Winnipeggers, support an additional 1% municipal tax dedicated to infrastructure renewal projects

The recent experience of senior levels of government demonstrates the value of this change. Over the last five years, provincial and federal governments have improved their tax competitiveness and reduced tax rates, while increasing infrastructure investing. They have been able to do this because revenue-associated growth taxes have continued to grow with the economy.

By shifting the municipal emphasis from generating revenue to generating wealth, the IFC submits that senior levels of governments should be more inclined to provide municipalities access to the dedicated revenues needed to fund Canada's infrastructure deficit.

More importantly this paradigm shift will create a simple yet necessary focus upon growing the economy at the municipal, provincial and national levels of government.

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[35] Probe Research Inc., Manitoba-wide survey of 1,000 Manitobans between September 15, 2008 and October 6, 2008

Ultimately, the report's recommendations and our collective success in addressing our provincial and national municipal infrastructure deficits are dependent upon broad public consultation, its understanding and support, and intergovernmental collaboration.

We anticipate and look forward to an ensuing vigorous political, public, stakeholder and media debate.

If acceptable to Manitobans, the options outlined in this report could support a comprehensive infrastructure funding strategy. They include measures that municipalities can unilaterally adopt and others that require intergovernmental negotiations. The final solution could also serve as a model for the rest of the country.

Our experience of the last five years demonstrates what can be accomplished when all three levels of government apply their collective attention and investment in Canada's infrastructure. However, moving forward, the IFC submits a long term plan must provide the transparency and accountability that taxpayers will demand and are entitled to receive in return for new revenues.

We must act. By starting now, we can begin the healing process that will make our economy stronger in the future and ease an unfair burden on future generations.

This report marks a first step. We encourage Manitobans to embrace the challenge of addressing our collective infrastructure deficit and join the debate.

Our collective will should focus to achieve the goal reflected in the title of this report – 'New Relationships: A New Order – A balanced approach to funding municipal infrastructure in Manitoba.'

Respectfully submitted,
Infrastructure Funding Council (IFC)



Chris Lorenc, B.A., LL.B.,
IFC Chair

IFC Members:
Ron Bell
Councillor Jeff Browaty
Jill Vogan, B.A., (Hons) and M.N.R.M.
Cory Young

APPENDIX 'A'

REPORT BENCHMARKS

The IFC was guided by a series of objectives, definitions and principles, which from our perspective promote sound direction and should support public policy associated with infrastructure investment strategies and supporting taxation. Each is provided below.

REPORT OBJECTIVES

The report's objectives are to provide or convey:

- A statement and definition of the problem and provide recommendations in a clear, connective manner
- Approaches which are *'Made in Manitoba for Manitobans'* but are exportable to the national level
- Recommendations which are not dependent upon federal participation for their initial implementation, although federal participation is absolutely contemplated and anticipated
- Recommendations which address the necessities of re-organization, fiscal choices and economic growth
- Concepts which are viewed as reasonable from the perspectives of broad public and private stakeholders
- The risk of inaction and the benefit of infrastructure investment
- Internal infrastructure funding options within the control of the municipalities, along with recommendations for external infrastructure funding options requiring intergovernmental negotiation and/or approval
- Clear direction related to implementation, including identifying parties and time frames to facilitate implementation.

DEFINITIONS

The IFC adopted a number of key words and phrases it chose to use in the municipal context with specific meaning throughout the report. They are as follows:

- ***Core Infrastructure*** means roads (regional, collector, local, lane and sidewalk), bridges & culverts, public transit, active transportation, riverbanks, flood protection, water and sewage facilities, land drainage and solid waste facilities.

- ***Social Infrastructure*** means parks and buildings including police, fire paramedic, libraries, pools, arenas, community centers and administration buildings.

- ***Infrastructure Assets*** refer to both core and social infrastructure.

- ***Existing Infrastructure Deficit*** refers to the amount required to rehabilitate or replace 'physically existing' infrastructure assets beyond budgeted levels. Examples include repairing a bridge or rebuilding a road which are unfunded within an existing budget.

    - ***New Infrastructure Deficit*** refers to investments in new, projected or anticipated infrastructure assets that do not currently exist or the improvement of existing infrastructure assets, each of which are unbudgeted. This can involve new assets, such as a building, a new park, and/or enhancement of existing assets such as expanding an existing roadway to handle additional capacity.

    - ***Strategic Infrastructure Investments*** refer to unique and unanticipated investment in assets required in special case scenarios to platform new economic strategies or opportunities, such as but not limited to, infrastructure for CentrePort Canada, the Manitoba Theatre Centre (MTC) or the new Winnipeg Football Stadium.

    - ***Total Infrastructure Deficit*** refers to the unfunded capital investment required to meet existing and new infrastructure requirements.

APPENDIX 'B'

SUBMISSION AND REPORT REVIEWS

During the course of its work, the IFC received submissions and engaged in consultative sessions with a number of organizations and individuals in the public and private sectors.

Submissions were received from the following:

- Business Council of Manitoba
- City of Thompson
- Centre for Applied Research in Sustainable Infrastructure
- Red River College
- Canadian Union of Public Employees Local 500
- Economic Development Winnipeg
- Frontier Centre for Public Policy
- International Institute for Sustainable Development
- Manitoba Home Builders Association
- Manitoba Public Utilities Board
- Manitoba Trucking Association
- Urban Development Institute Manitoba Division
- Winnipeg Chamber of Commerce

Presentations were made to the IFC by the Federation of Canadian Municipalities (FCM) and Manitoba Local Government, and there were ongoing discussions with numerous other stakeholders.

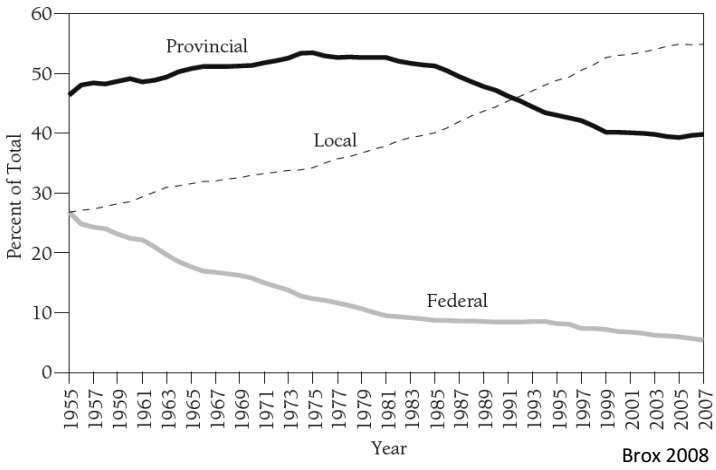
The IFC also reviewed a number of published reports from across Canada which help define and context the infrastructure challenges faced by Canadian municipalities. They also propose a variety of solutions to address them. They are referenced throughout and listed at the back of the report.

APPENDIX 'C'

8.0 INFRASTRUCTURE DEFICIT – HISTORICAL PERSPECTIVE AND CONTEXT

One only needs to look around communities throughout Manitoba to understand the extent of the provincial infrastructure deficit. Manitobans drive on pothole-ridden crumbling roads, cycle over aged bridges, visit drafty libraries, deal with boil water orders, and bring our children to shabby recreational facilities.

Figure 1
Infrastructure Capital by Jurisdiction, 1955-2007



The same is true in municipalities throughout Canada. The total stock of government-owned highways, roads, bridges, airports, railways, docks, canals, water supply systems as well as waste and sewage disposal systems, communication, cultural and outdoor recreational facilities is known as public infrastructure capital. Much of this capital was built in the 1950s, 1960s and 1970s. With a lifespan of 40 to 50 years, a large portion of our existing infrastructure is now in need of immediate rehabilitation or replacement.[36]

During the past several decades, municipalities have taken on additional infrastructure responsibility as provincial and federal governments have withdrawn their support.[37]

In more recent years, municipalities have also contributed to the problem by expanding the scope of infrastructure that they support in response to local priorities and public pressure. Carl Sonnen of the Federation of Canadian Municipalities notes new environmental and sustainability regulations instituted by senior levels of government have added to the burden often without accompanying financial assistance.[38] Canadian municipalities now build, own and maintain over 50% of the infrastructure that sustains the Canadian economy and drives growth.

In Manitoba, municipalities are frequently asked by Regional Health Authorities (RHAs) to contribute 10% to health capital projects. All municipalities in Manitoba are also being pressured to contribute to provincial highway renewal projects when they are within city or town boundaries and support lower volume provincial roads that are of a local priority.

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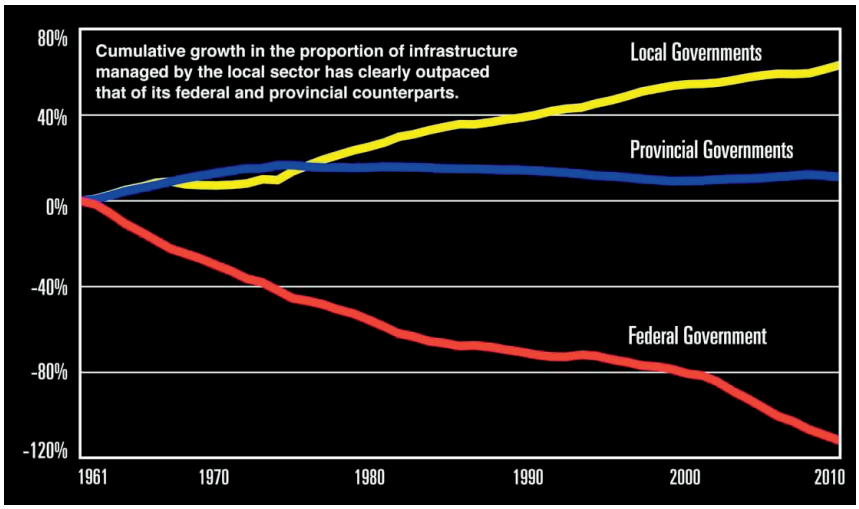
[36] TD Bank, *Mind the Gap*, 2004. http://www.pppcouncil.ca/pdf/mindthegap.pdf

[37] Brox, James A. "Infrastructure investment: the foundation of Canadian competitiveness." *IRPP Policy Matters*. *9,*2(2008)

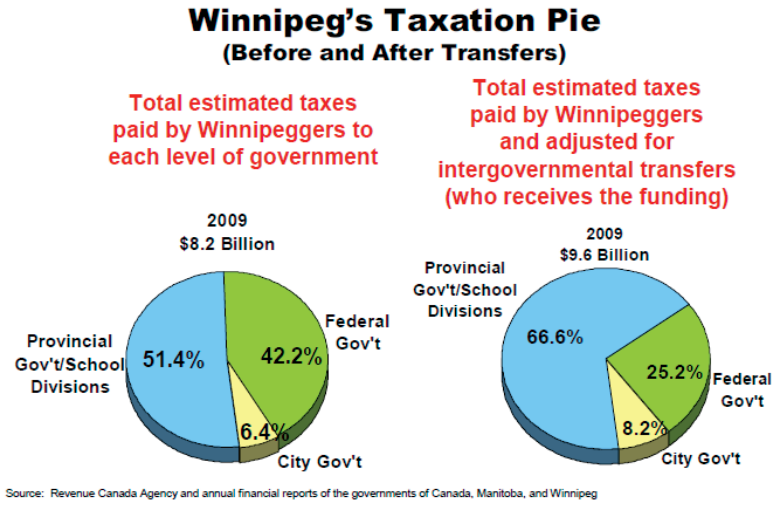
[38] Sonnen Carl, *Municipal Infrastructure: Macroeconomic impacts of spending and level of government financing* May 31, 2008 http://www.fcm.ca/english/View.asp?mp=1368&x=998

Manitoba has recently improved its environmental operating standards for wastewater facilities and made compliance with these new regulations a condition of receiving an operating license. This change requires Winnipeg to upgrade its wastewater treatment facilities at a cost of between $1.2 billion and $1.8 billion.[39] To date, the Province and federal governments have each committed $25 million towards the upgrade costs and the Province has proposed an additional contribution of $235 million. The result, even if unintentional, has been that senior government regulatory change has been introduced without corresponding financial support or recognition of the cost implications on municipalities. The pressures associated with municipalities' ability to fund existing or new infrastructure needs has reached a near crisis point.



For decades, municipalities across Canada have asked for additional sources of revenue to complete infrastructure work. In Manitoba, these efforts have been restricted by provincial legislation that spells out the various revenue sources available to municipalities.

In its 2006 report *Building Prosperity from the Ground Up: Restoring Municipal Fiscal Balance* the Federation of Canadian Municipalities found that of all of the tax revenues collected in Canada, only 8% goes to municipal governments. The remaining 92% is shared between the federal and provincial governments. Using 2007 taxation information, the Canada West Foundation calculated Winnipeg's share of all revenues collected was 5.6%[40] and a similar municipal study of tax allocation in Winnipeg in 2008 found that, even after intergovernmental transfers, the city only received 8 cents out of every dollar paid in taxes by Winnipeggers.



QUANTIFYING THE INFRASTRUCTURE DEFICIT

For decades various groups and governments have tried to assess the extent of the infrastructure deficit. In each case, studies have made assumptions and interpretations that have influenced the results. The purpose of this report is not to critique these cost estimates or pin an exact number to the problem. Instead the IFC has tried to estimate an order of magnitude and determine the need for action. The most commonly accepted estimate for

[39] Chartier, IFC Backgrounder, July 2010

[40] Vander Ploeg, Casey Canada West Foundation *Problematic Property Tax: Why the property tax fails to measure up and what to do about it*, http://www.utoronto.ca/mcis/imfg/pdf/Problematic%20Property%20Tax%20(Vander%20Ploeg).pdf

Canada's infrastructure deficit is $238 billion.[41]

In 2009, Winnipeg's infrastructure deficit was comprised of two components totaling an estimated $7.4 billion.[42](Figure 2).

- The existing infrastructure deficit – the current system of roads, bridges, water supply systems, waster and sewage systems and municipal buildings that are nearing or at the end of their useful life cycle and in need of immediate repair was projected at $3.8 billion[43]
- The new infrastructure deficit – strategic projects needed to fuel growth in the future or satisfy expanding population demand – was projected at $3.6 billion over the next 10 years.[44]

Accepting this analysis, the IFC estimates Winnipeg's annual infrastructure shortfall to be about $740 million within the context of the existing projected budgets.

Figure 2: Winnipeg Total Infrastructure Deficit

Total Infrastructure Deficit: $7.4 B

Existing Infrastructure - $3.8 B

	Capital	Operating	Total
Bridges	$200	$15	$215
Roads - Regional	$925	$10	$935
Roads - Local & Lanes	$756	$32	$788
Active Transportation	$0	$0	$0
Transit	$75	$25	$100
Parks	$284	$125	$409
Riverbanks	$100	$0	$100
Flood Protection	$130	$0	$130
Buildings			
- Police	$120	$0	$120
- Fire Paramedic	$23	$0	$23
- Libraries	$19	$0	$19
- Pools, Arenas, Parks, Rec.	$277	$0	$277
- Parkades (3 city owned)	$0	$0	$0
- Administrative Bldgs	$72	$0	$72
Tax Supported Sub-Total	**$2,981**	**$207**	**$3,188**
Water - Treatment	$17	$0	$17
Water - Distribution	$141	$0	$141
Sewage - Collection	$164	$0	$164
Sewage - Treatment	$6	$0	$6
Land Drainage	$238	$0	$238
Solid Waste	$10	$0	$10
Utility Sub-Total	**$576**	**$0**	**$576**
Total Existing	**$3,557**	**$207**	**$3,764**

New Strategic Infrastructure - $3.6 B

	Capital	Operating	Total
Bridges	$200	$4	$204
Roads - Regional	$1,524	$0	$1,524
Roads - Local & Lanes	$0	$0	$0
Active Transportation	$93	$1	$94
Transit	$1,147	$91	$1,238
Parks	$167	$26	$193
Riverbanks	$0	$0	$0
Flood Protection	$0	$0	$0
Buildings			
- Police	$15	$0	$15
- Fire Paramedic	$3	$15	$18
- Libraries	$8	$0	$8
- Pools, Arenas, Parks, Rec.	$142	$0	$142
- Parkades (3 city owned)	$0	$0	$0
- Administrative Bldgs	$15	$0	$15
Tax Supported Sub-Total	**$3,314**	**$137**	**$3,451**
Water - Treatment	$0	$0	$0
Water - Distribution	$15	$0	$15
Sewage - Collection	$34	$0	$34
Sewage - Treatment	$90	$15	$105
Land Drainage	$0	$0	$0
Solid Waste	$0	$0	$0
Utility Sub-Total	**$139**	**$15**	**$154**
Total New Strategic	**$3,453**	**$152**	**$3,605**

Municipalities outside Winnipeg estimate the existing infrastructure deficit to be $4 billion. This deficit is expected to grow by an additional $2 billion over the next ten years to rehabilitate or develop new

[41] The figure from the Mirza report: *Danger Ahead - the Coming collapse of Canada's Municipal Infrastructur*e, 2007 , is commonly cited
[42] Executive Policy Committee, 'Infrastructure deficit and possible funding options Winnipeg, Manitoba, July 22, 2009.
[43] Executive Policy Committee, *'Existing Infrastructure Deficit,'* Winnipeg, Manitoba, July 8, 2009.
[44] Executive Policy Committee, *'New Strategic Infrastructure Deficit'* Winnipeg, Manitoba, July 8, 2009.

infrastructure.[45] This represents a total deficit of $6 billion requiring annual funding of $600 million over the next 10 years.

For the purposes of making recommendations in this report and developing a financial plan, the IFC estimates Manitoba's combined total infrastructure deficit to be $13.4 billion. Over time, the options provided in this report could generate revenues of about $1 billion annually.

The IFC recognizes that additional work will be required in the next stage to fully assess and refine the final infrastructure need by all municipalities. [46]

CAPITAL BUDGET

Over the past decade, the Winnipeg has increased its capital budget from $120 million in 2001 to $476 million in 2009 (see chart below). The recent growth reflects additional funding required completing several large one-time projects (a new water treatment plant, upgrades to current sewage treatment plants and the implementation of rapid transit) which have been facilitated through infrastructure funding agreements with senior levels of government, new revenue streams including the Gas Tax Agreement and the introduction of Public Private Partnership (P3) projects.

Winnipeg's Capital Budgets, 2001 to 2009 (in millions $)

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010F	2011F	2012F	2013F	2014F
Roads	31	68	52	32	55	62	157	180	97	65	65	68	66	69
Transit	11	11	19	14	15	32	42	17	165	28	27	27	29	30
Other Tax Supported	25	29	41	48	30	50	73	94	58	65	38	45	49	52
Water, Sewer, LD	53	62	61	111	198	164	156	131	157	153	257	246	165	81
Total	120	170	173	205	298	308	427	421	476	310	387	387	308	232

Notwithstanding the recently increased capital investments, the forecasted budget years show a declining level of planned capital investment which will further increase the infrastructure deficit magnitude.

REVENUE SOURCE COMPARISONS

A 2007 national report for the AMM found that Manitoba municipalities, when compared to other jurisdictions, faced greater infrastructure pressures because they provide a wider range of services to their citizens.

Using 2005 Statistics Canada data, a study by Dr. Enid Slack, an acknowledged international expert on municipal financing, found that Manitoba municipalities spent on average $1,368 per capita on capital infrastructure – less than most Provinces with the exception of the Maritimes (See Figure 3). The difference between Manitoba and other Provinces can, in part, be explained by:

- Efficiencies in the Manitoba system
- The number of total services provided relative to other Provinces

[45] This figure, although anecdotally cited by the AMM, does not appear to have sufficient supporting data.

[46] The Public Sector Accounting Board (PSAB) issues standards and guidance with respect to matters of accounting in the public sector. The PSAB rules, which are currently being implemented by municipalities outside Winnipeg, will enhance their capability to more accurately assess condition and needs.

Figure 3: 2005 Municipal Government Revenues by Province (includes water and sewer charges for comparison purposes)

Revenue Source	NL	PEI	NS	NB	QC	ON	MB	SK	AB	BC
Municipal Per Capita $	1,021	604	1,505	1,163	1,706	2,417	**1,368**	1,470	2,581	1,508
Municipal Revenue Source:	%	%	%	%	%	%	%	%	%	%
Property Taxes	52.1	64.8	67.7	49.8	58.9	46.4	**38.3**	46.8	39.0	50.0
Payments-in-lieu	2.5	0.3	3.5	6.6	4.4	1.6	3.3	3.1	1.6	1.5
Other Taxes	1.1	1.1	0.6	0.7	0.3	1.0	**2.5**	6.2	2.1	2.9
User Fees	18.6	21.4	18.1	26.0	17.1	21.4	**25.8**	23.0	25.4	31.3
Investment Income	1.4	0.1	2.4	0.6	1.4	4.7	4.8	4.5	13.3	7.1
Other	0.5	1.4	0.6	0.5	2.8	1.3	1.5	1.0	1.5	0.6
Own Source Revenue	76.2	89.1	92.9	84.1	85.0	76.4	76.2	84.6	82.8	93.4
Unconditional Grants	3.7	2.5	2.4	8.9	2.4	2.8	**12.5**	6.8	0.5	2.3
Conditional Grants	20.1	8.4	4.7	7.1	12.6	20.8	11.3	8.7	16.7	4.3
Federal	1.9	4.3	1.6	1.4	0.1	2.5	4.0	2.2	0.8	0.6
Provincial	18.1	4.1	3.1	5.7	12.5	18.3	**7.3**	6.5	15.9	3.7
Total Grants	23.8	10.9	7.1	15.9	15.0	23.6	**23.8**	15.4	17.2	6.6
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Statistics Canada, CANSIM database, Table 385-0024 (for municipal expenditure and revenue data); Table 510001 (for population).

When compared to other Provinces, Manitoba municipalities have the lowest reliance on property taxes as a source of revenue. This in part reflects attempts by several municipalities to hold the line on property taxes including a tax freeze in Winnipeg for 13 of the last 14 years. During this time, Winnipeg has moved from a high property tax jurisdiction to a lower property tax jurisdiction.

Manitoba municipalities have also diversified their revenue tax base more than other jurisdictions collecting 2.5% of their revenues from other measures. For example, 24% of the revenues collected by Manitoba municipalities were from user fees – the second highest in Canada. In Manitoba, unconditional grants – those that provide maximum flexibility to municipalities because there are no strings attached – are by far the highest anywhere in Canada. The level of support for Manitoba municipalities from conditional grants – money earmarked for specific purposes – are 7.3%, the fifth highest in Canada.

The 2005 data also shows that while transfer revenues to Manitoba municipalities from senior governments declined between 1990 and 2005, communities in the Province continue to rely more than any other jurisdiction on federal and provincial transfers. Furthermore, more recent research shows that other provinces have increased their support to municipalities and surpassed Manitoba in 2008. Between 2002 and 2008 actual grant

numbers shows that provincial grant contributions to Winnipeg dropped from the highest to the middle of the pack.

Total provincial grants in dollars per capita 2002 - 2008

Total Grants	Edm	Cal	Sask	Reg	Wpg	Ham	Tor	Ott
2002 Actual	$150	$155	$50	$64	$177	$86	$67	$50
2008 Actual	$624	$538	$190	$160	$280	$392	$199	$142
rank	1	2	6	7	4	3	5	8
% increase	316%	247%	279%	150%	58%	355%	197%	183%

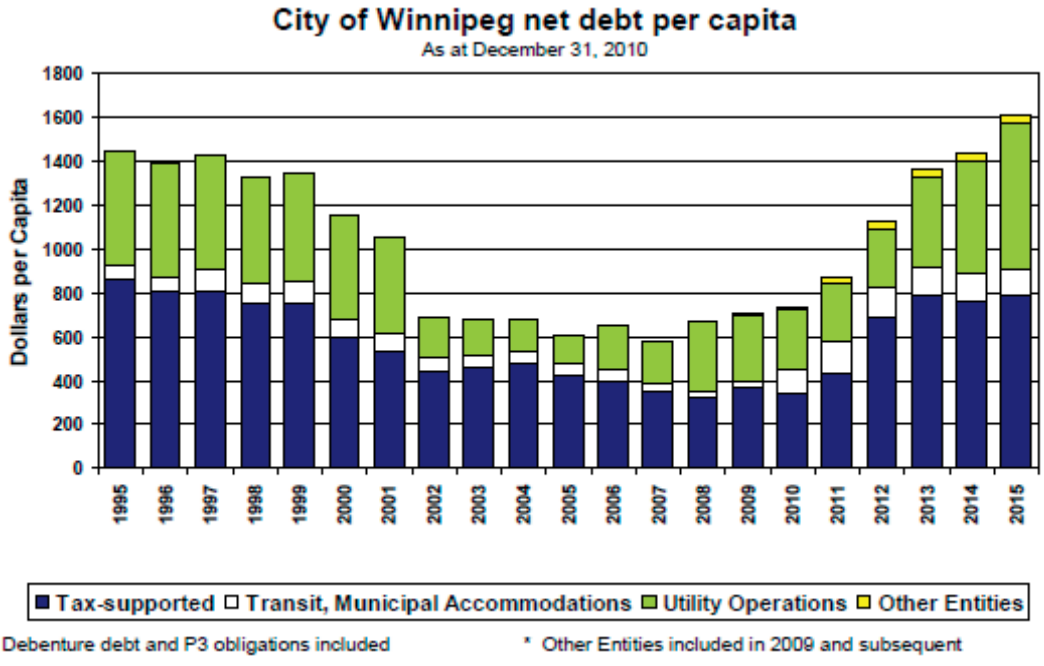
This analysis demonstrates the instability of revenues from senior governments and the risk this creates for municipalities with a budgetary reliance on these grants. To address the infrastructure deficit facing municipalities throughout Canada, municipalities need access to sustained, predictable own revenue sources – particularly in the form of growth taxes. Without this change, the deficit will continue to grow negatively impacting national growth and productivity and increasing safety risks for citizens throughout the country.

Primary Taxation Revenues
In $ millions

	1997-98	2008-09	Growth
Federal Government	117,844	177,538	51%
Province of MB	2,454	4,327	76%
Rest of Municipalities	$167	$278	67%
City of Winnipeg	$439	$464	6%

Access to growth taxes has helped provincial and federal governments become more tax competitive while continuing to increase infrastructure expenditures. Between 1998 and 2008, federal and provincial tax rates declined yet revenues from income and sales tax continued to grow substantially.

Winnipeg, by contrast, froze its property taxes between 1997 and 2011 in order to reduce its debt and remain competitive. Revenues from realty taxes (property and business) increased by only 6%. This represented growth of their assessment base - not value growth.



Between 1997 and 2009 Winnipeg stopped borrowing funds to finance tax-

supported capital projects, choosing instead to fund projects from cash from its operating budget. Council has recently again authorized borrowing for some large tax supported projects. In addition, Winnipeg has entered into P3 arrangements on a number of major projects (Disraeli Bridge and Chief Peguis Trail extension, Police Headquarters, Rapid Transit) which are recorded in its financial statements as long term financial obligations which are considered debt. Although there was a significant reduction in Winnipeg's tax supported debt, it has recently started making significant commitments toward using up this freed up debt room.

Over time, Winnipeg has also reduced the business tax rate and has introduced a small business tax credit which eliminates the tax altogether for the smallest businesses. The impact of these changes has been to further reduce funding available for infrastructure projects. These measures, along with significant reductions in the size of staff and the out-sourcing of some services, have reduced operating costs, outstanding debt and Winnipeg's debt servicing costs.[47]

By contrast, many (if not most) rural municipalities over the same period, successively and significantly increased their realty taxes over the same period by varying annual amounts of between 3% and 7%. The resulting realty tax revenue stream increased about 67% over the 10 year period. While the percentage of growth appears to be significant, the dollar value is not. It is also worth noting that the revenues are spread over 197 municipalities throughout the Province and while not reflective of the actual distribution of revenues, the additional revenue averages out to be $55,000 a year per municipality over the 10 year period.

The IFC reached three broad conclusions based on this analysis:

1. The municipal infrastructure deficit is real and it is significant. It is deserving of being placed amongst top government public policy priorities. [48]

2. The current revenue streams available to municipalities are inadequate to tackle the infrastructure challenge. Municipalities have little room left in the existing realty tax base. They have little, if any, access to tax growth revenues.[49]

3. Notwithstanding recent initiatives and significant investments by all three levels of government, Manitoba's infrastructure deficit continues to grow and must be addressed.[50]

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[47] It could be argued therefore that the City is in a better position than ever to take on increased debt to address infrastructure.

[48] Toronto Dominion (TD) Financial Group. *Mind the Gap - Finding the Money to Upgrade Canada's Aging Public Infrastructure Executive Summary*. TD Bank Financial Group. Canada. 2004.

[49] See: City of Edmonton. *Delivering the Goods - Infrastructure and Alternative Revenue Sources for the City of Edmonton.* Research report prepared by Casey G. Vander Ploeg, Canada West Foundation, 2008; Provincial and Territorial Municipal Associations. *Roles, Responsibilities, Resources, and Relationships.* Research report prepared by Enid Slack, Harry Kitchen, Melville McMillan, and Francois Vaillancourt . Ontario. 2007; Federation of Canadian Municipalities and National Research Council. *Alternative Funding Mechanisms - A best practice by the National Guide to Sustainable Municipal Infrastructure*. *Issue 1.1.* Canada: National Guide to Sustainable Municipal Infrastructure. 2003; Federation of Canadian Municipalities. *Meeting the Fiscal Requirements of Canada's Municipalities*, research report prepared by the Conference Board of Canada. Canada. 2005; Vander Ploeg, Casey G. *New Tools for New Times - A Sourcebook for the Financing, Funding and Delivery of Urban Infrastructur*e. Calgary: Canada West Foundation, 2006.

[50] FCM, Advocacy Outlook Presentation, 2010

IFC Assessment of Tax Tools Against Principles of Good Tax Design

	generate sufficient revenue	competitive with other jurisdictions	equitable fair	efficient	transparent	accountablegov't collects and spends	minimal administration	encourage sustainable development / environment	Authority in Place or Requires Provincial Acceptance	Revenue	
		current taxation level								In Winnpeg	Province wide
Frontage Levy	fair	only used in MB	good	good	good	good	fair	good	in place	$10.8M per foot	n/a (4)
Municipal Sales Tax	excellent	middle	fair	good	fair	good	good	poor	requires Prov	1% = $132 M	1% = $238 M
Vehicle Registraion Fee	fair	unknown	good	good	fair	fair	good	good	requires Prov	50% of Prov rate = $32M	50% of Prov rate = $64M
User Fees	good	middle	good	fair	good	good	fair	good	in place	n/a	n/a
Smart Debt Financing	good	n/a	good (1)	n/a	n/a	good	good	n/a	in place	n/a	n/a
Tax Increment Financing	fair	n/a	good	good	good	good	good	good	in place	n/a	n/a
Municipal Property Taxes	fair	low	fair	fair	fair	fair	fair	fair	in place	1% = $4.3M	1% = $7.5M
PST Rebate	limited	n/a	good	fair	good	fair	poor	n/a	requires Prov	$10.5 M	$17 M
Municipal Fuel Tax	good	low	good	good	good	fair	good	good	requires Prov	1 cent fuel tax = $12 M	1 cent fuel tax = $22 M
Income Tax	excellent	high	fair	poor	poor	fair	fair	poor	requires Prov	1% of total = $17M	1% of total = $27M
Development Charges	limited	low	fair (2)	fair	fair	good	good	good	requires Prov	At $5,000 per SFD lot = $10M	unknown
Land Transfer Tax	fair	unknown	poor (2,3)	good	poor	fair	good	poor	requires Prov	match provincial rates = $27M	unknown
Increase Tax on Nat Gas & ElecUtilities	fair	low on Prairies	poor	good	poor	poor	good	fair	requires Prov	match provincial rates = $23M	unknown

1) good for large inter-generational infrastructure e.g. roads, bridges, wastewater and water treatment facilities

2) targets small group and disproportionate of taxes on home purchasers

3) little connection between tax and any benefit

4) for rural areas, charge per property would likely be used

APPENDIX 'E' - SIRP I & II POLICIES SUMMARY

Infrastructure Maintenance

Life Cycle Costing

- That all capital programs for new or rehabilitated infrastructure be subjected to life cycle costing analysis to determine the most cost effective options for consideration.

Minimize Deferred Maintenance

- That ideally, maintenance for existing infrastructure should only be deferred if the impact on the life expectancy and life cycle of the asset is documented to be minimal.

Factor Maintenance into Initial Costs

- That when new or upgraded facilities are proposed, they be accompanied by resulting incremental maintenance costs, linked into a parallel maintenance budget.

Computerized Maintenance Management System (CMMS)

- That Civic Department preventative maintenance programs be funded by Council to be information current, and supported by Computerized Maintenance Management Systems (CMMS).

Management of Asset Data

- That the CAO Secretariat be assigned and resourced to coordinate the City's infrastructure asset data management.

New Technologies

Advanced Techniques & Technologies

- That the City encourages the application of "intelligent" technology, new methodologies and innovative products such as Advanced Composite Materials (ACMs) in infrastructure renewal, rehabilitation, construction or preventative maintenance programs.

Improved Practices

- That the City encourages the use of advanced techniques, improved technologies, better materials and best practices in all infrastructure programs, and participate in the technical guide for infrastructure initiative.

Update Construction Specifications

- That the City's standard construction specifications and general conditions be reviewed to encourage use of innovative practices, technologies and materials. The academic, engineering and construction communities should be involved in this review.

Commitment to Strategic Research & Innovation

- That the City partner with academia to strategically fund research aimed at identifying new or improved materials, technologies and techniques having broad infrastructure application.

Financial-Based Policy Options

Urban Infrastructure Financing Plan

- That the City create and adopt an urban infrastructure-financing plan, based on the principles outlined in Appendix "C" of the SIRP Report – Urban Infrastructure Financing Principles.

Accrual Accounting System

- That the City adopt a system for showing depreciation on its capital assets and begin the process of accounting for deferred maintenance.

Fully Costed Services

- That the City applies full cost accounting principles to all government services, and that pricing of services should reflect the full true costs of service provision.

Application of User Fees

- That the City implements properly structured user fees where the user and the service delivered can be identified.

Shift from Mill Rate to User Fees

- Any new user pay funding that relates to property and which replaces existing mill rate supported infrastructure budgets should be accompanied by a mill rate reduction equivalent to the pre- user fee level of mill rate support.

Infrastructure Services Renewal Levy

- That the City considers developing an "Infrastructure Services Renewal Levy" program which would manage the levying of specific user fees/levies to dedicated infrastructure rehabilitation and renewal programs.

Pursue Dedicated Levy Legislation

- That the City pursue Provincial legislation to allow new funding sources for infrastructure renewal, and that funds raised be dedicated for specific infrastructure purposes only.

Tax Exempt Bonds

- That the City pursues, with Province of Manitoba and the Federation of Canadian Municipalities, an amendment to the Income Tax Act to allow tax-exempt interest on government bonds raised for designated infrastructure project purposes.

Intergenerational Financing

- That the City should finance infrastructure projects in a manner that properly recognizes project life and replacement patterns.

Cost Shared Programs

- That the City join with other Manitoba municipalities and the Provincial Government in lobbying the Federal Government to support implementation of a sustained National Infrastructure Program, focusing in part on municipal infrastructure renewal.

Alternative Service Delivery

Implement ASD Options

- That with regard to infrastructure, Council implement its adopted policy on Alternative Service Delivery, as follows:

  "The City of Winnipeg is committed to providing quality services at an affordable cost on a sustainable basis. To this end, the City will systematically review its programs, services, and delivery mechanisms, and will pursue the most appropriate methods and structures for providing services to achieve the

best value for the municipal tax dollar and the optimal balance of overall benefits to the City and its Community."

Public-Private Partnership Research

- That Council ensure both internal and external research capacity be devoted to monitor and assess PPP trends throughout Canada, and to assist the City in considering local PPP proposals.

Pursue Partnering Strategies

- That Council pursues partnering strategies for infrastructure works in accordance with the framework of all applicable Council adopted policies.

PPP Policy Options

- That Council adopt as policy, consideration of the entire PPP spectrum as policy options in all large capital projects involving all aspects of infrastructure.

Winnipeg Transportation Utility

- That Council, using its ASD policy, develop a business plan to investigate establishing an arm's length "Winnipeg Transportation Utility", and approach the Province of Manitoba to seek any required enabling legislation.

National Infrastructure Policy

- That the City and Province partner to lobby the Federal Government to enter into a sustainable infrastructure agreement consistent with the Recommended National Infrastructure Policy (NIP), as set forth by the ICM and the "Proposed Guidelines for a New National Infrastructure Program", as adopted by the Premiers at the 1996 and 1997 Annual Premiers' Conferences.

Sustainable Infrastructure Development

Employment Training Program

- That the City proposes to senior levels of government, the delivery of infrastructure programs whose aim in part would be to provide useful training and employment skills development to various target groups.

Capital Region Infrastructure Strategy

- That the City pursue – with its neighbors and the Provincial Government – implementation of the Capital Region strategy that recognizes the importance of the supply and delivery of infrastructure in an environmentally responsible and sustainable manner.

Cost/Benefit Analysis

- That any new publicly funded infrastructure project be accompanied by cost/benefit analysis which establishes need and sustainability to clearly justify its construction.

Sustainable Infrastructure Development Policy (SIDP)

- That the City endorse the principles and guidelines of the MRTEE, and adopt the SIRP Principles for Sustainable Infrastructure Development, as set out in Appendix "B" of the SIRP Report.

SIRP Implementation Committee

- That the City establish a SIRP Implementation Committee – headed by the Chairperson of the Standing Policy Committee on Public Works and appropriately resourced through the office of the CAO – with a mandate to implement adopted policy options within 12 months of its appointment.

APPENDIX 'F'. Canada West Foundation, *New Tools for New Times*, 2006

FIGURE 1: Taxonomy of Urban Infrastructure Finance, Funding and Delivery

1. FINANCE TOOLS

1.1. Pay-As-You-Go

1.1.1. Traditional Pay-As-You-Go

a. Transfers to Capital From Current Revenue
- Current General Property Tax Revenue
- Current Selective Sales Tax Revenue
- Current Operating User Fee Revenue
- Current Miscellaneous General Purpose Revenue
- Operating Budget Surplus of the Prior Year

b. Local Improvement Levies and Special Assessments

c. Intergovernmental Grants and Contributions

d. Intergovernmental Tax Revenue Sharing

e. Reserves and Reserve Funds

f. Operating and Capital Leases

1.1.2. Innovative Pay-As-You-Go

a. Earmarking Current General Property Tax Revenue
- Earmark Current Property Taxes for General Capital
- Earmark Future Revenue Growth for General Capital

b. Increase Tax Rates for Current Basket of Tax Sources
- Earmarking
- Voter-Approval Process
- Sunset Tax Increases
- Cap Tax Rate

c. Lower/Eliminate Education Portion of Property Tax

d. Policy to Address Revenue Inelasticity

e. Create Strategic Reserves and Reserve Funds

f. Lease-Purchase-Financing
- Tax-Exempt-Lease-Purchase-Financing
- Guaranteed Savings Leases
- Master Leases

g. Leaseback Arrangements
- Purchase-Lease-Leaseback
- Purchase-Sale-Leaseback-Re-Purchase
- Cross-Border Tax Leasing and Leaseback

1.2. Borrowing

1.2.1. Traditional Borrowing

Short-Term Financing

a. Bank Financing (Short-Term, Bridge Financing)

b. Negotiated Borrowing (Partner with Private Parties)

Long-Term Financing

c. Regular Amortized Debenture Bond

d. Pooled Debentures

e. Borrowing Against Reserves

f. Local Improvement or Special Assessment Debentures

1.2.2. Innovative Borrowing

a. Short-Term Financing
- Tax Anticipation Notes (TANs)
- Revenue Anticipation Notes (RANs)
- Bond Anticipation Notes (BANs)
- Grant Anticipation Notes (GANs)
- Capital Outlay Anticipation Notes (CONs)

Innovative Borrowing Tools (Continued)

b. Smart Debt
- Project Selection
- Optimal Debt Levels
- Amortization
- Debt Structure (Regular, Retractable, Bullet)
- Repayment Policies

c. Senior Government Credit Enhancements
- Lines of Credit
- Interest Rate Subsidies
- Subsidies for Bond Issuance and Insurance
- Loan Guarantees
- Subordinate vs. Senior Debt Positions
- Direct Loans

d. Municipal Community Bonds

e. Municipal Tax-Exempt Bonds (TEBs)
- General Obligation or GO Bonds (Recourse Bonds)
- Revenue Bonds (Non-Recourse and Limited Recourse)

(Both types of TEBs come in many forms such as Zero-Coupon Bonds, Lease-Purchase Bonds, Lease-Payback Bonds, Public-Lease-Revenue Bonds, Leaseback Financing Bonds, Certificates of Participation (COPs), Private Activity Bonds, TIF Bonds, Redevelopment Financing Bonds, Interest-Free Bonds, Real Return Bonds, and "Mello-Roos" Bonds.)

f. Bond Banks

g. Revolving Loan Funds

h. Infrastructure Banks

i. Private and Public Pension Plan Capital

j Asset-Backed Borrowing

2. FUNDING TOOLS

2.1. Taxation

2.1.1. Traditional Taxation

a. Property Tax Revenue
- General Residential, Commercial, Industrial Property Tax
- Special or Supplemental Business Property Taxes
- Other Property-Based Tax Levies

b. Local Improvement Levies or Special Assessments

c. Selective Sales Tax Revenue
- Utility Franchise, Revenue-in-Lieu, or Sales Taxes
- Local Entertainment or Amusement Taxes

d. Intergovernmental Tax Revenue Sharing
- Federal Fuel Tax
- Provincial Fuel Tax
- Provincial Traffic Tickets and Fine Revenues

e. Intergovernmental Transfers
- Federal Conditional Capital Grants
- Federal Unconditional Capital Grants
- Federal Revenue-in-Lieu of Tax
- Provincial Conditional Capital Grants
- Provincial Unconditional Capital Grants
- Provincial Revenue-in-Lieu of Tax
- Intermunicipal Grants and Contributions

f. Other General Purpose Revenue
- Interest Income on Financial Investments
- Net Earnings of Municipal Corporations
- Municipal Fines, Forfeits, Tax Penalties, and Other

A detailed version of this taxonomy can be found in Part II of this report.

2.1.2. Innovative Taxation

a. Tax Incremental Financing (TIF)

b. Implement New Taxes
- Ensure Revenue Neutrality
- Focus on User Taxes or Benefit Taxes
- Use Percentage-Based Tax Rates
- Voter-Approved Taxes
- Capping of the Tax Rate
- Earmark for Capital, Specific Purpose, or Projects
- Employ Sunset Clauses

- Property Taxes
  - Special Capital Levy on the General Property Tax
  - Differential Property Taxation
  - Property Tax on Personal Property
  - Land Value Capture or Land Value Uplift Taxes
  - Site Value Taxation

- Other Real Estate Based Taxes
  - Real Estate Transfer Tax (RETT)
  - Development Tax
  - Blight Taxes
  - Parcel Taxation

- General Retail Sales Taxes
  - Local Option Sales Taxes (LOST)
  - Special Local Option Sales Taxes (SPLOST)
  - Municipal Option Sales Taxes (MOST)

- Selective Sales and Excise Taxes
  - Lodging and Accommodations Tax
  - Restaurant Tax
  - Alcoholic Beverages (Bar or Pub Tax)
  - Alcoholic Beverages (Off-Sales)
  - Gambling Tax

- Vehicle-Specific Sales and Excise Taxes
  - Local Option Fuel Tax (LOFT)
  - Local Vehicle Sales Tax
  - Local Car Rental Tax
  - Local Parking Tax
  - Local Vehicle Ownership or Registration Tax

- Income Taxes
  - Personal Income Tax
  - Corporate Income Tax

- Business Taxes
  - Gross Receipts Tax
  - Payroll Tax
  - Employee Tax
  - Business Occupation Tax

- Other Taxes
  - Head Tax or Poll Tax
  - Miscellaneous Taxes

c. Expanded Tax Revenue Sharing as "Second Best" Alternative
- Income Taxes
- General Retail Sales Tax

d. Modified Conditions for Federal and Provincial Capital Grants
- Borrowing and Grants
  - Garvee Grants
  - Federal Revenue Anticipation Notes (FRANs)
  - Conversion of Advance Construction

- Modified Cost-Sharing Arrangements
  - Flexible Matching
  - Tapered Matching

- Specialized Grant Funding Requiring Innovation
  - Grants for Marginally Marketable Projects
  - Grants for PPP Projects
  - Grants for Pricing Initiatives
  - Grants for Road Tolling Initiatives

2.2. User Fees

2.2.1. Traditional User Fees

a. Trading Fees or Fee for Service
- Partial Cost Recovery
- Average Cost Pricing
- Inappropriate Rate Structures
  - Flat or Fixed Rate
  - Constant Unit Rate
  - Two-Part Tariffs
  - Variable Rates

b. Development Cost Charges (DCCs)
  - Uniform DCC Fees
  - Negotiated DCC Fees
  - On-Site DCC Fees

2.2.2. Innovative User Fees

a. Proper Pricing
- Full Cost Recovery
- Marginal Cost Pricing
- Variable Unit Rates
- Multi-Part Tariffs
- Peak Period Pricing
- Differential User Fees

b. Developer Cost Charges (DCCs)
- Variable
- Expanded On-Site
- Expanded Off-Site
- Linkage
- Density Bonusing
- Maintenance and Replacement
- Front-Ended
- Scheduled

Innovative User Fee Tools (Continued)

c. Converting Current Tax Supported Infrastructure to User Pay
- Water Treatment and Distribution
- Wastewater Collection and Treatment
- Storm Water Drainage
- Solid Waste Collection and Recycling
- Roadways, Tunnels, Bridges
  - Direct Tolling (Real Tolls)
  - Variable Tolling (Value Pricing or Peak Period Tolls)
  - Indirect Tolling (Shadow Tolls)
  - Partial Tolling
  - Cordon Tolling (Congestion Tolls)
  - Vehicle-Miles-Travelled Fees (VMT Fees)

3. DELIVERY TOOLS

3.1. Public

3.1.1. Traditional Public

a. Government Departments
b. Decentralized Agencies
c. Taxation and User Fee Funding
d. Publicly Owned Infrastructure and Capital Equipment
e. Public Employees
f. Limited Private Participation
- Private Design (D)
- Private Bid Build (BB)
- Private Investment Capital

3.1.2. Innovative Public

a. Creation of New Municipal Utilities
b. Corporatization and Public Interest Companies (PICs)
c. Special District Financing

3.2. Private

3.2.1. Traditional Private

a. Private Investor-Owned Companies
b. Design-Finance-Build-Own-Operate (DFBOO)
c. User Fee Funding
d. Private Investment Capital
e. Private Employees
f. Significant Public Participation
- Government Regulation
- Government Facilitation
- Tax Subsidies

3.2.2. Innovative Private

a. Privatization or Full Divestiture
b. Sale-Leaseback Arrangements

3.3. Public-Private Partnerships (PPP)

a. PPPs for Operations and Service Delivery
- Service Contracts (Inputs)
- Alternative Service Delivery (Outputs)
- Operations and Maintenance (O&M) Contracts
- Managed Competition

b. Familiar PPP Configurations for Existing Infrastructure and Municipal Services

c. Familiar PPP Configurations for New Infrastructure and Municipal Services

4. OTHER INNOVATIONS

a. Strategic Capital Asset Management
- What do we own?
- What would it cost to rebuild?
- At what stage in the life-cycle are the assets?
- Maintenance, rehabilitation or replacement?
- When do we need to spend?
- How much do we need to spend?

b. Maximize Existing Capacities
- Multi-use facilities
- Regional infrastructure provision
- Blended financing
- Joint public-public development

c. Demand Management Strategies
d. Reform of Standards
e. Accrual Accounting
f. Activity-Based Accounting
g. Donations and Sponsorships
h. Community and Neighbourhood “Self-Help” Programs
i. Pooled Purchasing and Resource Sharing
j. Small Scale Private Infrastructure

EXECUTIVE SUMMARY

Edmonton's Infrastructure Challenge

In November 2006, the City of Edmonton released its *Long Range Financial Forecast* for the 2007-2016 period. At that time, the City of Edmonton reported infrastructure needs totalling $10.4 billion over 2007-2016. However, the City only had funding for $5.152 billion. This left a cumulative funding shortfall of $5.248 billion. In 2008, an infrastructure update reported that the funding shortfall has exploded to $19.207 billion over the 2008-2017 period. To meet this challenge on a "pay-as-you-go" basis, Edmonton's property taxes would have to quadruple. Efforts by the City of Edmonton, past tri-partite national infrastructure programs, the GST rebate, recent fuel tax revenue sharing agreements, and increased capital grants have allowed the City to boost its investment in infrastructure, but much of the City's reported needs remain unmet. This is not a problem going away anytime soon.

Edmonton's Revenue Profile

The revenue sources available to the City of Edmonton are very restricted. Operating funding comes from only three sources – property taxation, user fees, and other income. Grants constitute only a very small portion of operating revenue. External capital funding comes from two primary sources – capital grants (including fuel tax revenue sharing) and developer cost charges. The key problem here is a lack of *diversity* in the tax tools Edmonton can employ. The City is reliant on a set of funding tools that are relatively *inelastic.* This means that the revenues produced do not tend to grow well over time – they fail to capture a fair portion of the economic activity occurring within the City, they fail to keep pace with population growth, and they fail to compensate for inflation and the continually escalating cost of providing services and infrastructure.

Can Edmonton Meet the Challenge?

Edmonton's current set of funding sources cannot easily generate a growing stream of revenue to meet the infrastructure challenge:

- From 1990-2007, real per capita tax revenue for the City of Edmonton grew by only 5.7%. This pales in comparison to the growth in federal and provincial tax revenues. Over the same time period, federal tax revenues grew by 25.3% and provincial tax revenue (excluding oil and gas royalties) grew by 44.5%.
- From 1990-2007, the average Edmontonian paid $2,873 more in taxes to all orders of government. Of this amount, 53.1% accrued to the federal government while 45.3% accrued to the provincial government. Only 1.5% of the increase in taxation over the last 18 years – $45 – has gone to Edmonton City Hall. (All amounts in real per capita dollars.)
- In 2006, the average Edmonton homeowner paid $1,259 in municipal property tax on a home assessed at $219,000. In 2007, property taxes rose to $1,376. However, most of this increase was offset by growing personal disposable incomes. The median disposable income in Edmonton was $62,295 in 2006, but is estimated at $67,947 in 2007. Thus, the additional property taxes paid by an average household living in an average single family home – relative to growth in income – amounted to only $3 or 25¢ per month.
- At the same time, the personal income tax that had to be paid to the federal and provincial governments on rising median incomes was $948. This increase in tax revenue occurred even with new tax deductions and increases in existing deductions.

The Search for Alternatives

It is unreasonable to expect the City of Edmonton to effectively meet the infrastructure challenge if it remains so singularly dependent on the property tax. The infrastructure funding challenge constitutes a powerful argument for new directions and an expanded set of financing and funding tools. Many of Edmonton's competitor cities, whether in Europe, Asia, or the US, have significantly greater access to a wider range of taxes and/or tax revenue sharing. A diverse set of funding tools is required to implement emerging best practices in infrastructure provision. A good municipal funding system is both diverse and balanced, providing adequate and reliable revenues, good revenue growth over time, as well as equity, efficiency, simplicity, and accountability. No single tax source can achieve all these criteria.

Ideal or "Out-of-the-Box" Options

Ideal financing, funding, and delivery alternatives combine to ensure that infrastructure is provided both *effectively* and *efficiently*. Ideal revenue sources build sustainability into the provision of infrastructure over the long-term by helping fund infrastructure

and keeping demand in check. An ideal system would allow the City of Edmonton to follow a best practices model in infrastructure provision. More important, it would allow the City to do so by collecting a fair portion of local economic activity. It is important to understand how tax revenues grow. Revenues can grow when tax rates are moved upwards – a tax increase – or they can grow as the economy expands. Because the City of Edmonton is so dependent on the property tax, its revenues can grow primarily through the first method only. An ideal funding system would have at least some built in "escalators" allowing Edmonton's revenues to grow in tandem the local economy.

- *Public-private partnerships (PPPs):* PPPs see the public sector partnering with the private and non-profit sectors to deliver both services and infrastructure. On the operating side, PPP is a wide-spread and systematic commitment to private and non-profit involvement through competitive tendering. On the capital side, PPP goes beyond the traditional "bid-build" relationship and involves private participation in the design, financing, building, owning, and even operation of infrastructure assets. Possible savings that could be redirected to increase capital investment is $146.8 million in 2007. However, this is based on very generous assumptions and a simple benchmarking against the best results seen in the US and the UK. The savings could be more modest.

- *"Visitor-specific" selective sales taxes:* Many large cities around the globe use a set of selective sales taxes to generate revenue from "luxury" goods and services, or those disproportionately consumed by visitors to the city. Examples include an accommodations or lodging tax and taxes on restaurants, bars, pubs, casinos, and "off-sales" of beer, wine, and liquor. Visitors use municipal services and infrastructure but do not contribute to the residential property tax base out of which services and infrastructure are funded. These taxes address this problem. A 2% lodging tax and a gambling and liquor tax set at 5% of the provincial tax rate would have generated $32.0 million for Edmonton in 2007.

- *"Vehicle-specific" selective sales taxes:* Since 60% of Edmonton's infrastructure funding "gap" is in transportation, attention needs to focus on various "vehicle-specific" sales taxes that can be earmarked for transportation infrastructure. Examples include a local option fuel tax, a local vehicle registration tax, a special sales tax on vehicle sales, and local taxes on car rentals, parking, and even a separate property tax on vehicles. All of these are "user pay" taxes, which are more efficient than general tax funding. They help fund infrastructure supply at the same time as they keep demand in check. For the City of Edmonton, a basket of "vehicle-specific" selective sales taxes that included a 5¢ fuel tax, a $30.00 annual vehicle registration fee, a 1% sales tax on new vehicles, and a $20.00 tax on all license renewals could have generated $137.0 million in 2007.

- *Index grants to provincial personal incomes and corporate earnings or to provincial personal and corporate income tax revenues:* This option would see the province sharing with the City of Edmonton a portion of the personal and corporate income tax revenue it collects by tying annual operating and capital grants received by the City to growth in these two taxes. Grants could be indexed to provincial personal and corporate income tax revenue or indexed directly to personal incomes and corporate earnings. In 1992, provincial operating and capital grants to Edmonton were 3.80% of all personal and corporate income taxes collected by the province and 0.339% of all personal incomes and corporate earnings. Indexing against the 3.80% ratio would have meant an additional $65.3 million in grants for Edmonton in 2007. Indexing against the 0.339% ratio would have meant another $225.1 million for 2007.

- *A "SPLOST" retail sales tax or "penny" tax:* In the US, the "special purpose local option sales tax" or SPLOST is emerging as one of the most powerful ways to fund infrastructure. The tax is a local general retail sales tax applied at the local level. The tax is set at 1% and applies to a broad basket of goods and services. The tax rate is capped, imposition is by voter-approval in a referendum, revenues are earmarked for specific infrastructure projects, and the tax sunsets every five or six years. To impose the tax, governments prepare a list of projects to be funded by the tax. This list and a proposal for the tax are then placed on the ballot at a regular municipal election. If approved by voters, the tax is imposed, the projects proceed, and government follows up with an annual report on the tax to ensure accountability. The process repeats every five or six years. A 1% SPLOST tax could have generated $171.4 million in Edmonton for 2007. But as the economy expands, the retail sales tax base also grows. If Edmonton's retail sales tax base continues to grow over the next ten years as it has in the previous ten, the revenue produced could reach be $391.1 million by 2017. Over the 2008-2017 period, the average annual revenue yield could reach $277.5 million.

Doable or "In-the-Box" Options

All of the options above require a fundamental shift in thinking on the part of City Council and citizens, or approval from the provincial government. While the City of Edmonton should actively pursue these options, they do not provide much traction in the short-term. Thus, a second list of alternatives was developed that are more achievable within the confines of the *Municipal Government Act.*

- *Seek incremental "wins" under the status quo:* Dramatic policy shifts are difficult to secure. One option, favoured by many municipalities, is to simply "muddle-through" and seek incremental changes that do not dramatically alter the status quo. This includes such things as seeking out more grants and lobbying for another but much longer-term tri-partite national infrastructure program. In the case of Edmonton, a 20% increase in grants would have yielded another $72.3 million in 2007. However, most of the options here carry their own difficulties. In the end, there may be very little gained by pursuing alternatives within the fiscal status quo.

- *"User-pay-first" policy:* Certain infrastructure assets are inherently marketable, opening up the possibility of direct user fee funding and self-financing debt without the need to spend tax dollars. A consensus over user pay would see user fees applied to every infrastructure asset and service possible, with the aim of correct pricing and full cost recovery of operations, maintenance, and future capital. The second best choice is an "indirect" user fee or "user pay" tax. General taxation is the funding choice of last resort. Here, increased usage of local improvement levies might offer some potential. If Edmonton were to collect these levies at the same rate as in the past, another $23.4 million could have been generated in 2007. Advances in digital communications and GPS technology are allowing governments to apply user pay in areas previously "off-limits." An emerging example is the concept of a "vehicle-miles-traveled" or VMT tax. With VMT vehicles are metered – a direct user pay system for roadway infrastructure. The potential impact in savings could run into the billions of dollars.

- *Earmarking of property tax revenues:* With earmarked property taxes, individual property tax bills show the portion of municipal property tax dedicated to general operations and the portion for infrastructure. Earmarking can help lower political and public resistance to property taxes. Earmarking an annual 1% property tax increase to fund additional debt could help lever $1.1 billion in borrowing over the 2008-2017 period. In 2007, each 1% increase in property tax is worth $7.6 million.

- *"Smart" debt:* The idea behind "smart" debt is to build a consensus around an appropriate and sustainable level of tax-supported debt over the long-term, recognizing that borrowing is a legitimate part of any long-term capital financing plan. Currently, the cost of servicing general purpose debt in Edmonton is low. In 1990, the cost of general purpose debt servicing was 12.3% of operating revenue. The ratio was 5.7% over the 1990-2007 period. If the first ratio were in play in 2007, the City would be carrying an additional $2.650 billion in debt. If the second ratio were in play, the City would be carrying an additional $929.3 million.

- *A "standing" or "go-forward" property tax policy:* Relative to many other big cities in western Canada and other municipalities within the Edmonton metropolitan area, residential and business property taxes in Edmonton are below average. Further, municipal property taxes in Edmonton have been falling as a percentage of aggregate personal disposable incomes. The idea of a "go-forward" property tax policy is to have municipal property taxes collected at an agreed upon percentage of personal disposable incomes over the long-term. Between 1990-2007, municipal property tax collections in Edmonton were 3.31% of aggregate personal disposable incomes. In 2007, the ratio had fallen to 2.88%. If the ratio had not fallen, the City of Edmonton would have received an additional $97.7 million in 2007 alone. To maintain competitiveness, the taxes collected should not be completely out of sync with the average collected by other municipalities in the metro area and those levied by the other six big western cities.

Conclusion

Closing an infrastructure funding gap that reaches $2 billion annually is a mammoth assignment. To accomplish the task, a new financial partnership needs to be struck with the province that sees the City receiving additional taxation authority and/or expanded tax revenue sharing. The City of Edmonton will need to take a leadership role in working toward a more diverse set of tax tools and continue building the case for change. Because this is a long-term project, the City must also consider how it can maximize the limited revenue sources currently at its disposal. To be sure, this does not constitute a sustainable solution for the long-term. However, to the degree that Edmonton can make forward progress over and above what other cities are able to do, it will secure a competitive advantage by building a better and higher quality urban environment at the same time as it continues working toward a new era that holds more promise.

APPENDIX 'H' - City of Winnipeg, "IFC Backgrounder", 2010

The following have appeared in a variety of reports and as options or approaches to find efficiencies:

- Strong focus in tendering practices on use of new materials, designs and construction methods to increase asset life cycle and reduce life-cycle costs.
- Regional collaboration and inter-municipal cooperation including regional tender and service delivery authorities to reduce overall operating and capital costs, and maximize on economies of scale.
- Consider Fire Services and Emergency Preparedness Program support for the expansion and enhancement of regional fire services training, and emergency management training, enabling effective municipal emergency management systems.
- Employ innovative financing options:
    - First, governments can employ traditional tools, but simply use them differently (e.g., earmarking property taxes for capital purposes).
    - Second, governments can employ new tools (e.g., tax-exempt bonds).
    - Third, familiar methods can be applied to infrastructure systems to which they have not generally been applied in the past. Roadways, for example, have traditionally been financed by debt funded through taxation funded through taxation, and delivered publicly. But a new road could also be debt-financed, funded with pay as you go user fees (tolls), and privately delivered.
- Explore the full range of rapidly expanding leasing options.
- Convert infrastructure and municipal services currently dependent on the tax base to a system of user pay. For infrastructure that is already funded with user fees, the emphasis could be on innovations that promote proper pricing, including full cost recovery of operations, capital, and future capital needs.
- Innovation-based grants: develop specialized federal and provincial grants contingent upon the use of innovative tools (e.g., PPP options, road tolling, new design and materials with a focus up front upon extending infrastructure life cycle, with reduced life-cycle costs, e.g., ISIS Canada)
- Delivery improvements, including public and private/non-profit delivery, e.g., consider moving away from the traditional government department system and take advantage of benefits that accrue from creating new utilities and corporatizing existing utilities; explore the various PPP arrangements for operations and services, including alternative service delivery, operations and maintenance contracts, and managed competition.
- Enable introduction of tax-free municipal infrastructure bonds.
- Consider establishing project-specific capital funding for strategic and/or significant municipal transportation- and economic growth-supporting infrastructure which demonstrates enhancing competitive edge. The manner of funding could be through plebiscite authorizing a tax dedicated and limited to the asset which lapses upon completion. These could include:
    - Major or regional roadway construction
    - Local Road Bridges and structures
    - Paving of Community Airport runways
    - Upgrading of roads impacted by resource-based truck traffic
- Connect user fees to beneficiary:
    - Frontage Levies dedicated to transportation, sewer and water infrastructure
    - Add 1 cent to Fuel Tax dedicated to transportation infrastructure (provincial authority)
    - Bridge/road tolls to roads and bridges
    - Vehicle Registration Fee
    - Other?
- Development cost charge allocated to infrastructure
- Debt Financing recognizing intergenerational infrastructure benefit
- Variations in fed-provincial - municipal infrastructure funding formulae
- Share of Provincial Sales Tax or the freed-up 1% in the federal GST
- Dedication of municipal GST exemption to infrastructure renewal
- Allocate full debt savings from old debt to infrastructure renewal - SIRP II
- Land transfer tax
- Tax on gas and electricity utilities
- Replace Education Property Taxation with alternative funding to free up municipal tax room
- Any new revenues to be dedicated to infrastructure renewal and construction could be based upon public criteria and objectives for which municipalities are held to account:
    - For example, new revenue streams could have 5- and 10-year sunset clauses: after 5 years' progress reviewed, revenue streams adjusted; after 10 years, entire program reviewed and decisions made on continuance based upon referendum

APPENDIX 'I" - City of Winnipeg, "Infrastructure Deficit and Possible Funding Options", 2009

Funding Source Options:

The City of Winnipeg has used the following funding sources to fund past capital projects:

- Property Tax
- User Fees
- Provincial Grants
- Federal Grants/Gas Tax
- Developer Contributions
- Frontage Levies
- P3 lease payments
- Debt (significantly used in the 1990s), currently used for water & sewer utilities

The following table outlines a short list of several funding options to fund both the Existing and New Strategic Infrastructure Deficit.

Funding Options	For Existing	for New Strategic
City Already Has Authority		
Frontage Levies	Local roads	
Debt Financing – typically for large projects	✓	✓
Public Private Partnership (P3)	✓	✓
Property Taxes	✓	✓
User Fees	✓	✓
Federal and Provincial Grants	✓	✓
Development Cost Charges (partial authority)		✓
Sponsorships	✓	✓
City Does Not Have Authority		
New City tax dedicated to infrastructure funding: - Fuel Tax - Sales Tax	 ✓ ✓	 ✓ ✓
Increased share of Federal and Provincial existing taxes	✓	✓
Development Cost Charges (expanded authority)	✓	✓
Land Transfer Tax	✓	✓
Vehicle Registration Fee	✓	✓
Franchise Fee on Gas and Electric Utilities	✓	✓
Income Tax	✓	✓
Electrical bill fee	✓	✓

APPENDIX 'J' Financial Model – For Demonstration Purposes

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
1% Sales Tax Revenue	238	248	258	268	279	290	302	314	326	339	353	367	382	397	413	429	446	464	483	502
in $ millions Retail Sales Growth	4.0%																			
Municipal Infrastructure Levy			collect																	
% MIL	0.0%	0.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
MIL Revenue	0	0	258	268	279	290	302	314	326	339	353	367	382	397	413	429	446	464	483	502
Equity Reserve		0	13	13	14	15	15	16	16	17	18	18	19	20	21	21	22	23	24	25
MIL Reserve		0	245	255	265	276	287	298	310	322	335	349	363	377	392	408	424	441	459	477
				spend																
5% Equity Reserve		0	0	13	13	14	15	15	16	16	17	18	18	19	20	21	21	22	23	24
Per Capita Amount		0	0	245	255	265	276	287	298	310	322	335	349	363	377	392	408	424	441	459
Manitoba		0	0	258	268	279	290	302	314	326	339	353	367	382	397	413	429	446	464	483
City of Winnipeg																				
55.2% Per Capita		0	0	135	141	146	152	158	164	171	178	185	192	200	208	216	225	234	243	253
Total		**0**	**0**	**135**	**141**	**146**	**152**	**158**	**164**	**171**	**178**	**185**	**192**	**200**	**208**	**216**	**225**	**234**	**243**	**253**
Remaining Municipalities																				
Equity Reserve		0	0	13	13	14	15	15	16	16	17	18	18	19	20	21	21	22	23	24
100% Per Capita		0	0	110	114	119	123	128	134	139	144	150	156	162	169	176	183	190	198	206
Total		**0**	**0**	**123**	**128**	**133**	**138**	**143**	**149**	**155**	**161**	**168**	**175**	**182**	**189**	**196**	**204**	**212**	**221**	**230**
Distribution of Municipal Infrastructure Levy																				
City of Winnipeg		0	0	135	141	146	152	158	164	171	178	185	192	200	208	216	225	234	243	253
Rest of Municipalities		0	0	123	128	133	138	143	149	155	161	168	175	182	189	196	204	212	221	230
Total				**258**	**268**	**279**	**290**	**302**	**314**	**326**	**339**	**353**	**367**	**382**	**397**	**413**	**429**	**446**	**464**	**483**

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Education Property Tax To Be Vacated	318	325	331	338	344	351	358	366	373	380	388	396	404	412	420	428	437	446	455	464
Growth	4%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
3 Year phase out				33.3%	33.3%	33.4%														
56.2% **City of Winnipeg**				**63.2**	**64.5**	**66.0**														
Remaining Municipalities				**49.3**	**50.2**	**51.4**														
Total				**112.5**	**114.7**	**117.4**														

Municipalities: Inflation plus Population Growth

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Wpg Current Total Capital Budget	$400	$400	$412	$424	$437	$450	$464	$478	$492	$507	$522	$538	$554	$570	$587	$605	$623	$642	$661	$681
growth (CPI plus 1% pop growth)		3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
$ growth		$12	$12	$13	$13	$14	$14	$14	$15	$15	$16	$16	$17	$17	$18	$18	$19	$19	$20	$20

New Additional Funding for Infrastructure	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**
City of Winnipeg		12	24	37	50	64	78	92	107	122	138	154	170	187	205	223	242	261	281	301
50% **Remaining Municipalities**		6	12	19	25	32	39	46	53	61	69	77	85	94	103	112	121	131	140	151
Total		**18**	**37**	**56**	**75**	**96**	**116**	**138**	**160**	**183**	**206**	**231**	**255**	**281**	**308**	**335**	**363**	**392**	**421**	**452**

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Additional Federal Fuel Tax	100	101	102.01	103.03	104	105														
Additional Federal Fuel Tax Fully allocated		1.0%		33%	67%	100%														
City of Winnipeg		61.4%		21	43	65	65	66	66	67	68	69	69	70	71	71	72	73	73	74
Remaining Municipalities				13	27	41	41	41	42	42	43	43	43	44	44	45	45	46	46	47
Total				**34**	**69**	**105**	**106**	**107**	**108**	**109**	**110**	**112**	**113**	**114**	**115**	**116**	**117**	**118**	**120**	**121**

IFC Recommended New Funding available to address $13.4 Billion of Infrastructure Deficit

in $ millions																					
For City of Winnipeg	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**5 Year subtotal**	**2019**	**2020**	**2021**	**2022**	**2023**	**5 Year subtotal**	**2024**	**2025**	**2026**	**2027**	**2028**	**5 Year subtotal**	**2029**	**2030**
Vacated Education Property Taxes	-	-	-	63	129	197	201	205	**796**	210	214	218	222	227	**1,091**	231	236	241	246	250	**1,204**	255	261
Additional Federal Fuel Tax	-	-	-	11	43	65	65	66	**249**	66	67	68	69	69	**339**	70	71	71	72	73	**356**	73	74
Municipal Infrastructure Levy	-	-	-	135	141	146	152	158	**732**	164	171	178	185	192	**891**	200	208	216	225	234	**1,084**	243	253
Municipal Additional Funding	-	12	24	37	50	64	78	92	**357**	107	122	138	154	170	**690**	187	205	223	242	261	**1,119**	281	301
Wpg Sub-Total	**-**	**12**	**24**	**246**	**362**	**472**	**496**	**521**	**2,134**	**547**	**574**	**601**	**630**	**659**	**3,011**	**689**	**720**	**752**	**785**	**818**	**3,763**	**853**	**889**
Remaining Municipalities	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**		**2019**	**2020**	**2021**	**2022**	**2023**		**2024**	**2025**	**2026**	**2027**	**2028**		**2029**	**2030**
Vacated Education Property Taxes	-	-	-	49	100	154	157	160	**621**	163	167	170	173	177	**850**	180	184	188	191	195	**938**	199	203
Additional Federal Fuel Tax	-	-	-	7	27	41	41	41	**156**	42	42	43	43	43	**213**	44	44	45	45	46	**224**	46	47
Municipal Infrastructure Levy	-	-	-	123	128	133	138	143	**664**	149	155	161	168	175	**808**	182	189	196	204	212	**983**	221	230
Municipal Additional Funding	-	6	12	19	25	32	39	46	**178**	53	61	69	77	85	**345**	94	103	112	121	131	**559**	140	151
Remaining Municipalities Sub-Total	**-**	**6**	**12**	**197**	**280**	**359**	**375**	**391**	**1,620**	**408**	**425**	**443**	**461**	**480**	**2,216**	**499**	**520**	**540**	**562**	**584**	**2,705**	**607**	**630**
Total Province wide	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**		**2019**	**2020**	**2021**	**2022**	**2023**		**2024**	**2025**	**2026**	**2027**	**2028**		**2029**	**2030**
Vacated Education Property Taxes	-	-	-	112	229	351	358	366	**1,417**	373	380	388	396	404	**1,940**	412	420	428	437	446	**2,142**	455	464
Additional Federal Fuel Tax	-	-	-	17	69	105	106	107	**405**	108	109	110	112	113	**552**	114	115	116	117	118	**581**	120	121
Municipal Infrastructure Levy	-	-	-	258	268	279	290	302	**1,396**	314	326	339	353	367	**1,699**	382	397	413	429	446	**2,067**	464	483
Municipal Additional Funding	-	18	37	56	75	96	116	138	**535**	160	183	206	231	255	**1,035**	281	308	335	363	392	**1,678**	421	452
Province Wide Sub-Total	**-**	**18**	**37**	**443**	**642**	**831**	**871**	**912**	**3,754**	**955**	**999**	**1,044**	**1,091**	**1,139**	**5,227**	**1,188**	**1,239**	**1,292**	**1,346**	**1,402**	**6,468**	**1,460**	**1,519**

City of Winnipeg -- Effect on Infrastructure Deficit

Relating to Existing	1,700
Relating To Growth	1,800
2009 Current Infrastructure Deficit for Winnipeg	**3,500**
	Annual Growth
Growth relating to Existing Infrastructure	210
Growth relating to New Strategic Infrastructure	180
Total Growth in Infrastructure Deficit	**390** in constant 2009 dollars
Add Construction Inflation to Infrastructure	
Conference Board recommended twice CPI	**4.0%** construction inflation

reduce to 60% / 60% of previous year

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Growth relating to Existing Infrastructure	227	236	246	255	266	276	287	299	311	187	194	202	210	218	227	236	245	255	265	276
Growth relating to New Strategic Infrastructure	195	202	211	219	228	237	246	256	266	160	166	173	180	187	195	202	210	219	228	237
Total Growth in Infrastructure Deficit	422	439	456	474	493	513	534	555	577	346	360	375	390	405	421	438	456	474	493	513
Allocation of Funding																				
Existing	**75%**																			
New	25%																			

in $ millions	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
1st Priority to Existing Infrastructure	$2,120	$2,356	$2,593	$2,830	$2,911	$2,916	$2,849	$2,776	$2,696	$2,472	$2,236	$1,986	$1,724	$1,448	$1,158	$854	$536	$203	-$145	-$509
New funding	$0	$9	$18	$185	$272	$354	$372	$391	$410	$430	$451	$472	$494	$517	$540	$564	$588	$614	$640	$667
Effect on Existing Infrastructure Deficit	$2,120	$2,347	$2,575	$2,646	$2,640	$2,562	$2,477	$2,385	$2,285	$2,042	$1,785	$1,514	$1,230	$931	$618	$291	-$52	-$411	-$785	-$1,176
New Infrastructure	$2,160	$2,362	$2,570	$2,783	$2,949	$3,096	$3,224	$3,356	$3,492	$3,515	$3,538	$3,561	$3,583	$3,605	$3,628	$3,650	$3,672	$3,695	$3,718	$3,741
New funding		$3	$6	$62	$91	$118	$124	$130	$137	$143	$150	$157	$165	$172	$180	$188	$196	$205	$213	$222
Effect on New Infrastructure Deficit	$2,160	$2,359	$2,564	$2,721	$2,859	$2,978	$3,100	$3,226	$3,355	$3,372	$3,388	$3,403	$3,418	$3,433	$3,448	$3,462	$3,476	$3,490	$3,505	$3,519
Total Remaining Wpg Infrastructure Deficit	**$4,280**	**$4,707**	**$5,139**	**$5,367**	**$5,498**	**$5,539**	**$5,577**	**$5,611**	**$5,641**	**$5,413**	**$5,172**	**$4,917**	**$4,648**	**$4,364**	**$4,066**	**$3,753**	**$3,424**	**$3,080**	**$2,719**	**$2,343**

Remaining Municipalities in 2010 4,000

annual increase **200** in constant 2010 dollars

annual increase with construction inflation	208	216	225	234	243	253	263	274	285	296	308	320	333	346	360	375	390	405	421	438
in $ millions	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**
1st Priority to Existing Infrastructure	$4,208	$4,424	$4,643	$4,865	$4,911	$4,885	$4,789	$4,688	$4,582	$4,470	$4,353	$4,230	$4,102	$3,969	$3,830	$3,685	$3,534	$3,377	$3,215	$3,046
New funding	$0	$6	$12	$197	$280	$359	$375	$391	$408	$425	$443	$461	$480	$499	$520	$540	$562	$584	$607	$630
Effect on Existing Infrastructure Deficit for Remaining Municipalities	**$4,208**	**$4,418**	**$4,631**	**$4,668**	**$4,632**	**$4,526**	**$4,414**	**$4,297**	**$4,174**	**$4,045**	**$3,910**	**$3,769**	**$3,622**	**$3,469**	**$3,310**	**$3,144**	**$2,972**	**$2,793**	**$2,608**	**$2,416**
Total Remaining Deficit Combined for City and Remaining Municipalities	**$8,488**	**$9,125**	**$9,770**	**$10,035**	**$10,130**	**$10,065**	**$9,991**	**$9,908**	**$9,815**	**$9,458**	**$9,082**	**$8,687**	**$8,270**	**$7,834**	**$7,376**	**$6,897**	**$6,396**	**$5,873**	**$5,328**	**$4,759**

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INFRASTRUCTURE FUNDING COUNCIL (IFC)

Christopher (Chris) W. Lorenc, B.A.,LL.B.
Chair, Infrastructure Funding Council (IFC)



A lawyer by background, Chris Lorenc has been President of the Manitoba Heavy Construction Association (MHCA) since 1991 and President of the Western Canada Roadbuilders & Heavy Construction Association (WCR&HCA) since 1995. Mr. Lorenc graduated from the University of Manitoba with Bachelor of Arts in 1973 and Law (LL.B.) degree in 1976 and then practiced general, corporate and commercial law until 1991.

He served on Winnipeg's City Council for nine (9) years from 1983 until he retired from public office in 1992. While on Council he chaired a number of its Standing Committees, including Public Works and Environment, specific task forces and was a long serving member of Council's Executive Policy Committee (EPC).

Mr. Lorenc is active with the Canadian Construction Association (CCA) and serves on a number of its committees including: Civil Infrastructure Council (CIC); Gold Seal (national management excellence certification program); International Business; Human Resources; and Marketing and Promotion.

He is also a management representative on the Manitoba Labour Board and a member of: the Manitoba Employer's Council (MEC); the provincial Investment Promotion Committee (IPC); Manitoba International Gateway Strategy Council; Winnipeg Chamber of Commerce *'Trade & Transportation'* Committee; the Manitoba Chambers of Commerce; the Institute of Corporate Directors; and a founding board member of the Manitoba Construction Sector Council (MCSC).

In 2007 he chaired the Mayor's Trade Council (MTC) whose 2008 report *'Winnipeg – Canada's Center for Global Trade'* is credited as the impetus for the creation of CentrePort Canada, Canada's first inland port on which Board he now serves. The report also led to tri-level government decisions to promote inland port investments in Winnipeg and Manitoba. For this work Mr. Lorenc was awarded the '*Manitoba Service Excellence Partnership Award*' by the Manitoba government in June 2009.

He is frequently invited to speak to a variety of forums and comment on public radio on a variety of public policy topics. He has authored numerous public policy opinion editorials and has an extensive background in developing and writing public policy for governments on topics including government organization, intergovernmental relations, sustained infrastructure investment, and trade and transportation.

He has been both chair and member of a number of civic and provincial policy task forces some of which he initiated. Those included: Strategic Infrastructure Reinvestment Policy (SIRP) Task Forces (1998 & 2000); Committee on Tax Reform (1998); Workplace Safety & Health Act Review Committee (2001); Worker Compensation Act Review Panel (2004); Economic Opportunity Commission (EOC) in 2006.

He is married to his wife Maria of 29 years. They have three sons Marek (26), Gregory (24) and Michael (22). In his spare time Mr. Lorenc enjoys reading and spending time at the family cottage at Winnipeg Beach, Manitoba.

INFRASTRUCTURE FUNDING COUNCIL (IFC) MEMBERS



Ron Bell

Ron Bell was a councillor in the Town of Birtle for two terms before becoming mayor in 1995, a position he held until February, 2010.

Ron served on the Association of Manitoba Municipalities (AMM) board of directors for 10 years, including 4 years as president, before stepping down in 2008.

One of the highlights of Ron's term as president was the agreement on the transfer of federal gas tax revenues under the New Deal for Cities and Communities, signed in 2005.

Ron also represented the AMM on the Federation of Canadian Municipalities board of directors, the Federal Gas Tax Oversight Committee, the Provincial/Local Consultative Committee on Infrastructure, and the Infrastructure Council of Manitoba.

Ron and his family live in Birtle, MB and farm at Isabella, MB.



Councillor Jeff Browaty

Councillor Browaty has represented the City of Winnipeg's North Kildonan Ward since 2006. He is a member of the Executive Policy Committee and serves as the Chair of the Standing Policy Committee on Property & Development, and is a member of the Standing Policy Committee on Downtown Development. Jeff represents the City on the Executive of the Red River Basin Commission, and is a member of the boards of both the Winnipeg Public Library and the Winnipeg Housing Rehabilitation Corporation.

Representing the City on the Winnipeg-Kansas City Economic Partnership from 2008 - 2010, Jeff gained experience in addressing critical national and international trade, transportation, environmental and security issues through his participation in the North America Corridor Coalition.

Prior to his election in 2006, Jeff worked as a real estate appraiser. In 2001 he served as a research intern at the University of Manitoba's Transport Institute where he worked on various transportation projects, including a freight sustainability demonstration seminar and a Manitoba-Nunavut fuel re-supply study. Earlier in his career, he worked as a Communications Officer at the Manitoba Provincial Legislature and as an assistant to a federal Member of Parliament. He holds a Bachelor of Commerce (Honours) from the I. H. Asper School of Business with double majors in Management Information Systems (M.I.S.) and Marketing.

Jill Vogan, B.A. (Hons) and M.N.R.M. (Masters of Natural Resource Management), University of Manitoba



Jill, a career provincial civil servant, worked for 30 years in a central agency capacity, primarily in intergovernmental relations. Jill served four Premiers, five provincial Ministers, five Clerks of Executive Council, and numerous deputy ministers. From policy analysis to federal-provincial strategic policy and planning, Jill's public sector career included negotiating and managing a range of multi-million dollar, federal-provincial infrastructure and economic development initiatives.

Jill is currently an Associate with Eclectic Communications, specializing in written business communications.

Cory Young



Cory Young has been active in municipal government since 1991. A graduate of the Manitoba Municipal Administrator Program, he has served as Chief Administrative Officer for both the Town of Churchill and the Town of Winnipeg Beach.

Mr. Young also served on Thompson City Council where he chaired the Finance and Administration committee, Public Safety Committee, and was a member of the Public Works & Infrastructure Committee.

During his years with municipal government Mr. Young was also active with the AMM, serving as Northern Region Resolutions Chair for two years.

He has been employed with the Provincial Government since 2004. He currently resides in Winnipeg.

Winnipeg

City of Winnipeg

2018 State of the Infrastructure Report



Vision

To be a vibrant and healthy city which places its highest priority in quality of life for all its citizens.

Corporate Mission

Working together to achieve affordable, responsive and innovative public service.

Photo: Austin Mackay, courtesy Tourism Winnipeg
Cover Photo: Aaron Cohen, courtesy Tourism Winnipeg

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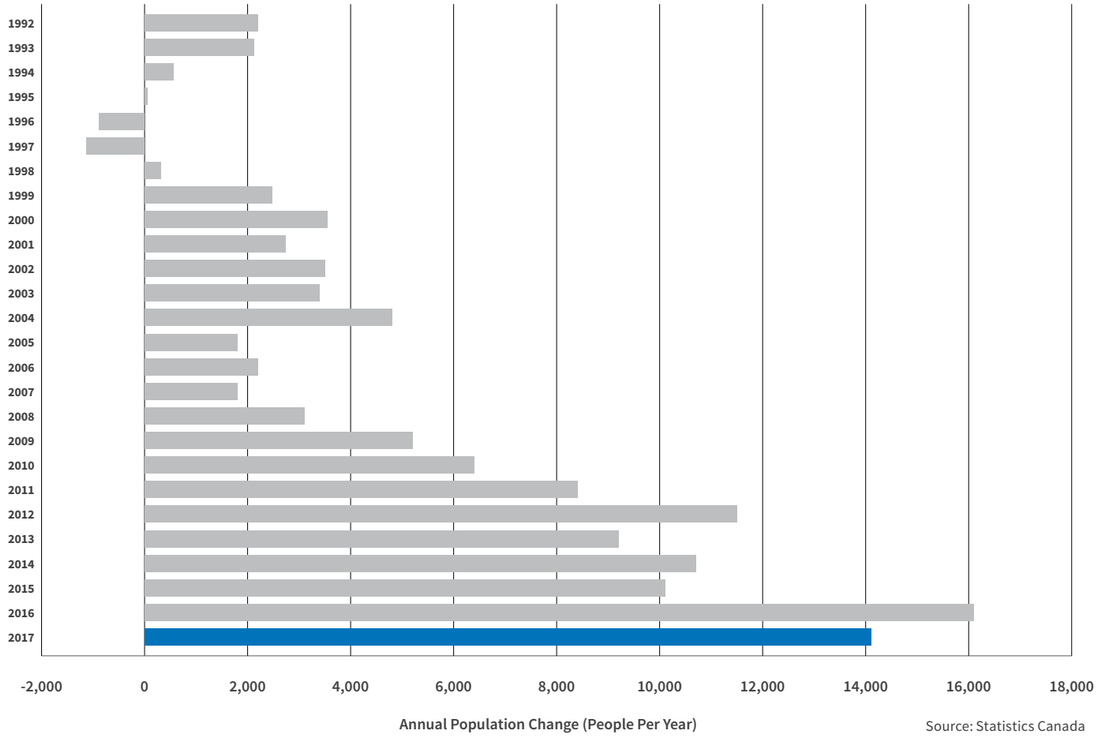
Introduction

Winnipeg is growing. The city is in the early stages of a cycle of strong growth, a pace not seen for decades as evidenced by the table below. This momentum is showing no signs of slowing.

City of Winnipeg Annual Population Change



Source: Statistics Canada

According to the *2016 City of Winnipeg Population, Housing, and Economic Forecast,* Winnipeg's average annual population growth over the next 25 years is estimated to increase by 8,200 people per year. It also notes that the city's Census Metropolitan Area population is predicted to exceed 1 million people by 2034/2035 and surpass 1,055,000 by 2040.

Winnipeg itself is expected to grow to a population of approximately 922,600 by 2040. In 2017, Winnipeg's population was 749,500*. Furthermore, the number of households is expected to increase by around 32 percent, or approximately 100,000, to a total of 391,100 by 2040.

Investments in key services and infrastructure are critical to support a growing, thriving, modern city, now and into the future. The *2018 State of the Infrastructure Report* provides comprehensive information regarding the major asset groups that the City of Winnipeg (City) manages in order to deliver services for residents.

* Source: Statistics Canada

Winnipeg's Infrastructure at a Glance



Photo: Aaron Cohen, courtesy Tourism Winnipeg

1,939 (lane-km) | Regional Streets

5,396 (lane-km) | Local Streets *(excluding Lanes/Alleys)*

305,257 | Park and Boulevard Trees

3,587 ha | Parks and Open Space*

661 | Athletic Fields*

63 | Community Centres

12 | City-Operated Arenas

12 | Indoor Pools

10 | Outdoor Pools

83 | Wading Pools

19 | Spray Pads

42 | Department Offices and Facilities

7,085 | Desktop Devices

2,994 km (linear) | Active Transportation *(Bike Paths and Sidewalks)*

145 | Bridges *(Vehicular, Pedestrian, and Underpasses)*

2,637 km | Distribution System Water Mains

2,681 km | Collection and Interceptor Sewer Mains

1,403 km | Land Drainage Sewer Mains

152 km | Feeder Mains

118 km | Dikes

22,045 | Hydrants

34 | Flood Pumping Stations

3 | Sewage Treatment Plants

615 | Buses

286 | WPS Fleet *(Light, Super, and Heavy Duty)*

30 | WFPS Stations and Academy

* Excludes Assiniboine Park

Source: City of Winnipeg, 2018 City Asset Management Plan

Citizen Satisfaction Survey Highlights

The City conducts an annual citizen satisfaction survey to solicit opinions on its performance in the delivery of key services. In 2017, 600 Winnipeggers, aged 18 and older, provided their thoughts on what the City is doing well and what needs improvement. Residents were also asked what actions they thought the City could take to improve the quality of life in the city and these actions were grouped by category. Respondents overwhelmingly noted that actions related to roads and infrastructure would improve quality of life.

Top 3 Actions to Improve Quality of Life*

41% of respondents indicated **Roads/Infrastructure**

15% of respondents indicated **Crime/Policing**

8% of respondents indicated **Transit**

Citizen Satisfaction with City Services

88% rate **overall City services** as very good or good

48% are very satisfied or somewhat satisfied with **major streets**

49% are very satisfied or somewhat satisfied with **residential streets**

41% are very satisfied or somewhat satisfied with **management of rush hour traffic**

87% are very satisfied or somewhat satisfied with **local parks**

97% are very satisfied or somewhat satisfied with **major parks****

84% are very satisfied or somewhat satisfied with **quality of drinking water**

93% are very satisfied or somewhat satisfied with **protection from river flooding**

85% are very satisfied or somewhat satisfied with **protection from sewer backup**

87% are very satisfied or somewhat satisfied with **garbage collection**

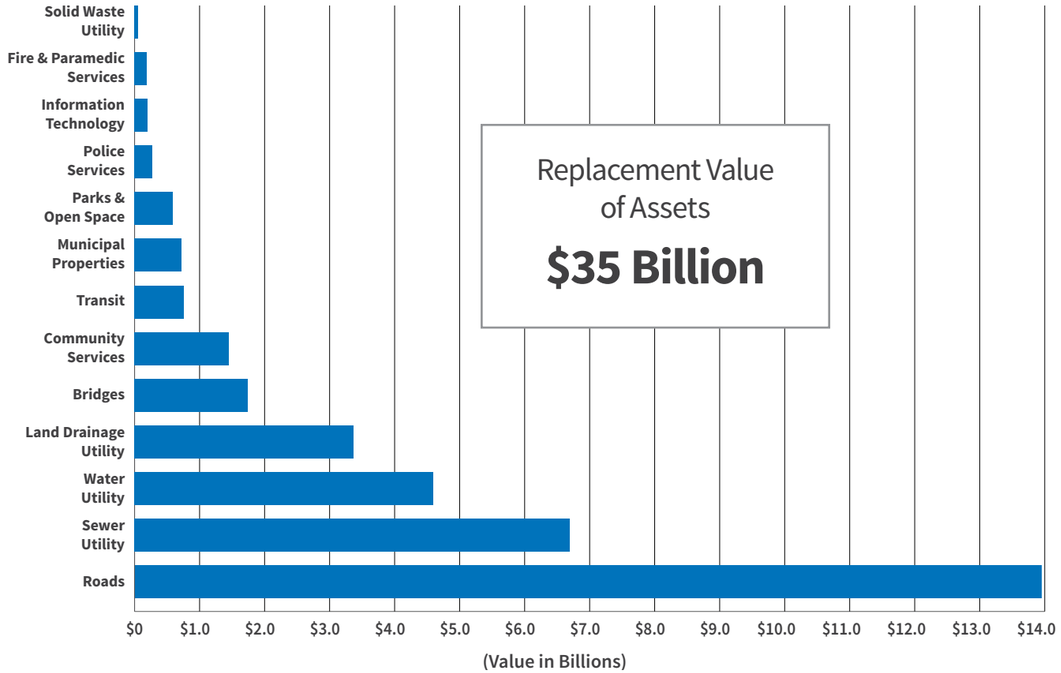
86% are very satisfied or somewhat satisfied with **recycling program**

75% are very satisfied or somewhat satisfied with **public transportation****

* Respondents were permitted to provide more than one response.

** Those who indicated they have used the service.

State of Local Infrastructure



The City must balance a multitude of competing spending priorities with limited resources. As the city continues to grow at historically high rates, the need to make sustainable, well-timed infrastructure investments is essential to ensure we continue to deliver high-quality services for residents.

To that end, in January 2015, Council approved the City's Asset Management Policy, making asset management a core business function. Asset management is not a singular activity or project; rather, it is a systematic process that facilitates decision-making in regards to the construction, acquisition, operation, maintenance, renewal, replacement, and disposition of assets in the most cost-effective manner.

The adoption of the Asset Management Policy also established the framework for infrastructure stewardship through comprehensive Asset Management Plans (AMPs). AMPs are integrated with and help guide the long-range infrastructure investment planning process based on considerations such as affordability and, in the future, defined service levels. The City completed its first City Asset Management Plan (CAMP) in 2018. The *2018 State of the Infrastructure Report* is a high-level summary of the detailed findings of the CAMP.

Through the CAMP, the consolidation and analysis of information on assets across all civic departments, including the historic distribution of capital funding for these assets over the last decade, was undertaken. Providing detailed information about the City's infrastructure as a whole, including the state of existing assets, the assignment of value to needed improvements on existing and future assets, and the remaining service life of current assets has never been performed on this scale within the organization before.

The CAMP applied a consistent approach to how data was collected and analyzed across the entire portfolio of City-owned assets. This instituted a benchmarking tool for monitoring key performance indicators and allowed for an objective comparison over multiple service areas. For the first time, the City has been able to strategically categorize asset types and grade the physical condition of its main infrastructure elements. While the infrastructure elements have condition grades, there remain some assets where formal condition assessments have not yet taken place. The intent is to gather more information about unassessed assets in the future. Presentation of asset condition in this report does not include the replacement value of assets where condition assessments have not taken place.

However, the CAMP has full details on replacement values of these assets.

Adopting a holistic overview the City's condition grade for tax-supported and Transit infrastructure is C+, whereas water and waste utilities' asset conditions are B. The difference is primarily due to the fact that the Water and Waste utilities have dedicated funding and are governed by significant regulatory and level of service requirements, compared to the tax-supported and transit asset base. Combined, the City's condition grade is B-. The City's current asset inventory has a replacement value of approximately $35 billion.



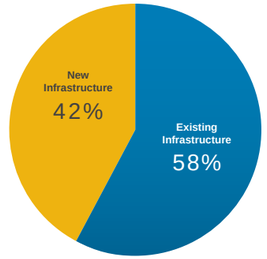
TAX-SUPPORTED AND TRANSIT INFRASTRUCTURE

WATER & WASTE UTILITIES

CITY'S OVERALL CONDITION GRADE

As the City's asset management plans were developed, support from cross functional teams and dedicated asset management leads fostered a shared vision which improved communication, provided new insights on asset performance and initiated a fundamental change in how investment models could be created to maximize value from City assets. Recognizing that the CAMP is an ever evolving document, strategies and continuous improvement initiatives have also been addressed and will serve as guidelines as the City continues to gain more knowledge about its assets.

The amalgamation of each department's spending plans and needs over the next ten years was used to calculate the City's infrastructure deficit. Total capital investment needs for each department were based on a 10-year horizon and included both existing and new infrastructure. The gap between total capital investment requirements and estimated future capital funding resulted in an approximately $6.9 billion deficit. While the shortfall seems difficult to overcome, it is encouraging to note that compared to the reported 2009 deficit, progress has been made by investing in priority projects and focusing on maintaining existing infrastructure. In 2009, the reported capital infrastructure deficit was estimated at approximately $7.0 billion. Converted to 2018 dollars, this equates to approximately $9.9 billion and provides a more accurate comparison to the 2018 deficit, estimated at approximately $6.9 billion today.



Infrastructure Deficit
2018-2027

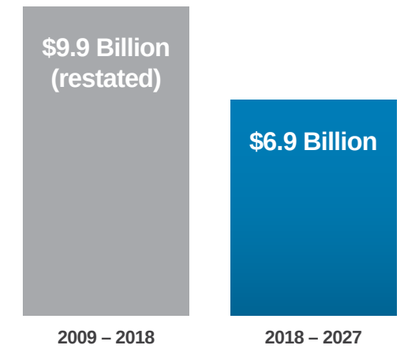
$6.9 Billion*

* The deficit is based on Capital investment needs spanning a 10-year period from 2018 to 2027.

Additionally, as the 2009 deficit included a small portion of operating funds, operational costs in the order of approximately $400 million were removed from the 2009 deficit figure to further ensure a fair comparison between the 2009 and 2018 infrastructure deficits.

Progress to reduce the infrastructure deficit from 2009 to 2018 may be attributed to a number of variables including allocating $2.1 billion more to infrastructure investments than originally planned from 2009-2017, successfully leveraging federal and provincial funding for major capital projects and the City dedicating an annual 2 percent property tax increase to improve the condition of roads.

Total Infrastructure Deficit



$3 Billion
DEFICIT DECREASED

Capital Expenditure

Despite limited growth in revenue over two decades, the city's population, its size, and demands for services continues to grow. Because of population growth at historically high rates, these demands are placing increasingly large pressures on both the operating and capital budgets to the extent that there is an unsustainable structural deficit in the tax-supported operating budget and a parallel infrastructure deficit in the capital budget.

Over the years, the City has seen significant change in the amount and type of capital expenditure. While capital spending amounts vary by year, excluding 2016, it has averaged $430 million from 2007 – 2017.

From 2010 to 2015, the City spent on average $689 per person, which is approximately $90 less per person from the multi city average.

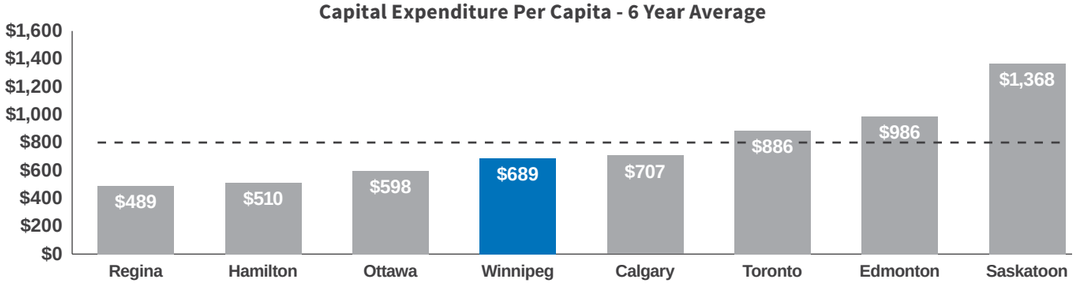
If the City of Winnipeg spent a similar amount compared to the average, the capital expenditures would increase by approximately $65 million per year.

But this level of spending is still short of what is needed to be sustainable. The infrastructure deficit, pegged at approximately $6.9 billion, or $690 million per year over the next 10 years, needs to be funded.

In short, the City will face difficult choices in funding capital projects, determining affordability, and what potential sources of revenue may be available.

Please note, with the exception of the data presented in this section, the financial information presented in the *2018 State of the Infrastructure Report* uses budget information rather than actual expenditures to align with budget and planning documents.

Capital Expenditure Per Capita - 6 Year Average



Source: City of Winnipeg, 2018 Community Trends & Performance Report – Volume 1

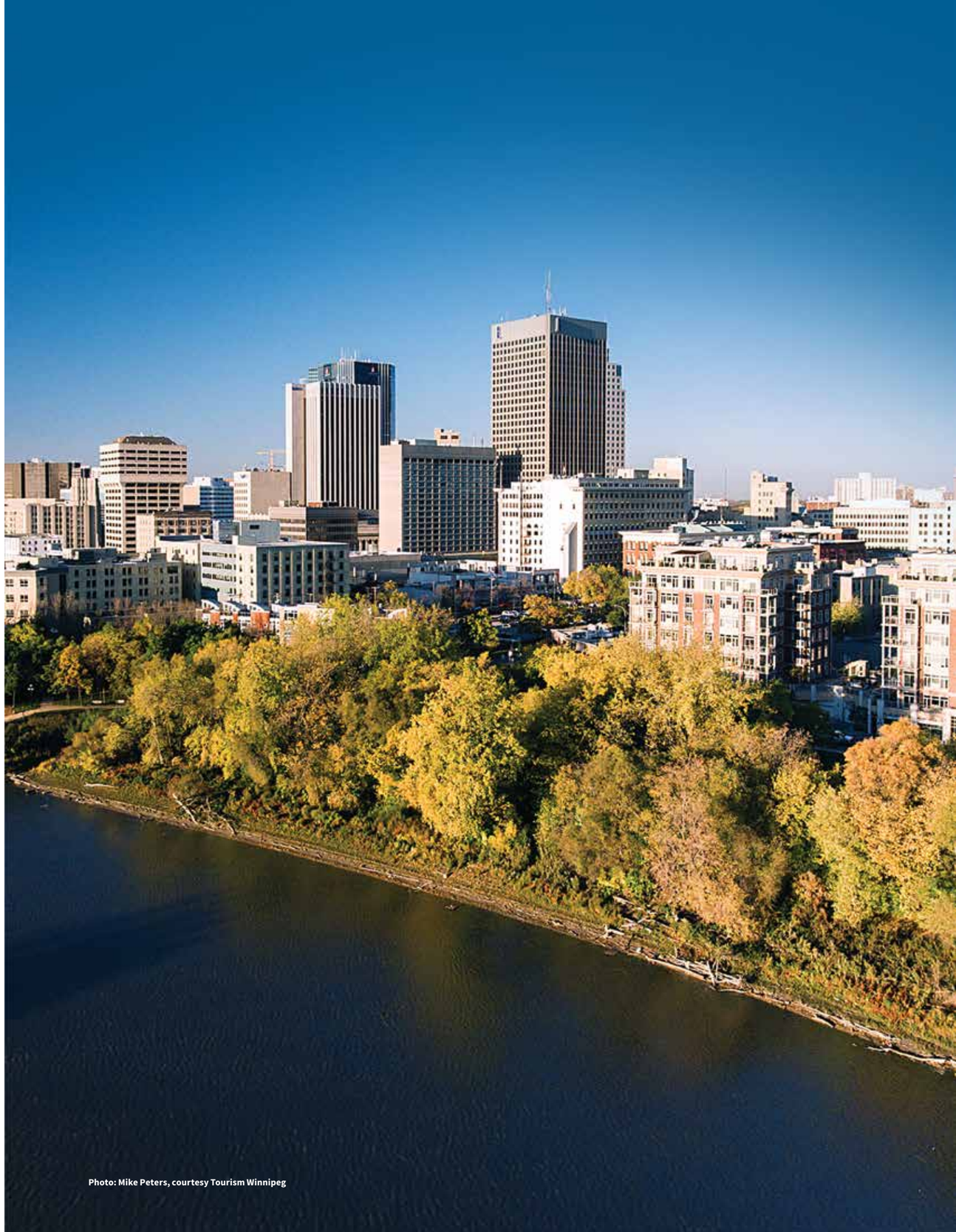


Photo: Mike Peters, courtesy Tourism Winnipeg

Photo: Tyler Walsh, courtesy Tourism Winnipeg

Capital Projects

Long-range financial planning is an important exercise to ensure funds are available in the future to meet anticipated needs, as required. On an annual basis, the Public Service prepares a 6-year capital investment plan as required by The City of Winnipeg Charter for Council-consideration, which includes the current year's capital budget and a 5-year capital forecast. Additionally, 4-year longer-term capital projections are prepared by the Public Service for planning purposes. The City's 2018 preliminary capital budget and the following 9-year estimated capital plan were used to capture anticipated levels of funding and the corresponding infrastructure deficit over a 10-year period.

Over the next 10 years (2018 – 2027), over $4.0 billion is estimated to go towards investments in the City's infrastructure; however, that level of funding is not adequate to address the City's infrastructure needs. The 2018 deficit is pegged at approximately $6.9 billion, with transportation services making up the majority of the overall deficit (70 percent). The deficit has identified a higher need to address existing infrastructure requirements compared to new infrastructure. This is due in part because many larger scale projects that are contemplated in the forecasted period are not currently funded.

10-year Capital Plan of $4,039 million

2018-2027 *(in millions)*

$1,767
Roads

$98
Bridges

$150
Parks & Open Space

$286
Water Utility

$756
Sewer Utility

$59
Land Drainage Utility

$44
Solid Waste Utility

$12
Police Services

$91
Fire & Paramedic Services

$199
Community Services

$59
Municipal Properties

$401
Transit

$117
Information Technology

Strategies to Address the Infrastructure Deficit

A combination of department-specific and city-wide financial strategies are required to effectively address the City's approximately $6.9 billion infrastructure deficit.

The City's current funding model is not sustainable.

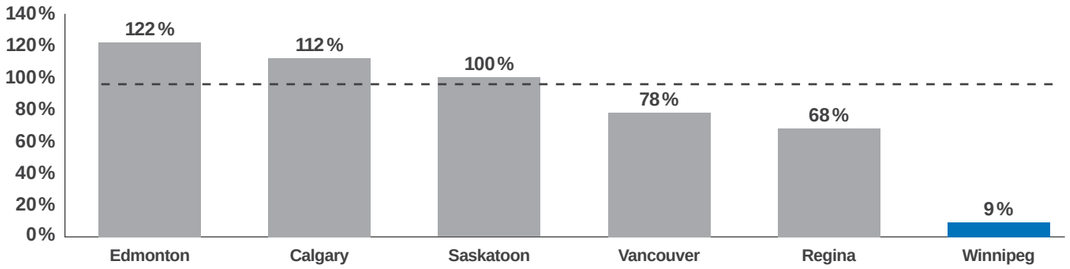
The majority of the City's revenue comes from property taxes, utility fees, and user fees. According to the 2018 Community Trends & Performance Report – Volume 1, other prairie cities in Canada collect on average 44 percent more revenue per capita compared to Winnipeg. Since 1998, the following Canadian cities have roughly doubled their property taxes, equivalent to a 98 percent increase on average, while Winnipeg has increased property taxes by only 9 percent.

Revenue can be attained by maximizing existing revenue sources, accessing new sources of revenue, and maximizing available capital funding from federal and provincial governments.

The City is also nearing the maximum borrowing limit set out in the debt strategy.

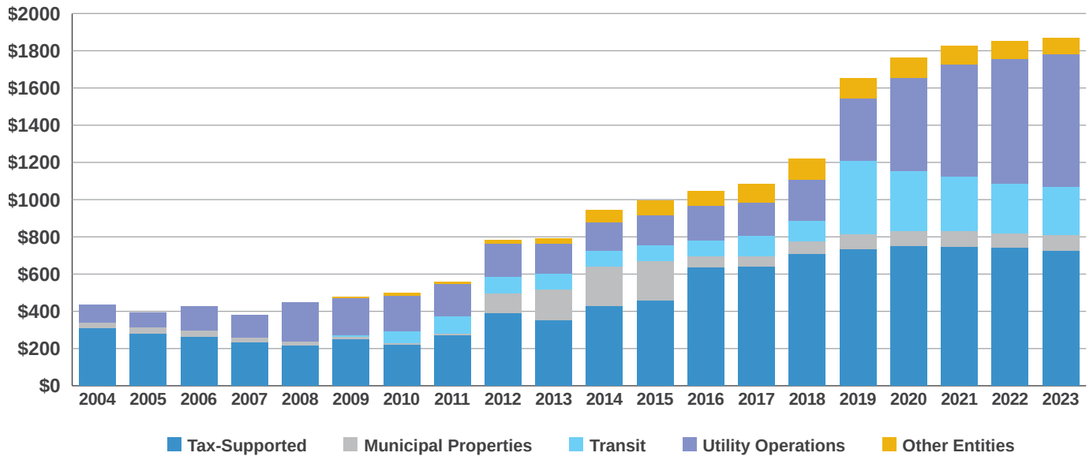
The net debt increased from 2007 to 2018, and is expected to continue increasing based on current financial commitments. The debt forecast does not currently account for borrowing funds to address the approximately $6.9 billion deficit, which if included, would become an unsustainable level of debt for the City. The ability to borrow further debt to finance infrastructure investments is more restrictive now than in the past and requires access to additional revenue in order to borrow more debt and make the annual debt interest payments.

Residential Property Tax Change (%) 1998 - 2016



Source: City of Winnipeg, 2018 Community Trends & Performance Report – Volume 1

Net Debt *(in millions)*



**Debenture debt and P3 obligations included*

Source: City of Winnipeg, 2018 City Asset Management Plan

Going forward, the City will have to consider a variety of strategies in order to effectively address the infrastructure deficit. Some key financial strategies could include:

1. **Increasing Access to Revenue:** Increases to existing revenues, exploring access to new revenues, and leveraging maximum dollars from federal and provincial capital funding.

2. **Develop Levels of Service:** Innovative approaches to maintaining or enhancing existing levels of service, as well as challenging decision-making in cases where reductions to service levels are warranted.

3. **Apply an Affordability Lens to Policy Development and Long-Term Strategic Plans:** Ensure guiding policies, such as *OurWinnipeg,* and service strategic plans, such as the Transportation Master Plan, consider what the City can afford.

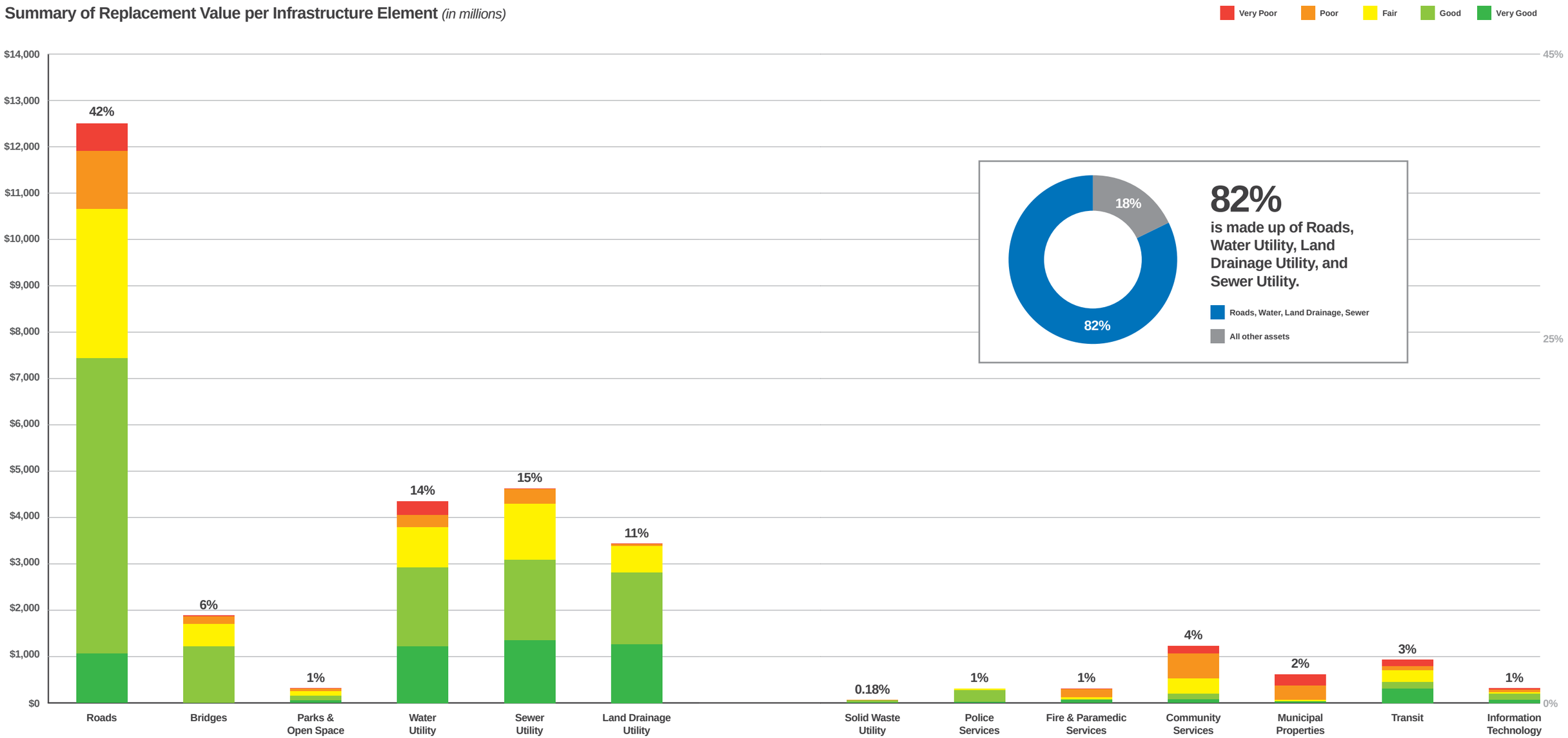
4. **Review Assets in *Poor* to *Very Poor* Condition:** Ensure critical infrastructure continues to receive adequate funding to address *Poor* to *Very Poor* condition and mitigate against assets deteriorating to this condition.

5. **Better Alignment Between the Budget Process and Asset Management:** The asset management program and budget process operate as a system that offer the greatest benefit if processes between each are fully integrated. Ongoing alignments between the asset management program and the budget process will allow for improved decision making related to capital infrastructure requirements and associated operational budget impacts through the implementation of short-term and near-term actions.

Summary of Replacement Value

The City has condition information on assets with a replacement value of $30 billion. On a city-wide basis, elements related to roads comprises almost half of the City's total asset replacement value. That percentage is indicative of the fact that there are over 7,300 lane-kms of regional and local streets in the City. Water and Waste Utilities hold the second highest value at approximately 40 percent. Together, they represent 82 percent of the total replacement value of all City assets.

Summary of Replacement Value per Infrastructure Element *(in millions)*



Percentages make not equal 100%

Summary of Average Condition

The information on condition ratings presented in the figure below can be used to help inform future investment planning decisions and requested funding levels. Areas with a high percentage of assets with a Poor to Very Poor condition that are deemed essential or critical to residents may require an increase or redistribution of funding to improve their condition. Assets rated in Poor to Very Poor condition are worth approximately $4.6 billion.

Summary of Condition and Grade per Infrastructure Element *(in millions)*



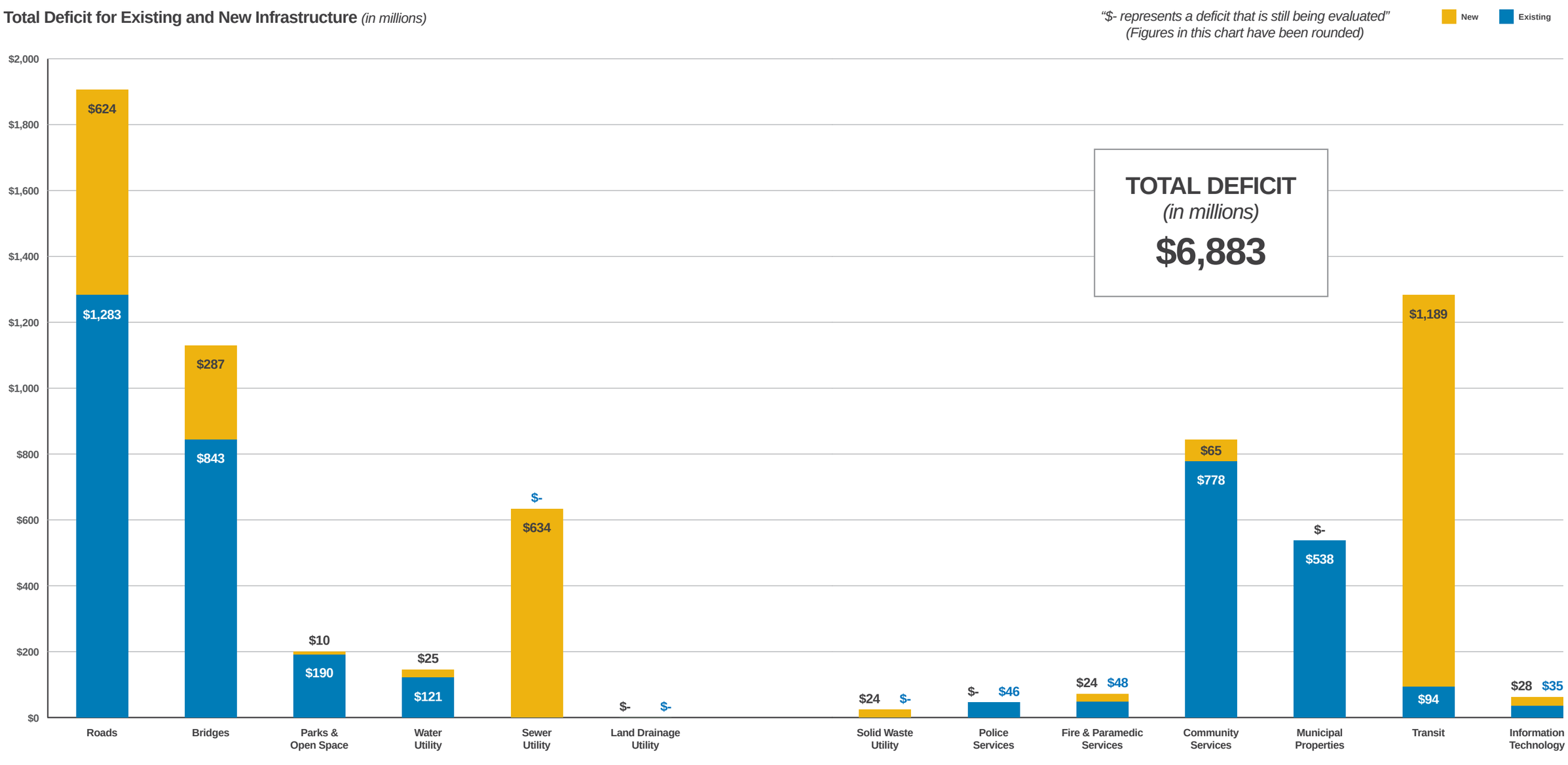
Summary of Infrastructure Deficit

The infrastructure deficit represents the current unfunded capital needs to achieve the assumed levels of service for existing infrastructure, as well as to support development of new infrastructure. The deficit is presented over a 10-year timeframe, from 2018-2027, for capital requirements only. Operating funding requirements are not captured.

Based on service needs for both existing and new infrastructure over the next 10 years, there is a deficit of approximately $6.9 billion, with a higher proportion required to support existing infrastructure needs than new infrastructure.

Total Deficit for Existing and New Infrastructure *(in millions)*

"$- represents a deficit that is still being evaluated"
(Figures in this chart have been rounded)



TOTAL DEFICIT
(in millions)
$6,883

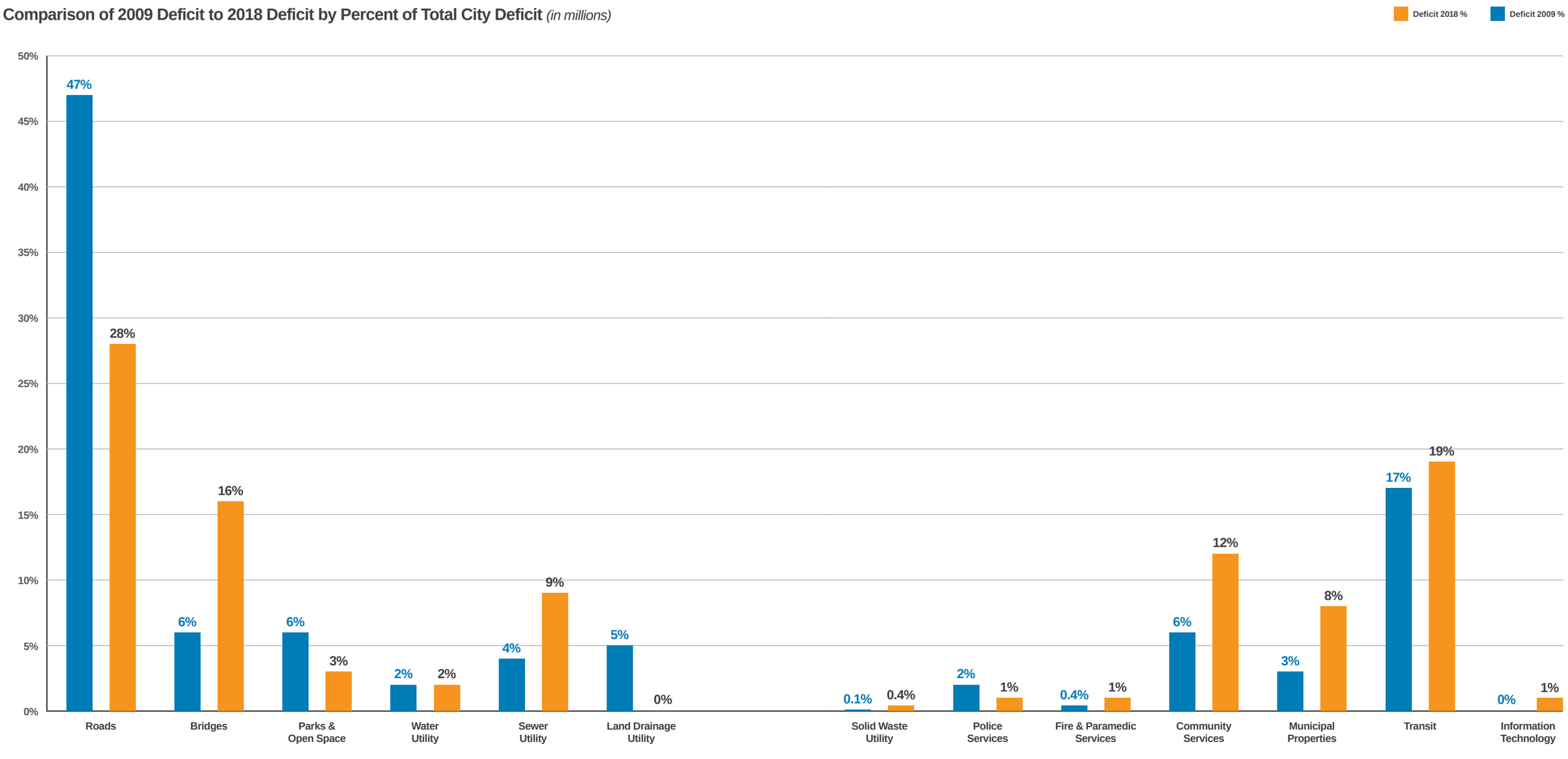
Infrastructure Deficit Comparison

The figure below provides a comparison of the 2009 infrastructure deficit to the 2018 infrastructure deficit. The last reported deficit in 2009, reported a capital infrastructure deficit estimated at approximately $7.0 billion. Converted to 2018 dollars, this equates to approximately $9.9 billion and provides a more accurate comparison to the 2018 deficit, estimated at approximately $6.9 billion today. Additionally, as the 2009 deficit included a small portion of operating funds, operational costs in the order of approximately $400 million were removed from the 2009 deficit figure to further ensure a fair comparison between the 2009 and 2018 infrastructure deficits. The 2018 deficit includes a construction escalation related to large infrastructure projects for the years 2018-2027.

Progress to reduce the infrastructure deficit from 2009 to 2018 may be attributed to a number of variables including allocating $2.1 billion more to infrastructure investments than originally planned from 2009-2017, successfully leveraging federal and provincial funding for major capital projects and the City dedicating an annual 2 percent property tax increase to improve the condition of roads. Progress made to reduce the deficit is encouraging, however there remains a significant deficit that is becoming more challenging to address.

The two main trends from 2009 to 2018 are that the deficit has decreased, and there is a proportional shift towards existing infrastructure over building new.

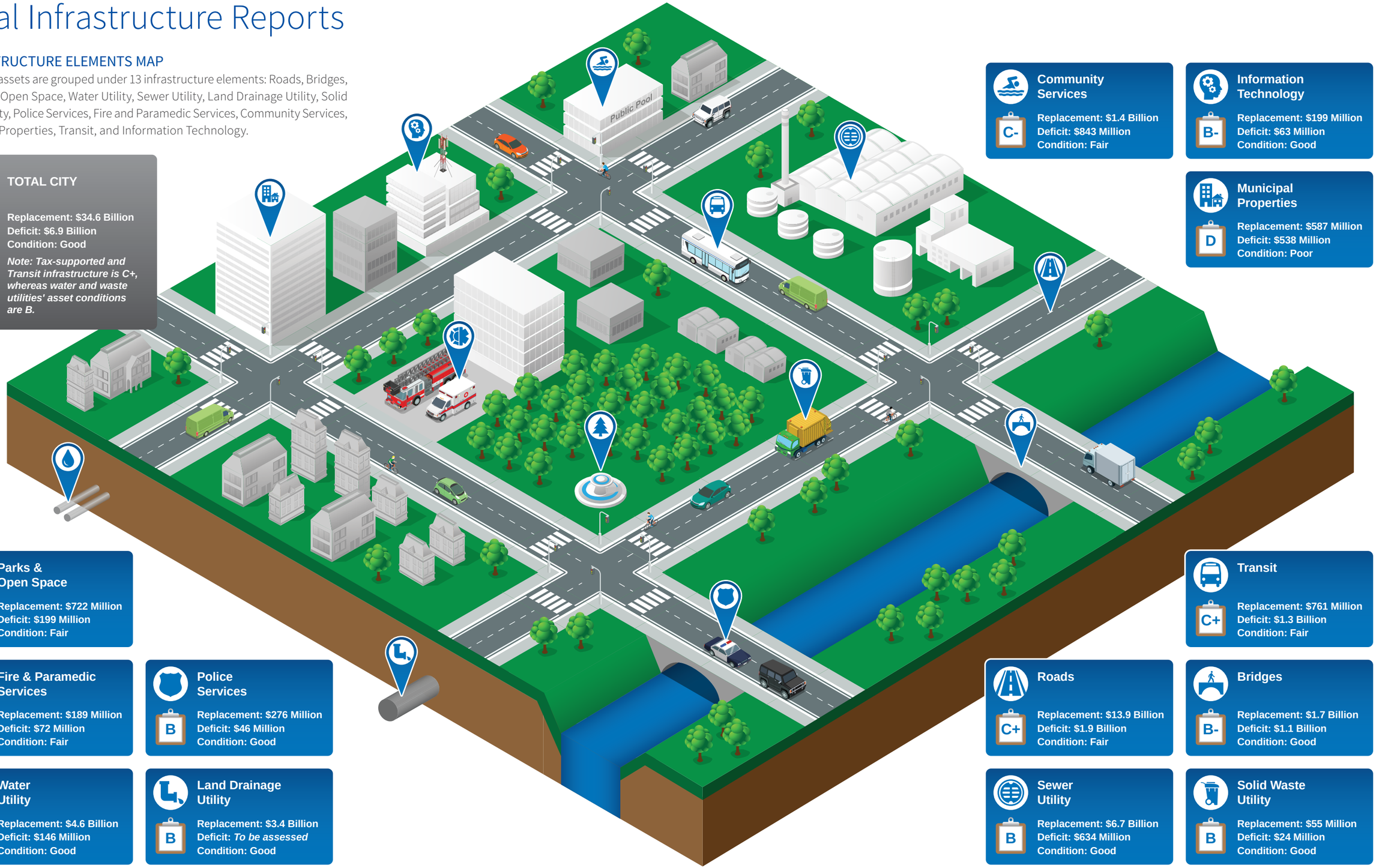
Comparison of 2009 Deficit to 2018 Deficit by Percent of Total City Deficit *(in millions)*



Local Infrastructure Reports

INFRASTRUCTURE ELEMENTS MAP

The City's assets are grouped under 13 infrastructure elements: Roads, Bridges, Parks and Open Space, Water Utility, Sewer Utility, Land Drainage Utility, Solid Waste Utility, Police Services, Fire and Paramedic Services, Community Services, Municipal Properties, Transit, and Information Technology.



TOTAL CITY

B-

Replacement: $34.6 Billion
Deficit: $6.9 Billion
Condition: Good

Note: Tax-supported and Transit infrastructure is C+, whereas water and waste utilities' asset conditions are B.

Community Services

C-

Replacement: $1.4 Billion
Deficit: $843 Million
Condition: Fair

Information Technology

B-

Replacement: $199 Million
Deficit: $63 Million
Condition: Good

Municipal Properties

D

Replacement: $587 Million
Deficit: $538 Million
Condition: Poor

Parks & Open Space

C+

Replacement: $722 Million
Deficit: $199 Million
Condition: Fair

Transit

C+

Replacement: $761 Million
Deficit: $1.3 Billion
Condition: Fair

Fire & Paramedic Services

C

Replacement: $189 Million
Deficit: $72 Million
Condition: Fair

Police Services

B

Replacement: $276 Million
Deficit: $46 Million
Condition: Good

Roads

C+

Replacement: $13.9 Billion
Deficit: $1.9 Billion
Condition: Fair

Bridges

B-

Replacement: $1.7 Billion
Deficit: $1.1 Billion
Condition: Good

Water Utility

B-

Replacement: $4.6 Billion
Deficit: $146 Million
Condition: Good

Land Drainage Utility

B

Replacement: $3.4 Billion
Deficit: *To be assessed*
Condition: Good

Sewer Utility

B

Replacement: $6.7 Billion
Deficit: $634 Million
Condition: Good

Solid Waste Utility

B

Replacement: $55 Million
Deficit: $24 Million
Condition: Good

ROADS

C+

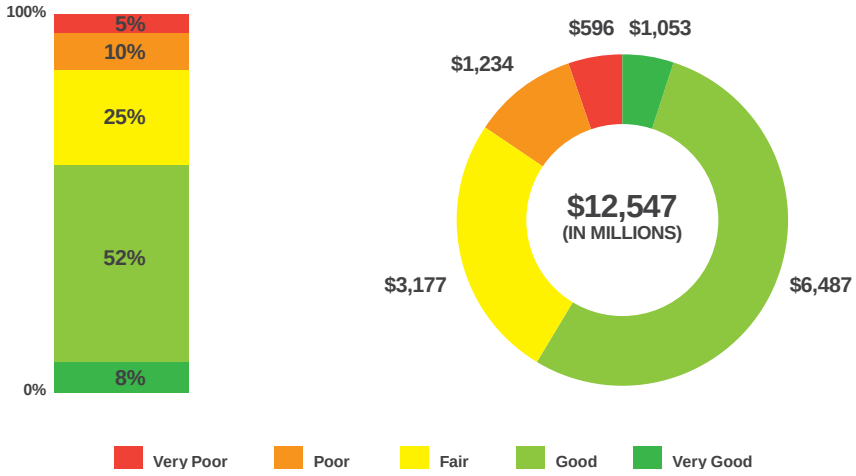
A well-maintained transportation system promotes economic vitality and a positive city image. Investing in a measurable approach in the maintenance of roads infrastructure will ensure the continued economic and social viability of the city.

Winnipeg's road network is intended to accommodate pedestrians, cyclists, transit, motorists, and the movement of goods. It consists of regional streets, local streets, and active transportation.

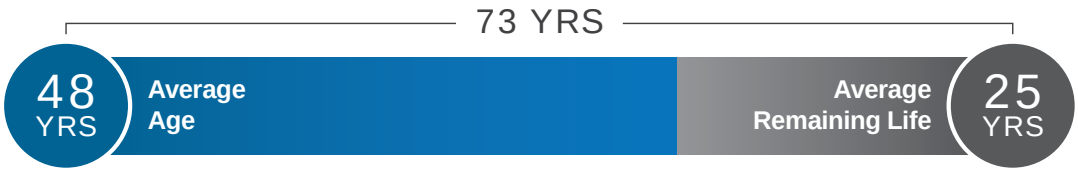
One of the challenges facing the City is the need to balance competing needs between expanding the transportation system to meet growth and managing existing, aging assets.

Overall, the assets in the Roads service area are in *Fair* to *Good* condition.

Condition and Total Replacement Value

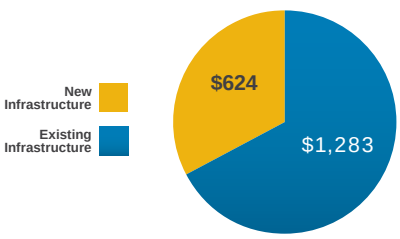


Average Expected Life



Total Infrastructure Deficit

2018-2027
$1,907 (in millions)



Percent Contribution to City's Total Infrastructure Deficit:

2009: 47%

2018: 28%

DEFICIT DECREASED

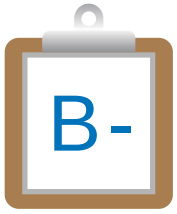
BRIDGES

There are 145 bridges in Winnipeg, including vehicular and pedestrian, as well as underpasses.

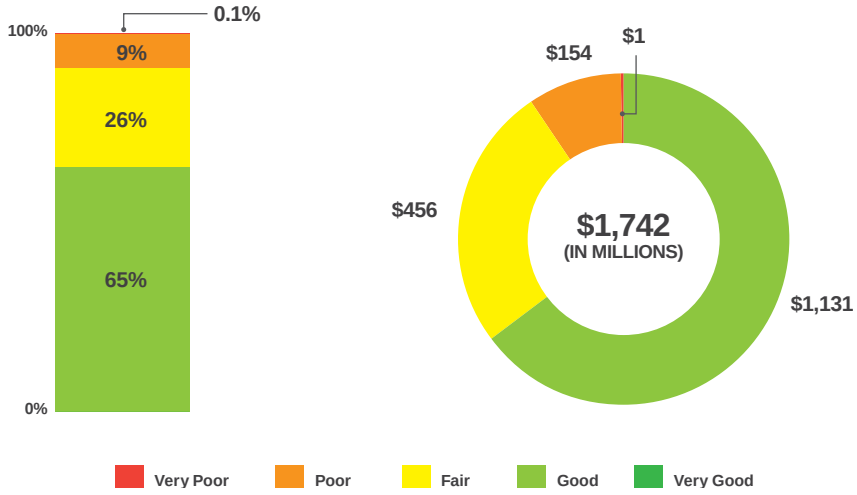
Any bridge in the *Poor* category is considered to be at a risk of not meeting service levels, and considered a high priority for reconstruction and/or renewal.

Overall, Bridge condition is mainly in *Good* condition.





Condition and Total Replacement Value



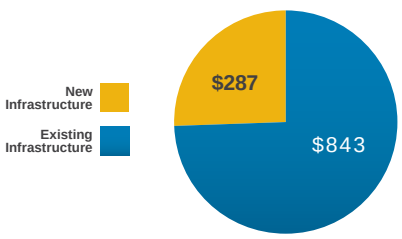
Average Expected Life



Total Infrastructure Deficit

2018-2027

$1,130 (in millions)



Percent Contribution to City's Total Infrastructure Deficit:

2009: 6%

2018: 16%

DEFICIT INCREASED

PARKS AND OPEN SPACE

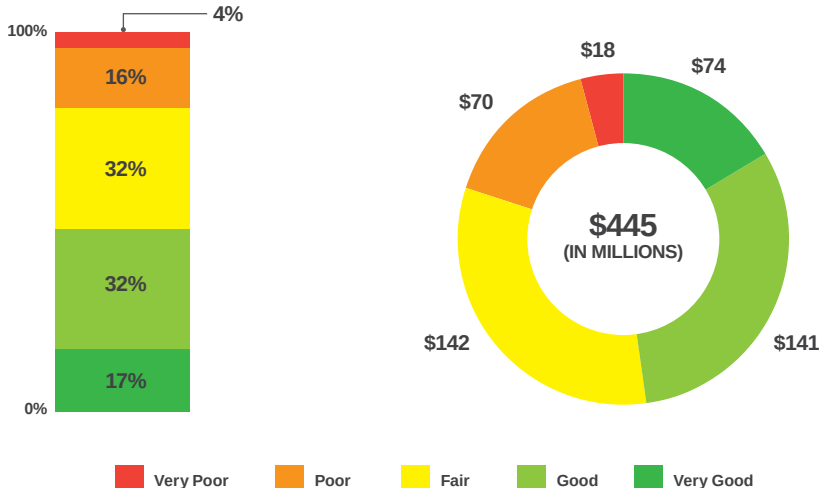
C+

Winnipeg's parks and open space system has been designed to contribute to the enjoyment and quality of life for the City's residents and visitors. It is an essential component of the urban fabric that encourages and promotes healthy lifestyles, cleaner environments, civic pride, and urban beautification.

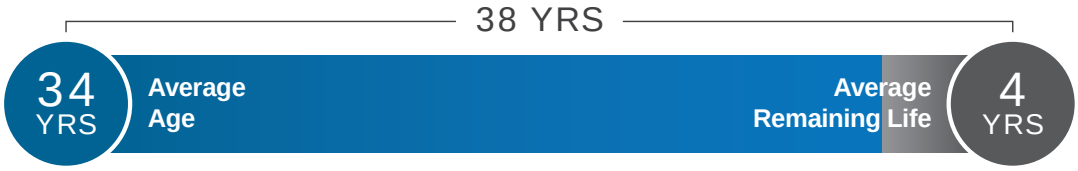
There are approximately 1,200 parks spanning a total area greater than 3,000 hectares, excluding Assiniboine Park. Assets include active transportation pathways within park boundaries, park amenities, park buildings, park roads, and trees.

The average asset condition of this infrastructure element is *Fair*.

Condition and Total Replacement Value

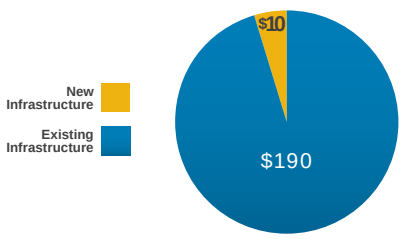


Average Expected Life



Total Infrastructure Deficit

2018-2027
$199 (in millions)



Percent Contribution to City's Total Infrastructure Deficit:

2009: 6%

2018: 3%

DEFICIT DECREASED

WATER UTILITY

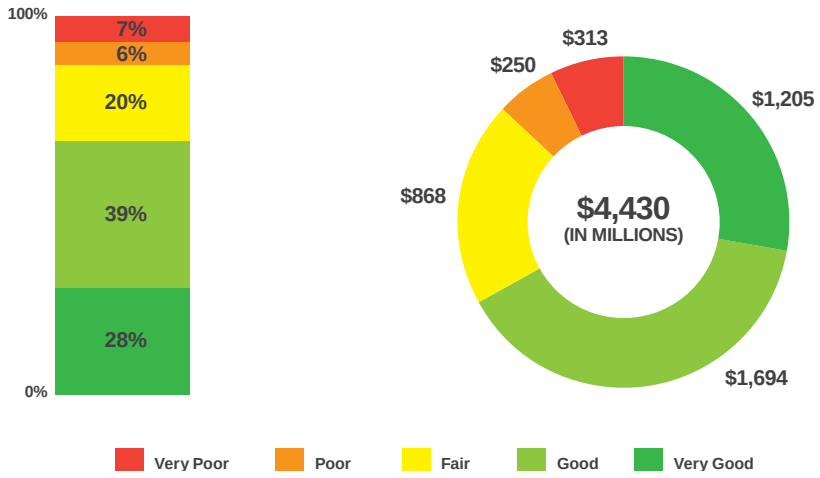
The Water Utility encompasses all aspects of supply, treatment and distribution of water from the source to the customer's tap. This infrastructure element is comprised of two main asset types: water supply and treatment, and water distribution.

Water supply and treatment assets refer to facilities, pumping stations, reservoirs, aqueducts, and feeder mains. Distribution assets include hydrants, water meters, mains, and water services. In addition to these assets, data on buildings and fleet vehicles is also reported.

Overall, the Water Utility assets are in *Good* condition.



Condition and Total Replacement Value

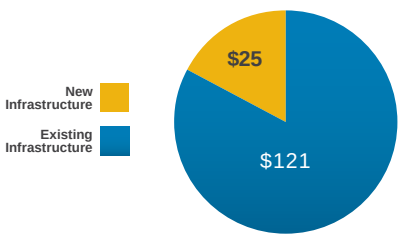


Average Expected Life



Total Infrastructure Deficit

2018-2027
$146 (in millions)



Percent Contribution to City's Total Infrastructure Deficit:

2009: 2%*

2018: 2%*

*Values may not align due to rounding.

DEFICIT DECREASED

SEWER UTILITY

Winnipeggers value and take pride in the abundant and natural surface water amenities both within and downstream of our city. Ongoing improvements to our wastewater system will be required to maintain or upgrade the level of service our residents currently enjoy.

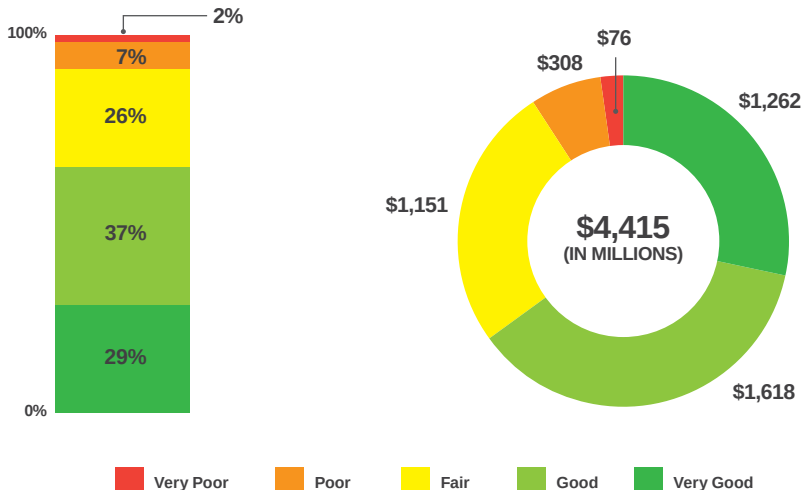
The Sewer Utility is divided into two main asset types: wastewater treatment and wastewater collection. Wastewater treatment refers to the City's three sewage treatment plants.

Wastewater collection assets include lift and diversion stations, chambers and ancillary structures, manholes, sewer mains, and combined sewer network/outfalls.

In addition to these assets, data on buildings and fleet vehicles are also reported.

The overall condition of Sewer Utility assets is *Good*.

Condition and Total Replacement Value

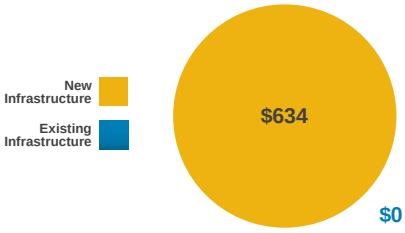


Average Expected Life



Total Infrastructure Deficit

2018-2027
$634 (in millions)



Percent Contribution to City's Total Infrastructure Deficit:

2009: 4%

2018: 9%

DEFICIT INCREASED

LAND DRAINAGE UTILITY

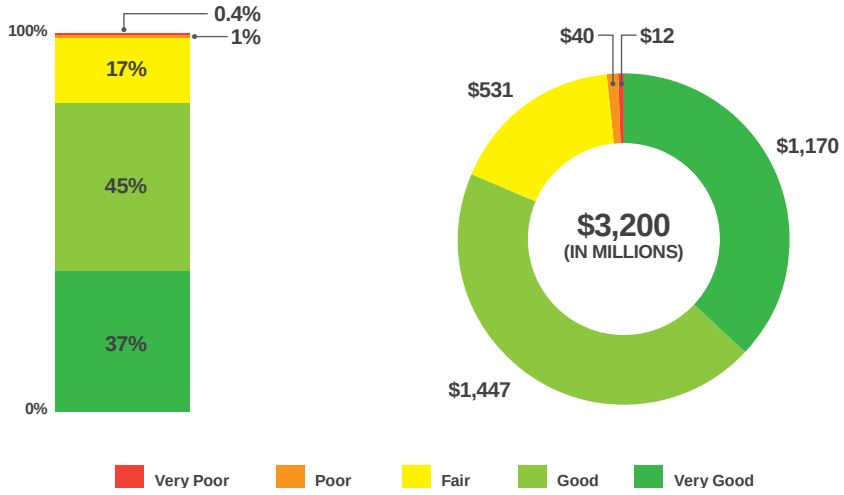
The Land Drainage Utility is comprised of two main asset types: land drainage and flood control.

Land drainage assets include manholes, underpass pumping stations, storage tanks, and storm water retention basins, pipes, drains and major ditches, and outfalls. Flood control assets include dikes and flood pumping stations.

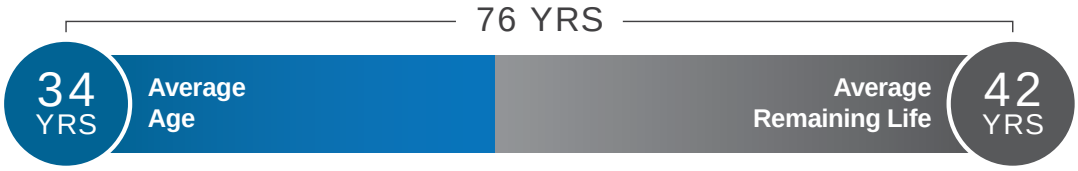
Overall, the Land Drainage Utility assets are in *Good* to *Very Good* condition.

B

Condition and Total Replacement Value

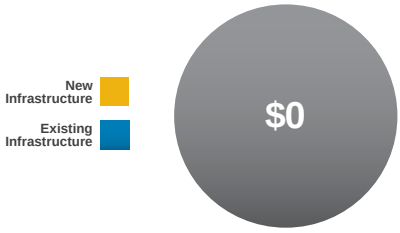


Average Expected Life



Total Infrastructure Deficit

2018-2027
$0 (in millions)



Percent Contribution to City's Total Infrastructure Deficit:

2009: 5%

2018: 0%

DEFICIT DECREASED

SOLID WASTE UTILITY

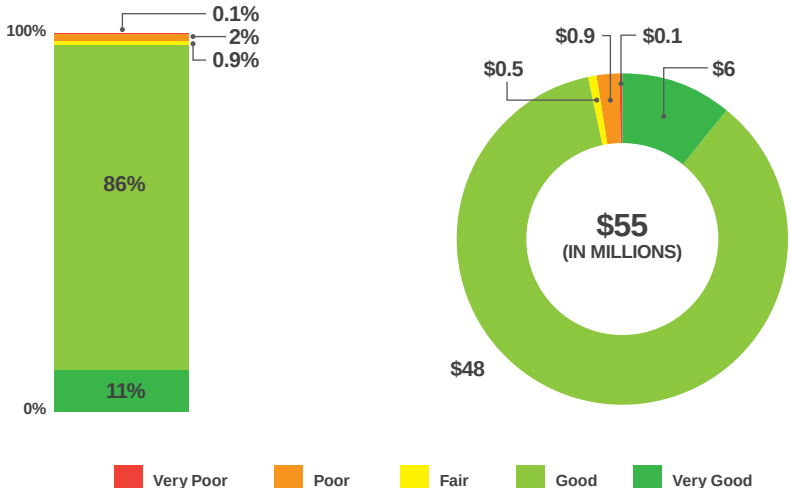
The Solid Waste Utility is comprised of two main asset types: collection and disposal, and recycling and waste diversion. A significant portion of the recycling and waste diversion assets are in new or nearly-new condition.

Solid waste collection services include weekly collection of garbage from single-family and multi-family homes and other miscellaneous services, such as collection of surplus or bulky waste, that are offered on a fee for service basis. Assets includes the Brady Road Resource Management Facility and ancillary structures, as well as garbage and recycling carts.

Recycling and waste diversion services include the weekly collection of recyclables for single-family and some multi-family homes that are delivered to the material recovery facility (MRF) and seasonal leaf and yard waste collection and composting. It also includes 4R Winnipeg Depots.

The overall condition of Solid Waste Utility assets is *Good* to *Very Good*.

Condition and Total Replacement Value

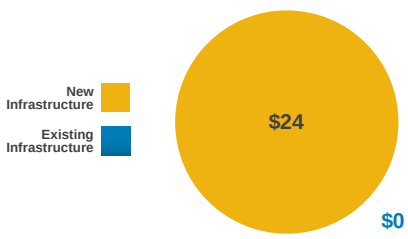


Average Expected Life



Total Infrastructure Deficit

2018-2027
$24 (in millions)



Percent Contribution to City's Total Infrastructure Deficit:

2009: 0.1%

2018: 0.4%

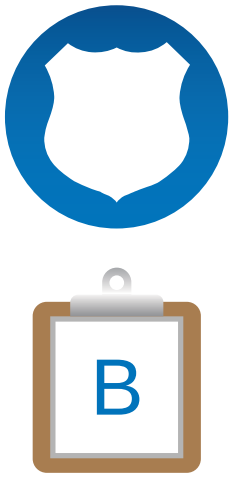
DEFICIT INCREASED

POLICE SERVICES

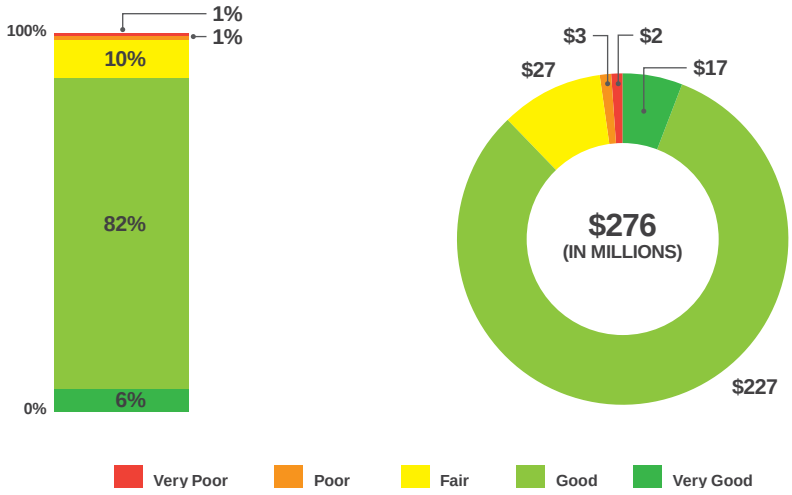
To be sustainable and livable a city needs to be safe, and the quality of life offered by a city depends in many ways on its safety and security. The Winnipeg Police Service (WPS) plays an integral role in creating safe communities through crime prevention and effective response to social disorder and criminal activity.

Significant investments have been made within the last 10 years towards the WPS's assets, including the construction of the East and West District stations and the WPS headquarters building.

Overall, the assets in the Police Services infrastructure element are in overall *Good* condition.



Condition and Total Replacement Value

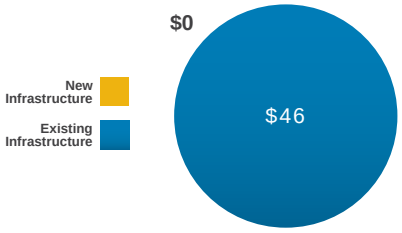


Average Expected Life



Total Infrastructure Deficit

2018-2027
$46 (in millions)



Percent Contribution to City's Total Infrastructure Deficit:

2009: 2%

2018: 1%

DEFICIT DECREASED

FIRE AND PARAMEDIC SERVICES

C

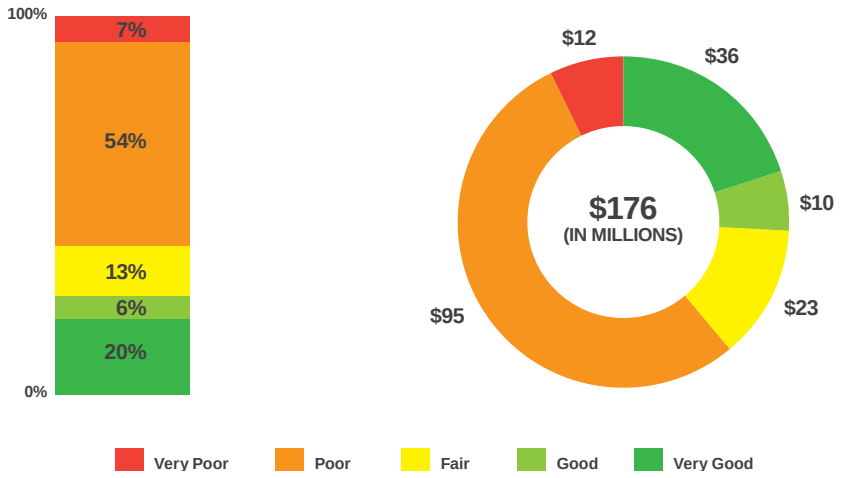
The Winnipeg Fire Paramedic Service provides key services for the safety and security of the residents of Winnipeg: fire rescue response; medical response; fire and injury prevention; and disaster preparedness and response.

Assets in the Fire and Paramedic Services infrastructure element include 30 fire stations, one stand-alone ambulance station, as well as a communication centre and training academy.

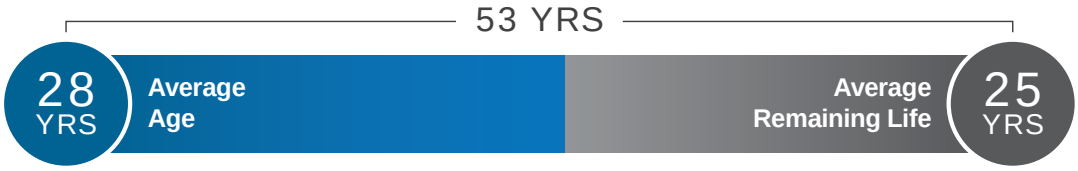
It also includes 310 vehicles and specialized equipment required to provide emergency services. Additional heavy equipment is needed to support and maintain assets at the stations and the training academy.

Overall, the assets in the Fire and Paramedic Services infrastructure element are listed as *Fair*.

Condition and Total Replacement Value

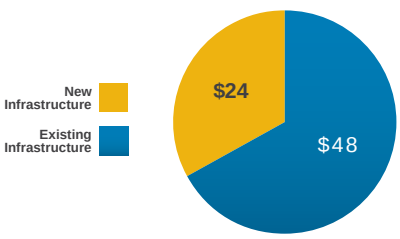


Average Expected Life



Total Infrastructure Deficit

2018-2027
$72 (in millions)



Percent Contribution to City's Total Infrastructure Deficit:

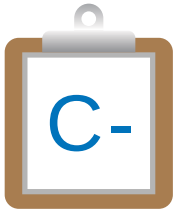
2009: 0.4%

2018: 1%

DEFICIT INCREASED

COMMUNITY SERVICES



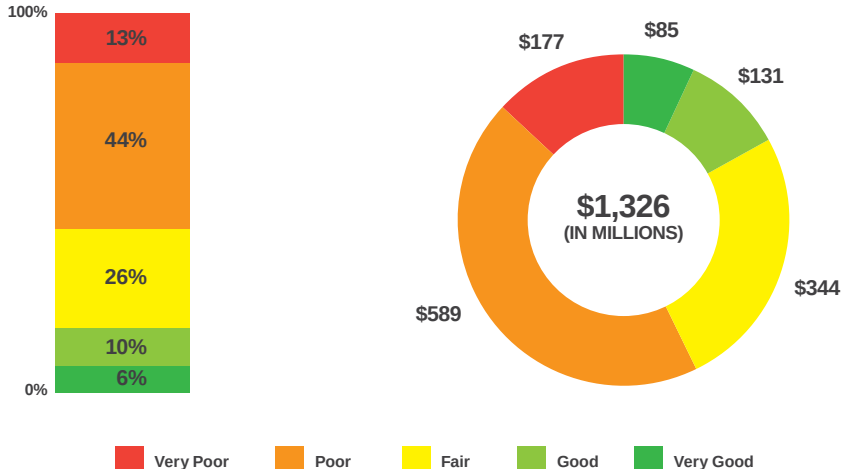


The City provides high quality aquatics, recreation and leisure opportunities and programs for residents. The inventory of assets includes recreation and leisure centres, community centres, arenas, indoor pools, outdoor pools, wading pools and spray pads. The majority of these assets were constructed prior to the Unicity amalgamation in 1972. Over the years, insufficient capital and operational investments have led to the deterioration of these assets and their building systems.

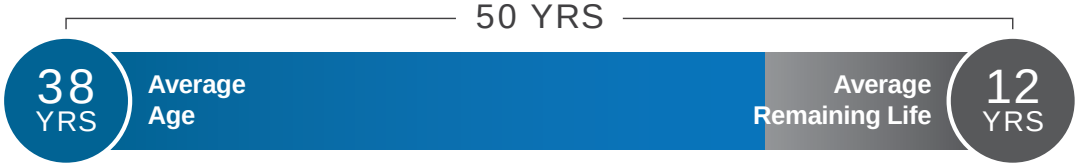
Functional obsolescence and poor physical accessibility further compromises the ability of existing assets to adequately meet current service level needs. In addition, existing facilities are not geographically distributed in an equitable fashion across the city, leading to a wide variety of service levels by area. Winnipeg has also seen considerable growth in new areas creating demand for new recreation facilities and services.

The overall condition of the assets in the Community Services infrastructure element is *Fair* trending toward *Poor*; however, a significant number are in *Poor* to *Very Poor* condition.

Condition and Total Replacement Value

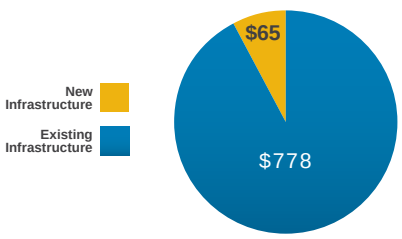


Average Expected Life



Total Infrastructure Deficit

2018-2027
$843 (in millions)



Percent Contribution to City's Total Infrastructure Deficit:

2009: 6%

2018: 12%



DEFICIT INCREASED

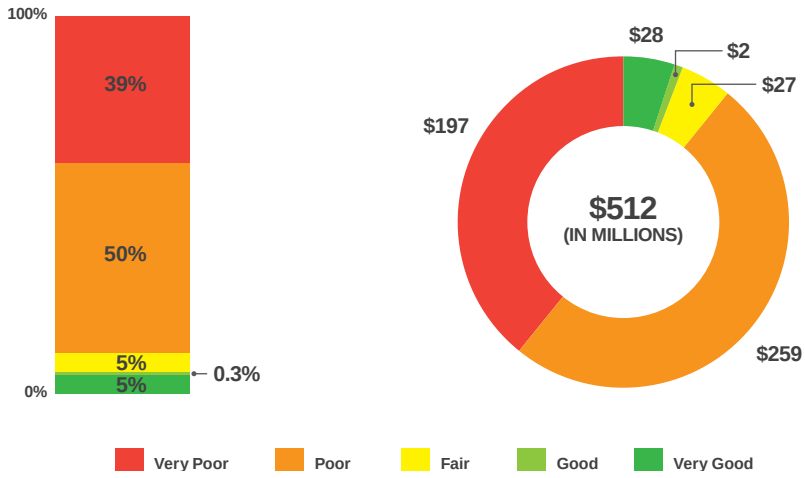
MUNICIPAL PROPERTIES

D

The City has a number of municipal office buildings and facilities. These assets are on average, past their useful life. This category includes office buildings, heritage buildings, cemetery buildings, leased out buildings, buildings and facilities utilized by the City's Special Operating Agencies, as well as other non-building property assets such as riverbanks and surface parking lots.

Overall, the assets that fall within this category are in *Poor* to *Very Poor* condition.

Condition and Total Replacement Value

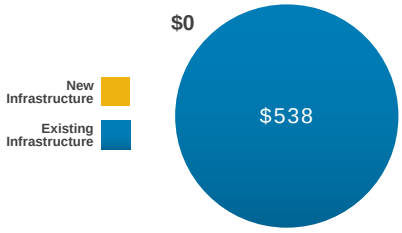


Average Expected Life



Total Infrastructure Deficit

2018-2027
$538 (in millions)



Percent Contribution to City's Total Infrastructure Deficit:

2009: 3%

2018: 8%

DEFICIT INCREASED

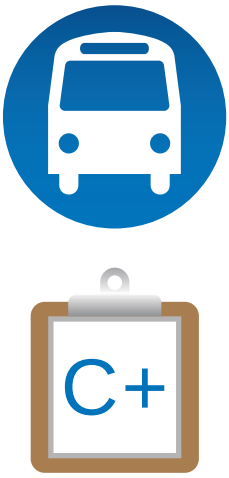
TRANSIT

Winnipeg Transit provides a vital service to the citizens of Winnipeg with an extensive and robust public transit system.

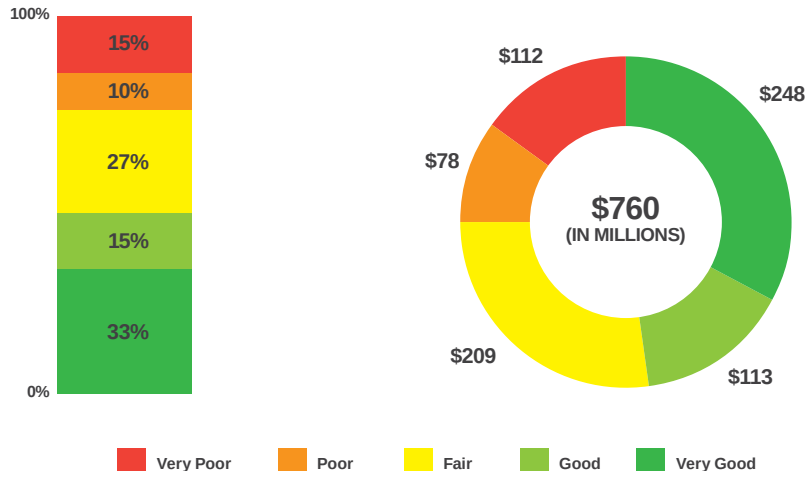
Winnipeg Transit has a network of 93 bus routes, made up of: 10 Rapid Transit routes, 24 express and super express routes, 52 regular routes, 3 free Downtown Spirit routes, and 4 on-demand DART routes. Winnipeg Transit's fleet of approximately 615 buses is 100% accessible.

Winnipeg Transit also offers door-to-door service through its Handi-Transit system for individuals who are unable to use the conventional Transit service.

The majority of the Transit infrastructure element's assets are currently in *Fair* to *Good* condition.



Condition and Total Replacement Value

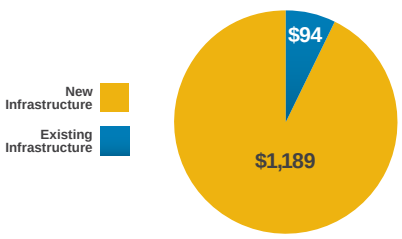


Average Expected Life



Total Infrastructure Deficit

2018-2027
$1,282 (in millions)



Percent Contribution to City's Total Infrastructure Deficit:

2009: 17%

2018: 19%

DEFICIT INCREASED

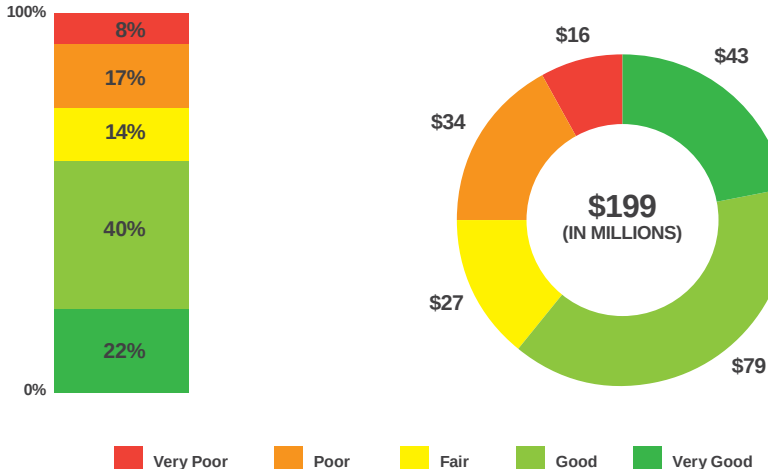
INFORMATION TECHNOLOGY

B-

Information Technology assets are significant enablers of City services provided to residents. The asset types include hardware and software and have been part of the City's overall asset mix for decades, though technology advances have been significant.

Overall, the condition of these assets is listed as *Good* condition.

Condition and Total Replacement Value

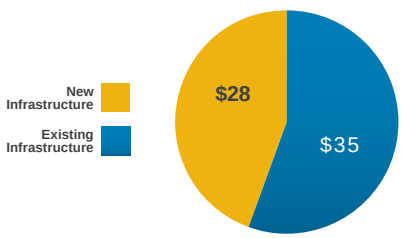


Average Expected Life



Total Infrastructure Deficit

2018-2027
$63 (in millions)



Percent Contribution to City's Total Infrastructure Deficit:

2009: 0%

2018: 1%

DEFICIT INCREASED



More Information

For more information regarding the City's infrastructure, including the Asset Management Program and the 2018 City Asset Management Plan, please see: **winnipeg.ca/infrastructure**.



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Winnipeg

Unfunded Major Capital Projects Detail

May 2019

Vision

To be a vibrant and healthy city which places its highest priority in quality of life for all its citizens.

Corporate mission

Working together to achieve affordable, responsive and innovative public service.



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Introduction

The City of Winnipeg's (City) 2018 State of the Infrastructure report outlined the City's infrastructure deficit, across all civic services, which totaled $6.9 billion over the next 10 years (2018-2027), for both new and existing infrastructure.

The Unfunded Major Capital Projects Detail provides a summary of current information on 22 proposed unfunded major capital projects over the next 10 years (2019-2028). The unfunded major capital projects detailed in this document range in costs from $24 million to $1.8 billion. These 22 unfunded major capital projects have a total cost of over $4.9 billion of which roughly $4.5 billion is unfunded and together these projects comprise about 60% of the City's infrastructure deficit.

With several projects having recently completed preliminary designs, this document is meant to provide City Council and the public with an overview of these 22 unfunded major capital projects prior to Council making decisions on individual projects.

In addition, this document provides a financial/affordability context by outlining possible federal and provincial funding, debt financing costs along with equivalent property tax and water and sewer rates increases needed to pay for the tax-supported projects outlined in this report.

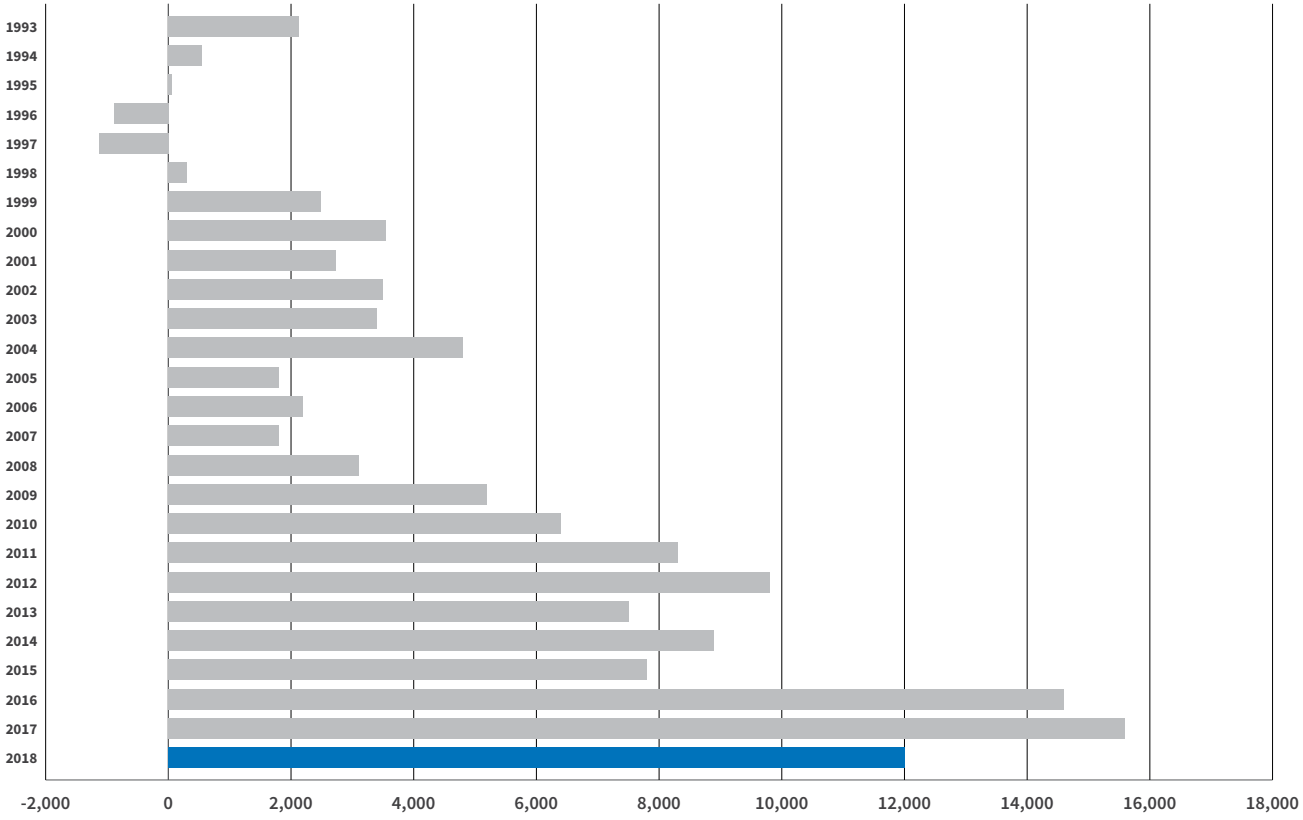
The threshold for a project to be considered a major capital project is defined annually in the Council-approved Capital Budget. The threshold is adjusted annually for construction inflation. In 2019, the threshold is $23 million.

Subsequent sections provide information on the City's infrastructure deficit and major capital projects

Growth in Winnipeg

Winnipeg is growing at a pace not seen for decades.

City of Winnipeg annual population change



Source: Statistics Canada

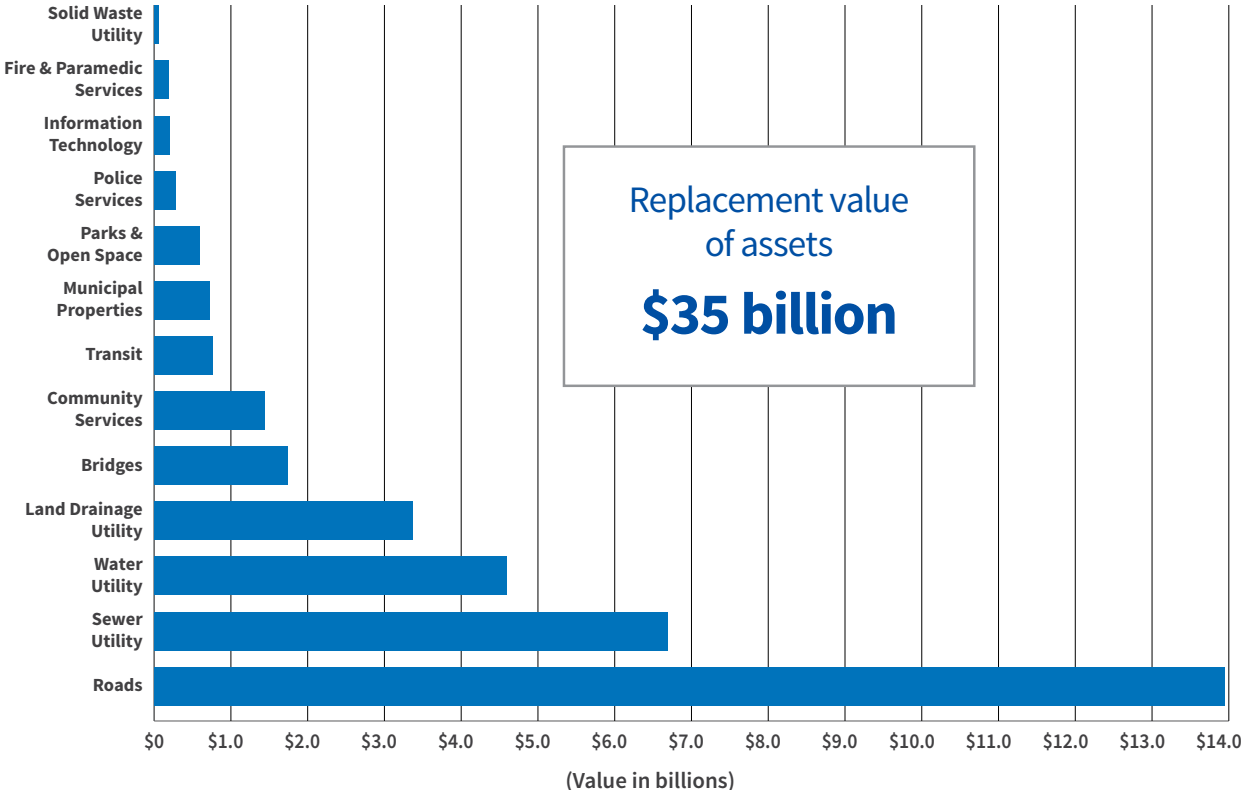
According to the *2016 City of Winnipeg Population, Housing, and Economic Forecast,* Winnipeg's average annual population growth over the next 25 years is estimated to increase by 8,200 people per year. It also notes that the city's Census Metropolitan Area population is predicted to exceed 1 million people by 2034/2035 and surpass 1,055,000 by 2040.

Winnipeg itself is expected to grow to a population of approximately 922,600 by 2040. In 2018, Winnipeg's population was 753,700*. Furthermore, the number of households is expected to increase by around 32 percent, or approximately 100,000, to a total of 391,100 by 2040.

Investments in key services and infrastructure are critical to support a growing, thriving, modern city, now and into the future.

* Source: Statistics Canada

State of local infrastructure*



The City must balance a multitude of competing spending priorities with limited resources. As the city continues to grow at historically high rates, the need to make sustainable, well-timed infrastructure investments is essential to ensure we continue to deliver high-quality services for residents.

To that end, in January 2015, Council approved the City's Asset Management Policy, making asset management a core business function. Asset management is not a singular activity or project; rather, it is a systematic process that facilitates decision-making in regards to the construction, acquisition, operation, maintenance, renewal, replacement, and disposition of assets in the most cost-effective manner.

The adoption of the Asset Management Policy also established the framework for infrastructure stewardship through comprehensive Asset Management Plans (AMPs). AMPs are integrated with and help guide the long-range infrastructure investment planning process based on considerations such as affordability and, in the future, defined service levels. The City completed its first City Asset Management Plan (CAMP) in 2018, and the *2018 State of the Infrastructure Report*, a high-level summary of the detailed findings of the CAMP.

Through the CAMP, the consolidation and analysis of information on assets across all civic departments, including the historic distribution of capital funding for these assets over the last decade, was undertaken. Providing detailed information about the City's infrastructure as a whole, including the state of existing assets, the assignment of value to needed improvements on existing and future assets, and the remaining service life of current assets had never been performed on this scale within the organization before.

The CAMP applied a consistent approach to how data was collected and analyzed across the entire portfolio of City-owned assets. This instituted a benchmarking tool for monitoring key performance indicators and allowed for an objective comparison over multiple service areas. For the first time, the City was able to strategically categorize asset types and grade the physical condition of its main infrastructure elements. While the infrastructure elements have condition grades, there remain some assets where formal condition assessments had not yet taken place. The intent is to gather more information about unassessed assets in the future.

* Information presented in this section from the *2018 State of the Infrastructure Report*.

Adopting a holistic overview, the City's condition grade for tax-supported and Transit infrastructure is C+, whereas Water and Waste utilities' asset conditions are B. The difference is primarily due to the fact that the Water and Waste utilities have dedicated funding and are governed by significant regulatory and level of service requirements, compared to the tax-supported and transit asset base. Combined, the City's condition grade is B-. The City's asset inventory has a replacement value of approximately $35 billion.



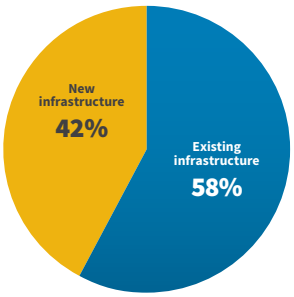
TAX-SUPPORTED AND TRANSIT INFRASTRUCTURE

WATER & WASTE UTILITIES

CITY'S OVERALL CONDITION GRADE

As the City's asset management plans were developed, support from cross-functional teams and dedicated asset management leads fostered a shared vision which improved communication, provided new insights on asset performance and initiated a fundamental change in how investment models could be created to maximize value from City assets. Strategies and continuous improvement initiatives were addressed and will serve as guidelines as the City continues to gain more knowledge about its assets.

The amalgamation of each department's spending plans and needs over the next ten years (2018-2027) was used to calculate the City's infrastructure deficit. Total capital investment needs for each department were based on a 10-year horizon and included both existing and new infrastructure. The gap between total capital investment requirements and estimated future capital funding resulted in an approximately $6.9 billion deficit. While the shortfall seems difficult to overcome, it is encouraging to note that compared to the reported 2009 deficit, progress has been made by investing in priority projects and focusing on maintaining existing infrastructure. In 2009, the reported capital infrastructure deficit was estimated at approximately $7.0 billion. Converted to 2018 dollars, this equated to approximately $9.9 billion and provided a more accurate comparison to the 2018 deficit, estimated at approximately $6.9 billion in 2018.



Infrastructure deficit 2018-2027

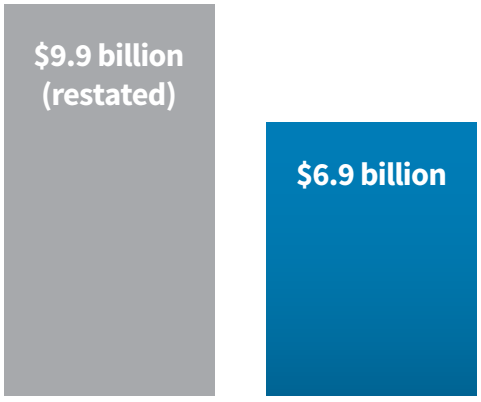
$6.9 billion*

* The deficit is based on Capital investment needs spanning a 10-year period from 2018 to 2027.

Additionally, as the 2009 deficit included a small portion of operating funds, operational costs in the order of approximately $400 million were removed from the 2009 deficit figure to further ensure a fair comparison between the 2009 and 2018 infrastructure deficits.

Progress to reduce the infrastructure deficit from 2009 to 2018 may be attributed to a number of variables including allocating $2.1 billion more to infrastructure investments than originally planned from 2009-2017, successfully leveraging federal and provincial funding for major capital projects, and the City dedicating an annual 2 percent property tax increase to improve the condition of roads.

Total infrastructure deficit





$3 billion

DEFICIT DECREASED

Capital expenditures

Despite limited growth in revenue over two decades, the city's population, its size, and demands for services continues to grow. Because of population growth at historically high rates, these demands continue to place large pressures on both the operating and capital budgets to the extent that there is an unsustainable structural deficit in the tax-supported operating budget and a parallel infrastructure deficit in the capital budget.

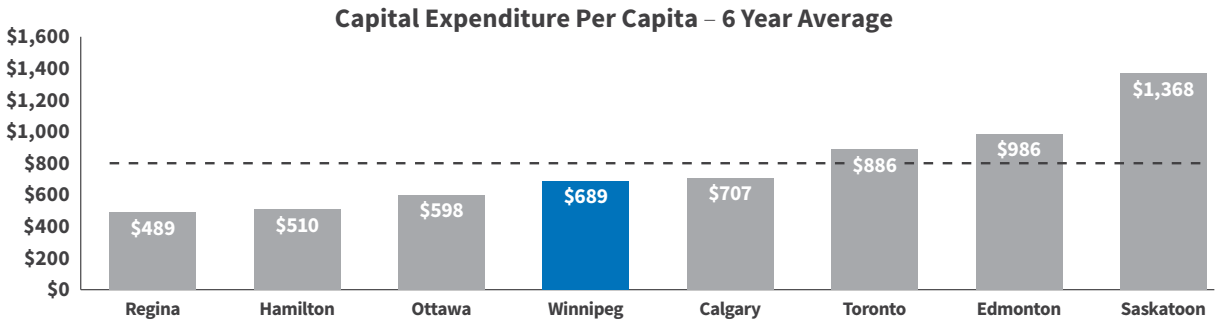
Over the years, the City has seen significant change in the amount and type of capital expenditure. While capital spending amounts vary by year, it has averaged $420 million.*

Over the last five years, the City spent on average $689 per person, which is approximately $90 less per person from the multi city average.‡

If the City of Winnipeg spent a similar amount compared to the average, the capital expenditures would increase by approximately $65 million per year.

But this level of spending is still short of what is needed to be sustainable. The infrastructure deficit needs to be funded.

In short, the City will face difficult choices in funding capital projects, determining affordability, and what potential sources of revenue may be available.

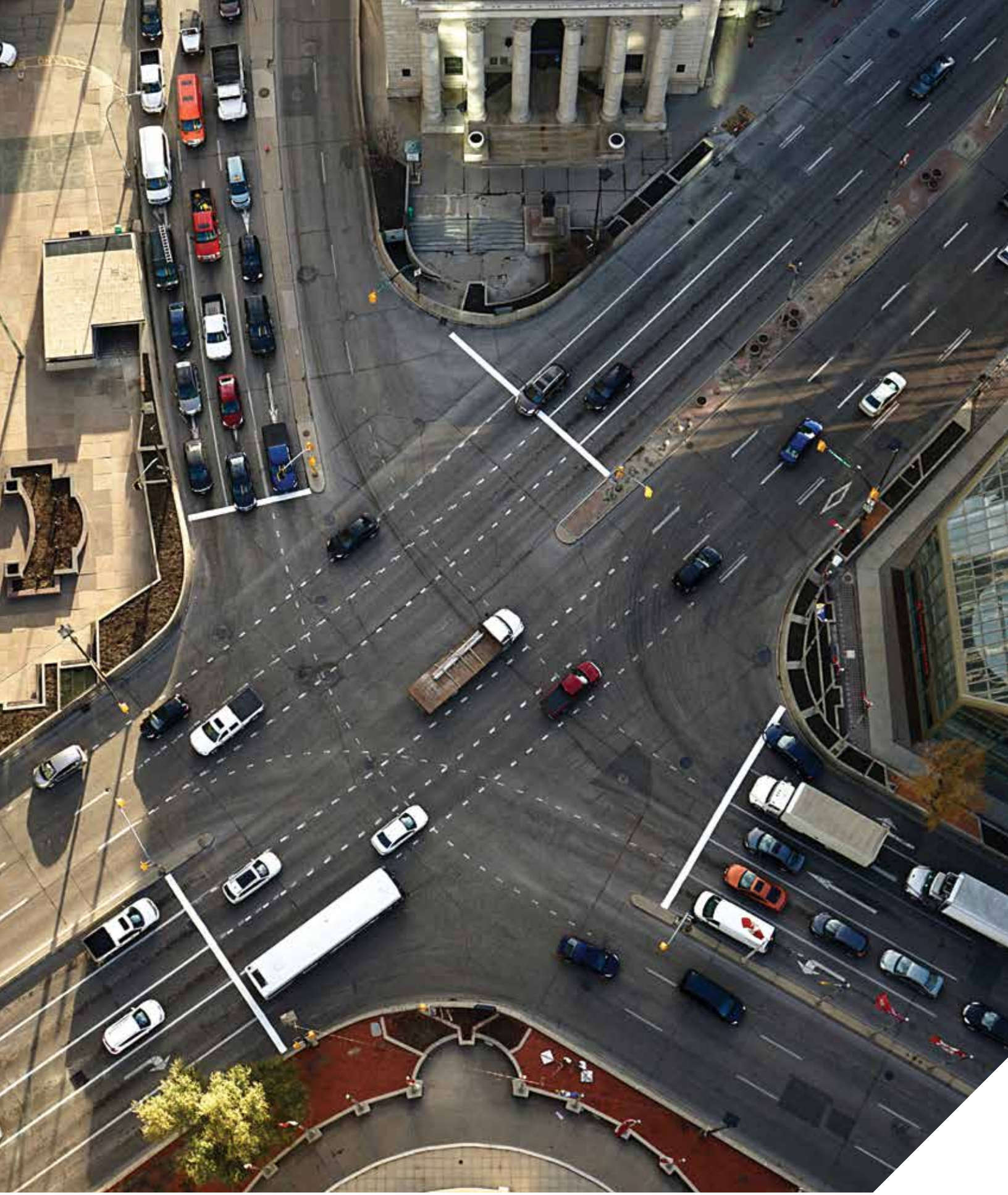


Source: City of Winnipeg, 2019 Community Trends & Performance Report—Volume 1

* 2009-2018, excluding 2016

‡ Source: Annual capital budgets





Capital projects

Long-range financial planning is an important exercise to ensure funds are available in the future to meet anticipated needs, as required. On an annual basis, the Public Service prepares a 6-year capital investment plan as required by The City of Winnipeg Charter for Council-consideration, which includes the current year's capital budget and a 5-year capital forecast. Additionally, 4-year longer-term capital projections are prepared by the Public Service for planning purposes. The City's 2018 adopted capital budget and the following 9-year estimated capital plan were used to capture anticipated levels of funding and the corresponding infrastructure deficit over a 10-year period.

It's estimated that over $4.0 billion will go towards investments in the City's infrastructure to 2027. However, that level of funding is not adequate to address the City's infrastructure needs. The 2018 infrastructure deficit is pegged at approximately $6.9 billion, with transportation services making up the majority of the overall deficit (70 percent). The deficit has identified a higher need to address existing infrastructure requirements compared to new infrastructure. This is due in part because many larger scale projects that are contemplated in the forecasted period are not currently funded.

10-year proposed capital plan of $4,039 million

2018-2027 *(in millions)*



Unfunded major capital projects

The following section provides a summary of current information on 22 proposed unfunded major capital projects planned over the next 10 years (2019-2028).

The proposed unfunded major capital projects listed in this report do not appear in order of project priority. Rather, they are grouped together by tax-supported and transit infrastructure projects (Community Services, Public Works, Winnipeg Transit), and Water and Waste utilities infrastructure projects, respectively. The projects are then categorized alphabetically by department, and further by project name.

This project listing is meant to provide an overview of proposed unfunded major capital projects only, not a priority ranking.

The estimated project costs for the 22 proposed projects are costed in the year to meet level of service needs; or the earliest a Class 3 cost estimate is anticipated to be available; or due to project phasing.

The City is currently reviewing and updating its asset management prioritization model, which has been in use since 2013. Once the revised version of the asset management prioritization model is complete, the City will further assess unfunded major capital projects.

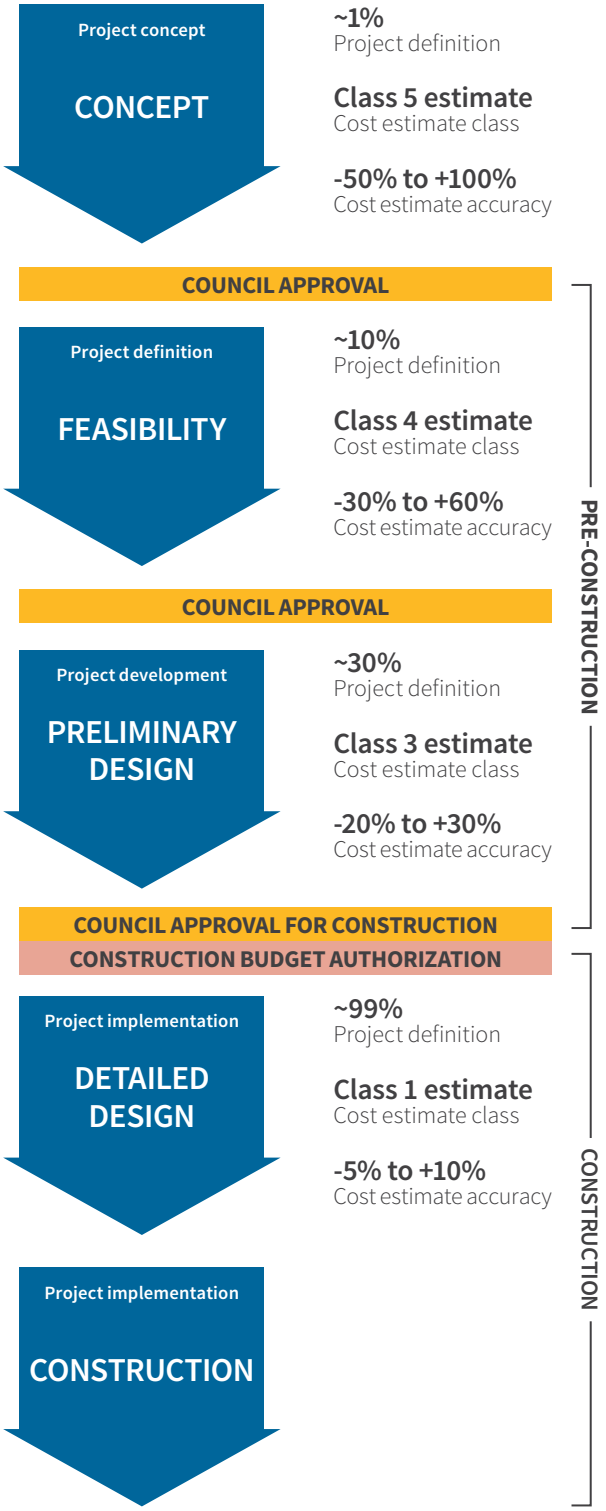
MAIN PROJECT DRIVERS

The decision to undertake a major capital project is driven by certain project drivers. The main project drivers are categorized as follows:

- **Maintain**: Investments of this type would ensure assets maintain the level of service and address any underperforming assets. Investments focus on rehabilitation or replacement of existing assets.
- **Enhance**: Investments of this type would allow an asset to deliver levels of service over and above target levels or provide services that had not been available prior to the investment.
- **Growth**: Investments of this type would ensure levels of service could be met as population grows and puts greater demand on the services required. Investments would focus on creating new infrastructure that would add to the City's asset inventory.
- **Regulatory**: Investments needed to satisfy a new regulatory or legal requirement for a level of service.

Major capital project delivery process

The figure below illustrates the major capital project delivery process as it moves from concept to construction.



Estimated project costs

	Project Name	Class of Estimate	Estimated Cost (in millions)				Estimated Project Duration (years)
			Year Project Costed*	Total	Funded**	Unfunded	
COMMUNITY SERVICES	East of the Red Rec Plex	5	in 2021 $	$70	$0	$70	4
	South Winnipeg Recreation Campus ($108M)						
	Phase 1–YM/YWCA	5	in 2021 $	$60	$9	$51	3
	Phase 2–Community Centre	5	in 2022 $	$36	$4	$32	3
	Phase 3–Library	5	in 2023 $	$12	$0	$12	3
	Southeast Winnipeg Recreation & Library Facilities ($24M)						
	Phase 1–Community Centre	5	in 2021 $	$12	$0	$12	3
	Phase 2–Library	5	in 2022 $	$12	$0	$12	3
	TOTAL COMMUNITY SERVICES			**$202**	**$13**	**$189**	
PUBLIC WORKS	Arlington Bridge Replacement	3	in 2020 $	$319	$0	$319	6
	Chief Peguis Trail Extension West–Main to Brookside	3	in 2027 $	$598	$0	$598	5
	Lagimodiere Twin Overpasses Rehabilitation	5	in 2024 $	$45	$0	$45	4
	Louise Bridge Replacement	5	in 2025 $	$240	$0	$240	5
	Marion Transportation Improvements			TBD			
	Route 90 Improvements–Taylor to Ness	5	in 2020 $	$500	$2	$498	6
	St. Vital Bridge Rehabilitation	5	in 2023 $	$50	$5	$45	3
	William R. Clement Parkway–Grant to Ridgewood			TBD			
	TOTAL PUBLIC WORKS			**$1,752**	**$7**	**$1,745**	
WINNIPEG TRANSIT	Electric Bus Pilot Project	5	in 2020 $	$26	$0	$26	2
	North Transit Garage Replacement	5	in 2020 $	$150	$0	$150	3
	Rapid Transit Corridors (3 corridors)	5	in 2021 $	$900	$0	$900	12 (3 corridors)
	TOTAL TRANSIT			**$1,076**	**$0**	**$1,076**	
	TOTAL TAX SUPPORTED			**$3,030**	**$20**	**$3,010**	
WATER & WASTE	Airport Area West Water & Sewer Servicing	5	in 2021 $	$55	$2	$53	5
	North End Sewage Treatment Plant (NEWPCC) Upgrades ($1,789M)						
	Phase 1–Power Supply & Headworks Facilities	3	in 2019 $	$408	$408	$0	7
	Phase 2–Biosolids Facilities	3	in 2020 $	$553	$0	$553	8
	Phase 3–Nutrient Removal Facilities	3	in 2023 $	$828	$0	$828	9
	Southwest Interceptor–Phase 2	5	in 2026 $	$32	$0	$32	4
	TOTAL WATER & WASTE			**$1,876**	**$410**	**$1,466**	
	TOTALS			**$4,906**	**$430**	**$4,476**	

Notes: * Project timing is subject to funding availability and Council approvals. Year project costed to meet level of service needs; or earliest Class 3 cost estimate is anticipated to be available; or due to project phasing.
** Funding includes previously approved funding and forecasted funding as per 2019 Operating and Capital Budgets.

Possible federal & provincial funding, debt & affordability

	Project Name	Class of Estimate	Assumed Possible Funding*							City Operating Budget			Affordability
			Estimated Total Cost	Federal	Provincial	City**	% City Share**	City Funded***	City Unfunded	Borrowing Costs City Annual Payments	Additional Operational & Maintenance Annual Costs	Total Annual Costs	Operating Budget Impact Equivalent Property Tax Increase
COMMUNITY SERVICES	East of the Red Rec Plex	5	$70	$12.0	$10.0	$48.0	69%		$48.0	$3.7	$0.6	$4.3	0.8%
	South Winnipeg Recreation Campus ($108M)												
	Phase 1–YM/YWCA‡	5	$60	$22.8	$19.0	$18.2‡	30%	$9.1	$0.0‡	$0.0		$0.0	0.0%
	Phase 2–Community Centre	5	$36	$13.7	$11.4	$10.9	30%	$4.0	$6.9	$0.5	$0.2	$0.7	0.1%
	Phase 3–Library	5	$12			$12.0	100%		$12.0	$0.9	$0.2	$1.1	0.2%
	Southeast Winnipeg Recreation & Library Facilities ($24M)												
	Phase 1–Community Centre	5	$12	$4.5	$3.7	$3.8	32%		$3.8	$0.3	$0.1	$0.4	0.1%
	Phase 2–Library	5	$12			$12.0	100%		$12.0	$0.9	$0.2	$1.1	0.2%
	TOTAL COMMUNITY SERVICES		$202	$52.9	$44.1	$104.9		$13.1	$82.7‡	$6.4	$1.3	$7.7	1.4%
PUBLIC WORKS	Arlington Bridge Replacement	3	$319			$319.0	100%		$319.0	$24.8		$24.8	4.4%
	Chief Peguis Trail Extension West–Main to Brookside												
	If approved in 2020	3	$471			$471.0	100%		$471.0	$36.6	$2.0	$38.6	6.9%
	If approved in 2027	3	$598			$598.0	100%		$598.0	$46.5	$2.0	$48.5	8.7%
	Lagimodiere Twin Overpasses Rehabilitation Rehabilitation	5	$45			$45.0	100%		$45.0	$3.5		$3.5	0.6%
	Louise Bridge Replacement	5	$240			$240.0	100%		$240.0	$18.7		$18.7	3.3%
	Marion Transportation Improvements		TBD										
	Route 90 Improvements–Taylor to Ness	5	$500			$500.0	100%	$2.1	$498.0	$38.7		$38.7	6.9%
	St. Vital Bridge Rehabilitation	5	$50			$50.0	100%	$5.0	$45.0	$3.5		$3.5	0.6%
	William R. Clement Parkway–Grant to Ridgewood		TBD										
	TOTAL PUBLIC WORKS		$1,752			$1,752.0		$7.1	$1,745.0	$136.0	$2.0	$138.0	24.6%
WINNIPEG TRANSIT	Electric Bus Pilot Project	5	$26	$9.9	$8.2	$7.9	30%		$7.9	$0.6		$0.6	0.1%
	North Transit Garage Replacement	5	$150	$55.8	$46.5	$47.7	32%		$47.7	$3.7		$3.7	0.7%
	Rapid Transit Corridors (3 corridors)	5	$900	$334.8	$279.0	$286.2	32%		$286.2	$22.3		$22.3	4.0%
	TOTAL TRANSIT		$1,076	$400.5	$333.7	$341.8			$341.8	$26.6	$0.0	$26.6	4.7%
	TOTAL TAX SUPPORTED		$3,030	$453.4	$377.8	$2,198.8		$20.2	$2,169.6‡	$168.8	$3.3	$172.1	30.7%
WATER & WASTE	Airport Area West Water & Sewer Servicing	5	$55			$55.0	100%	$2.0	$53.0	FUNDED THROUGH WATER & SEWER RATES (The 2019 Water and Sewer Rates Report forecasts a cumulative increase of residential water and sewer rates of 37.5% over the next 10 years.)			
	North End Sewage Treatment Plant (NEWPCC) Upgrades ($1,789M)												
	Phase 1–Power Supply & Headworks Facilities	3	$408	$0.0	$0.0	$408.0	100%	$408.0					
	Phase 2–Biosolids Facilities	3	$553	$122.5	$102.5	$328.0	59%		$328.0				
	Phase 3–Nutrient Removal Facilities	3	$828	$122.5	$102.5	$603.0	73%		$603.0				
	Southwest Interceptor–Phase 2	5	$32			$32.0	100%		$32.0				
	TOTAL WATER & WASTE		$1,876	$245.0	$205.0	$1,426.0		$410.0	$1,016.0				
	TOTAL–ALL PROJECTS		$4,906	$698.4	$582.8	$3,624.8		$430.2	$3,185.6‡				

Notes: * Possible federal and provincial funding: Investing in Canada Infrastructure Program (ICIP).
** Includes ineligible costs.
*** Funding includes previously approved funding and forecasted funding as per 2018 Operating and Capital Budgets.

‡ Assuming joint ICIP application from City and YM/YWCA, resulting in $9.1 million each from YM/YWCA and City.

In 2019, a 1% property tax increase will generate $5.6 million revenue.
Assumed City portion is debt-financed using 30-year debt at 6% interest rate.
Impact fee could potentially be used for growth related projects which would reduce debt.





Unfunded major capital projects descriptions

COMMUNITY SERVICES

East of the Red Rec Plex



CURRENT COST ESTIMATE

$70 million

Costed in 2021 dollars

Class 5 estimate

(-50% to +100%)

***+ $** Eligible for cost sharing with other levels of government*

Main project driver

MAINTAIN

Description	The proposed project involves the development of a 90,000 square foot regional recreation and leisure facility, including a leisure pool, eight lane swim tank, indoor track, fitness areas, gymnasium, and multi-purpose rooms, all attached to the new Transcona Library.
Need / rationale	The existing Transcona Centennial Indoor Pool, Bernie Wolfe Indoor Pool, and other facilities in the area are near the end of their service life and are in need of significant investment or replacement. These buildings also do not meet current accessibility standards and service expectations. The proposed new facility would provide a state of the art, energy-efficient public amenity, while allowing for the decommissioning of existing, aging assets. In addition, northeast Winnipeg has experienced significant growth and currently lacks adequate City-owned recreation space to provide Leisure Guide or drop-in recreation/leisure programming.
Short-term risks of not proceeding	The existing facilities in the area are at or near end of service life and the risk of unplanned closures is high. Closures would have a significant service impact as there is no additional capacity in the system to absorb customers over the long term.
Status	The *East of the Red Rec Plex Feasibility Study and Business Plan* was completed in spring 2018. City-owned land is available adjacent to the new Transcona Library.
Project duration	Once construction budget is approved by council, the estimated project duration is 4 years.

COMMUNITY SERVICES

South Winnipeg Recreation Campus



CURRENT COST ESTIMATE | **TOTAL: $108 MILLION**

Phase 1: YM/YWCA	Phase 2: Community Centre	Phase 3: Library
$60 million	**$36** million	**$12** million
Costed in 2021 dollars	*Costed in 2022 dollars*	*Costed in 2023 dollars*
Class 5 estimate (-50% to +100%)	Class 5 estimate (-50% to +100%)	Class 5 estimate (-50% to +100%)

***+ $** Eligible for cost sharing with other levels of government*

Main project driver

GROWTH

Description	The proposed project would see the development of a phased multi-use/ multi-generational recreation campus in Waverley West that includes a YM/YWCA with lap tank, leisure pool, fitness space and gymnasium; a community library; a new community centre with multiple gymnasiums, multi purpose spaces and an adjacent park space. The City is in the process of acquiring the land required for this project, and is working collaboratively with area stakeholders on the development of the proposed recreation campus, including the Pembina Trails School Division. Opportunities to allow for shared parking, servicing, and site amenities with the school division are being explored to reduce duplication of spaces.
Need / rationale	With an anticipated population of approximately 40,000 to 50,000 people once fully developed, the Waverley West area currently has no recreation facility, community centre, or community library. In order to meet level of service requirements, new program space is required, including gymnasium/multi-purpose space, indoor pool, library, and park space. The potential opportunity to partner with the YM/YWCA on the development of a branded facility would lead to Winnipeg's first leisure pool while limiting the City's capital and operational liability.
Short-term risks of not proceeding	There will soon be 40,000 to 50,000 residents with no access to City recreation services or facilities within their community. Without access to recreation programs and services in the area, resident's quality of life will be negatively affected.
Status	The acquisition of a 19-acre parcel adjacent to a 25-acre Pembina Trails School Division site is in progress. Conceptual site planning and estimates are expected to be completed in the third quarter of 2019 for Council's consideration. Phases may be delivered concurrently depending on funding and cash flow approvals.
Project duration	Once construction budget is approved by council, the estimated project duration for: Phase 1 is 3 years. Phase 2 is 3 years. Phase 3 is 3 years.

Southeast Winnipeg Recreation & Library Facilities



CURRENT COST ESTIMATE | **TOTAL: $24 MILLION**

Phase 1: Community Centre	Phase 2: Library
$12 million	**$12** million
Costed in 2021 dollars	*Costed in 2022 dollars*
Class 5 estimate (-50% to +100%)	Class 5 estimate (-50% to +100%)

***+ $** Eligible for cost sharing with other levels of government*

Main project driver

GROWTH

Description	The proposed project involves the development of a new community centre and library facility to serve existing and growth areas in the southeast region of the city.
Need / rationale	The southeast quadrant of Winnipeg includes the existing neighbourhoods of Island Lakes and Royalwood, as well as the rapidly growing developments of Sage Creek and Bonivista. These neighbourhoods currently lack recreation and library facilities within their communities.
Short-term risks of not proceeding	Without access to recreation programs and services in the area, residents' quality of life will be negatively affected.
Status	An approximately 11 acre parcel in the Bonivista neighbourhood has been acquired for recreation purposes. A site for a new library has not yet been confirmed. The *2018 Capital Budget* forecasts $140,000 for a feasibility study in 2020 to explore opportunities for new infrastructure to service growth in the southeast region, which could include a new community centre and library.
Project duration	Once construction budget is approved by council, the estimated project duration for: Phase 1 is 3 years. Phase 2 is 3 years.

PUBLIC WORKS

Arlington Bridge Replacement



CURRENT COST ESTIMATE

$319 million

Costed in 2020 dollars

Class 3 estimate

(-20% to +30%)

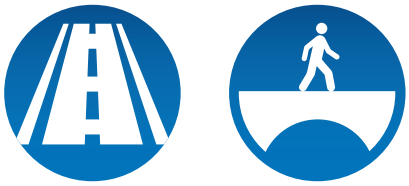
Main project driver

MAINTAIN

Description	The proposed project requires construction of a new three-lane bridge to the west of the existing bridge. The new bridge will include two uni-directional bike lanes and two sidewalks. The project would also require reconstruction of Arlington Street from McDermot Avenue to Selkirk Avenue, as well as the decommissioning and removal of the existing Arlington Bridge.
Need / rationale	The century-old Arlington Bridge is nearing the end of its service life. It is currently safe, but unplanned temporary closures can occur at any time to undertake reactive maintenance. Currently, trucks, buses and fire trucks are using alternative routes for transportation and the movement of goods due to load restrictions on the bridge. There is a concern that further deterioration of the Arlington Bridge may result in its unplanned permanent closure. The bridge is important to the surrounding communities.
Short-term risks of not proceeding	An unplanned permanent bridge closure may occur without notice, resulting in significant traffic impacts in the area if the bridge deteriorates beyond repair or if it becomes uneconomically practical to repair it. Once the project and funding is approved, it is anticipated to take up to six years to open a new bridge to traffic, including two years for detailed design and property acquisition. Delay in moving the project forward will result in no bridge being in service for a sustained long term period.
Status	The preliminary design is complete and an administrative report is planned for Council's consideration in the second quarter of 2019.
Project duration	Once construction budget is approved by council, the estimated project duration is 6 years.

PUBLIC WORKS

Chief Peguis Trail Extension West–Main to Brookside



CURRENT COST ESTIMATE

$487 million
Costed in 2020 dollars
Class 3 estimate
(-20% to +30%)
If approved in 2020

$598 million
Costed in 2027 dollars
Class 3 estimate
(-20% to +30%)
If approved in 2027

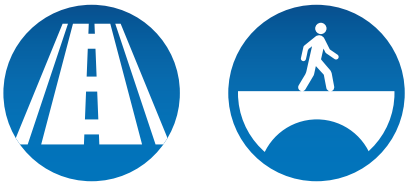
Main project driver

GROWTH

Description	The proposed project consists of the construction of a four-lane divided roadway from Main Street to Brookside Boulevard (Route 90), including overpasses at Main Street and McPhillips Street. It will also include four intersections and three pedestrian and cycling overpasses, and improvements to the Kildonan Settlers Bridge to accommodate intersection improvements at Main Street and multi-use pathways on both sides of the roadway.
Need / rationale	Chief Peguis Trail is intended to provide a continuous east-west link between the east and west sections of the Perimeter Highway (PTH 101) via CentrePort Canada Way, improve access to industrial parks in the vicinity of the airport, and further develop the future Inner Ring Road. There is currently no link to future residential and commercial communities as they develop in the northwest area of the city. This project will also address a gap in the active transportation network, as identified in the *Pedestrian and Cycling Strategies* (2011).
Short-term risks of not proceeding	The exact timeframe of when Chief Peguis Trail is needed is not fully known. There is no current major activity in CentrePort, which might ultimately drive the need for the Chief Peguis Trail extension. Current traffic projection estimates indicate Chief Peguis Trail between Main Street and McPhillips will not be required until after 2031. An upcoming review of the Transportation Master Plan will provide more analysis on the required project timing. If the project and funding are approved by Council, it is anticipated to take up to five years to be opened to traffic, including two years for detailed design and property acquisition.
Status	The preliminary design is complete and an administrative report is planned for Council's consideration in the second quarter of 2019.
Project duration	Once construction budget is approved by council, the estimated project duration is 5 years.

PUBLIC WORKS

Lagimodiere Twin Overpasses Rehabilitation



CURRENT COST ESTIMATE

$45 million

Costed in 2024 dollars

Class 5 estimate

(-50% to +100%)

Main project driver

MAINTAIN

Description	The proposed project involves the major rehabilitation of the Lagimodiere Twin Overpasses over Concordia Avenue and the CPR Keewatin rail lines.
Need / rationale	Rehabilitation is required to extend the service life of the twin bridges by an additional 50 years. The last significant bridge rehabilitation was over 30 years ago. The bridge superstructure and substructures are deteriorating as a result of reinforcing steel corrosion and concrete degradation. Improvements to the traffic capacity and roadside safety need to be determined as part of a preliminary design study.
Short-term risks of not proceeding	Delay could result in overpass reconstruction as opposed to rehabilitation and corresponding increased project costs. In order to complete the project by 2027, preliminary design would need to commence in 2023.
Status	Work on the preliminary design is anticipated to commence in 2023.
Project duration	Once construction budget is approved by council, the estimated project duration is 4 years.

PUBLIC WORKS

Louise Bridge Replacement



CURRENT COST ESTIMATE

$240 million

Costed in 2025 dollars

Class 5 estimate

(-50% to +100%)

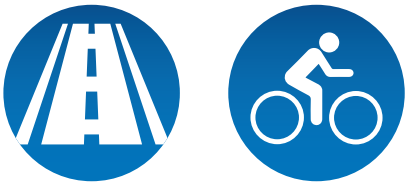
Main project driver

MAINTAIN

Description	The proposed project scope has yet to be fully defined as a preliminary design study for Louise Bridge, Higgins Underpass, and Stadacona extension are required.
Need / rationale	The current Louise Bridge is functioning safely but has extensive deterioration and limited remaining service life, meaning unplanned, potentially frequent repairs will be required. The concrete bridge deck dates back to 1963 and is deteriorating due to the corrosion of reinforcing steel. The bridge cannot be widened to accommodate current or future traffic capacity. Currently 25,000+ vehicles per day cross the bridge, which is considered high for a two-lane bridge. In addition, the bridge is currently a truck route with load restriction of 36,500 kg, which is considerably lower than the current legal truck load limit of 62,500 kg. There is also inadequate vertical clearance (3.76m) compared to the legal truck height limit (4.15m). Neither the vertical clearance nor the load capacity can be improved to support current legal trucks limits.
Short-term risks of not proceeding	Without replacement, the bridge will require extensive rehabilitation within the next 7 to 10 years. Reactive repairs with unscheduled bridge closures would be increasingly frequent. Without a new bridge, there will be no improvement to service meaning there would continue to be truck restrictions.
Status	Conceptual and functional design of the Louise Bridge Replacement is occurring as part of the *Eastern Corridor Study* and is anticipated to be completed in the fourth quarter of 2019.
Project duration	Once construction budget is approved by council, the estimated project duration is 5 years.

PUBLIC WORKS

Marion Transportation Improvements



CURRENT COST ESTIMATE

$TBD

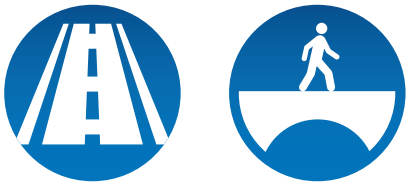
Main project driver

ENHANCE

Description	The proposed project involves an investigation of lower-cost alternatives to the road alignment that improve traffic operations, safety, and enhance pedestrian and cycling options without an underpass or widening along the relevant roads.
Need / rationale	The Council-adopted Transportation Master Plan (2011) recommended that a feasibility study be conducted to review the alignment for a widening and grade separation of Marion Street. The plan indicated that a review of this alignment was needed due to new and expanded residential and industrial development in eastern Winnipeg, which resulted in regular congestion along Marion Street, in particular where it intersects Archibald Street and Lagimodiere Boulevard. The City is investigating and will report back on more affordable functional design options to improve transportation along Marion Street between Lagimodiere Boulevard and Youville Street that do not include an underpass or widening. In addition, the more affordable options will present improvements to pedestrian and cycling infrastructure as well as improvements to safety and traffic operation at key intersections, while minimizing land requirements.
Short-term risks of not proceeding	Without improvements, continued and increasing bottlenecks and unpredictable stoppage in traffic are anticipated, which could result in increased congestion on alternative routes.
Status	Project re-scoping is anticipated in the third quarter of 2020.
Project duration	Once construction budget is approved by council, the estimated project duration is TBD.

PUBLIC WORKS

Route 90 Improvements–Taylor to Ness



CURRENT COST ESTIMATE

$500 million

Costed in 2020 dollars

Class 5 estimate

(-50% to +100%)

Main project driver

MAINTAIN

Description	The proposed project requires the widening and reconstruction of Route 90 from four to six lanes from Ness Avenue to Taylor Avenue. Considerable interchange and bridge improvements are required, which will include rehabilitation and reconstruction of the St. James Bridges crossing the Assiniboine River and modifications to the Portage Avenue interchange.
Need / rationale	Route 90 is a vital transportation corridor through the city linking major residential, employment, and commercial areas in the southwest and northwest quadrants of the city. Currently, the section of Kenaston Boulevard from Taylor Avenue to Ness Avenue has very poor traffic flow, poor capacity at intersections, and is often heavily congested, even during times of the day outside of peak rush hour. The bridges require rehabilitation and expansion to accommodate six traffic lanes and active transportation infrastructure. Both the southbound (built in 1936) and northbound (built in 1962) bridges are currently rated fair, with some components in poor condition. They are both in need of renewal as the most recent rehabilitations occurred over 30 years ago.
Short-term risks of not proceeding	The southbound St. James Bridge will require a renewal within five-to-seven years. Kenaston Boulevard has undergone reactive maintenance for the past 20 years and will also require reconstruction within five to seven years. Planned redevelopment at Kapyong Barracks will add to the existing congestion along Route 90 and exacerbate the related traffic issues, including slower flow, increased potential for collisions, and limited access for emergency services.
Status	A preliminary design and Class 3 cost estimate is expected to be finalized in the fourth quarter of 2020 for Council's consideration.
Project duration	Once construction budget is approved by council, the estimated project duration is 6 years.

PUBLIC WORKS

St. Vital Bridge Rehabilitation



CURRENT COST ESTIMATE

$50 million

Costed in 2023 dollars

Class 5 estimate

(-50% to +100%)

Main project driver

MAINTAIN

Description	The proposed project would involve the rehabilitation of the St. Vital Bridge over the Red River connecting Osborne Street to Dunkirk Drive, including marginal widening to better accommodate pedestrian and cycling requirements and improve roadside safety.
Need / rationale	The bridge and traffic barriers are deteriorating as a result of reinforcing steel corrosion and concrete degradation. Ongoing annual repairs and safety maintenance are required until rehabilitation can occur. The bridge deck was last rehabilitated over 30 years ago. Rehabilitation is required to extend the service life of the bridge for an additional 50 years. As part of the rehabilitation, it needs to be determined if pedestrian and cycling infrastructure can be improved, which would require additional widening of the bridges. The existing 1.5m sidewalks do not safely accommodate both pedestrians and cyclists.
Short-term risks of not proceeding	Continued deterioration of the bridge could result in a more expensive bridge replacement rather than rehabilitation.
Status	Preliminary design is anticipated to commence in 2022.
Project duration	Once construction budget is approved by council, the estimated project duration is 3 years.

PUBLIC WORKS

William R. Clement Parkway–Grant to Ridgewood

CURRENT COST ESTIMATE

$TBD

Main project driver

GROWTH

Description	The proposed project involves the construction of a new four lane divided roadway from Grant Avenue to Ridgewood Avenue, including trail crossings, and dog park locations.
Need / rationale	This section of William R. Clement Parkway is a southwest piece of the incomplete Inner Ring Road, as identified in the 2011 Transportation Master Plan. The *City of Winnipeg's Transportation Master Plan* (TMP) identified the Inner Ring Road as a major transportation connection to accommodate the travel demand associated with future residential, commercial, and industrial growth in Winnipeg. Residential growth in the southern part of Charleswood over the next two decades is expected to result in increased travel demand to and from this area. This increase in travel demand will be multi-modal, but a significant portion will be vehicular traffic. There is a need to mitigate the impact of this increase in vehicular traffic on the existing residential streets in Charleswood and also to accommodate future regional traffic growth in southwest Winnipeg.
Short-term risks of not proceeding	Development in Ridgewood South is rapidly advancing and future development may not be approved without the commitment to build appropriate arterial routes and their connections. Passenger vehicles and trucks are currently using alternative routes. Growth leads to higher traffic volumes and truck traffic will increase congestion and the deterioration of road surface conditions in the surrounding area.
Status	This project is currently on hold. The City will not approve or engage any major capital infrastructure planning in these areas until a new South Wilkes Precint Plan is adopted by Council.
Project duration	Once construction budget is approved by council, the estimated project duration is TBD.

WINNIPEG TRANSIT

Electric Bus Pilot Project



CURRENT COST ESTIMATE

$26 million

Costed in 2020 dollars

Class 5 estimate

(-50% to +100%)

***+ $** Eligible for cost sharing with other levels of government*

Main project driver

ENHANCE

Description	The proposed pilot project includes the purchase of 12-20 electric buses, associated charging infrastructure, and other related infrastructure.
Need / rationale	The project is needed to evaluate the performance and reliability of electric buses and to identify larger scale integration requirements and the viability of converting from a traditional diesel bus fleet to an electric bus fleet. The project will also determine if the transition from a diesel bus fleet to an electric bus fleet reduces bus maintenance operating costs and greenhouse gas emissions. The existing diesel bus fleet has a large carbon footprint, uses non-renewable fossil fuels, and requires costly maintenance.
Short-term risks of not proceeding	Continued and increased greenhouse gas emissions, along with the possibility of a future carbon tax, could have a significant impact on fleet fuel costs. There are current opportunities to capitalize on available cost-sharing opportunities offered by other levels of government.
Status	As part of the 2019 Capital Budget, Council approved a study to identify benefits and logistics of the *Electric Bus Pilot Project* is expected to be completed in the third quarter of 2019.
Project duration	Once construction budget is approved by council, the estimated project duration is 2 years.

North Transit Garage Replacement



CURRENT COST ESTIMATE

$150 million

Costed in 2020 dollars

Class 5 estimate

(-50% to +100%)

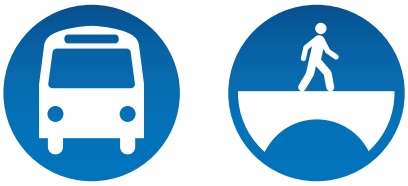
***+ $** Eligible for cost sharing with other levels of government*

Main project driver

MAINTAIN

Description	The proposed project would see the replacement of Winnipeg Transit's existing North Garage currently located at 1520 Main St. at a new location. The project includes the development of an energy efficient bus storage and light maintenance facility with increased bus capacity, designed to facilitate the transition to an electric bus fleet.
Need / rationale	The North Garage needs to be replaced within the next five years to ensure the department can meet growing service demands. The current facility is in overall poor condition and is no longer able to meet Winnipeg Transit's service requirements. Built in the 1930s, it is not feasible to continue to maintain the existing building, as there are many issues that require constant repairs and investments with limited long term value. Winnipeg Transit is also nearing its capacity to store buses, and the North Garage site is too small to facilitate an expansion. Transit will need increased garage space as the fleet continues to grow to keep up with demand. The department will also need additional infrastructure to facilitate the transition from diesel to electric and alternative fuel buses.
Short-term risks of not proceeding	The facility is at risk of closure due to overall poor condition and health and safety concerns. Continued use of the existing facility will result in increased operating costs and in the continued deterioration of the facility. If the North Garage is closed for any reason, it is anticipated there would be a disruption to transit service. The existing infrastructure will not support an electric bus fleet or alternative fuels. Not moving forward with replacement could delay the City's timeline for converting to an electric bus fleet. Delay could also result in missing out on the opportunity to capitalize on available federal funding programs.
Status	The feasibility design and Class 4 cost estimate are anticipated to be completed in the third quarter of 2019.
Project duration	Once construction budget is approved by council, the estimated project duration is 3 years.

Rapid Transit Corridors *(3 corridors)*



CURRENT COST ESTIMATE

$900 million

Costed in 2021 dollars

Class 5 estimate

(-50% to +100%)

***+ $** Eligible for cost sharing with other levels of government*

Main project driver

GROWTH

Description	With the completion of the Rapid Transit Master Plan anticipated to be completed in 2020, the future proposed corridors will be determined and prioritized. The future rapid transit corridors radiate out from the city centre to the suburbs of Winnipeg. Construction will generally include on-street and dedicated bus transitways, modern stations, and active transportation opportunities.
Need / rationale	An expanded rapid transit system is necessary to effectively connect and accommodate Winnipeg's growth, to ensure residents are provided with a viable alternative to driving, to reduce existing and future road congestion, and to build a transportation system capable of serving future generations. Congestion of the existing street network is resulting in longer commute times. In addition, rapid transit is also essential for shaping land use in a manner that achieves the objectives set out in *OurWinnipeg* and *Complete Communities Direction Strategy*.
Short-term risks of not proceeding	Not proceeding with the expansion of the rapid transit system would result in an increase in vehicles on the road network, resulting in increased traffic congestion, greenhouse gas emissions, and commute times. Customer service for Transit's expanding ridership would also be compromised. Delaying further rapid transit phases could jeopardize the opportunity to capitalize on potential federal and provincial funding.
Status	Completion of a *Rapid Transit Master Plan* is anticipated in the first quarter of 2020, while the completion of the *Eastern Corridor Study* is anticipated in the fourth quarter of 2019.
Project duration	Once construction budget is approved by council, the estimated project duration is 12 years for 3 corridors.

Airport Area West Water & Sewer Servicing

CURRENT COST ESTIMATE

$55 million

Costed in 2021 dollars

Class 5 estimate

(-50% to +100%)

***+ $** Eligible for cost sharing with other levels of government*

Main project driver

GROWTH

Description	The proposed project will provide regional water and sewer servicing for the Airport Area West lands, located north of Saskatchewan Avenue and west of the Winnipeg Richardson International Airport. This will include construction of sewers and watermains, lift station(s), force main(s) and associated appurtenances as required.
Need / rationale	Water and sewer services are required to develop the Airport Area West lands. The construction of CentrePort Canada Way has enabled development potential in the area, which is inhibited without water and sewer services. In April 2019, Council received the Employment and Commercial Lands Study as information which references the Airport Area Lands. The study identifies a shortfall of vacant serviced industrial land to accommodate forecasted growth in the City of Winnipeg. The Airport Area West lands was identified in the study as having the potential to help address this issue and become a significant employment hub within the city.
Short-term risks of not proceeding	Failing to provide water and sewer services will delay the possible development of the Airport Area West lands and their potential economic benefits.
Status	A preliminary design and Class 3 cost estimate is currently being developed for Council's consideration.
Project duration	Once construction budget is approved by council, the estimated project duration is 5 years.

North End Sewage Treatment Plant *(NEWPCC)* Upgrades

CURRENT COST ESTIMATE | **TOTAL: $1,789 MILLION**

Phase 1: Power Supply & Headworks Facilities	Phase 2: Biosolids Facilities	Phase 3: Nutrient Removal Facilities
$408 million	**$553** million	**$828** million
Costed in 2019 dollars	*Costed in 2020 dollars*	*Costed in 2023 dollars*
Class 3 estimate (-20% to +30%)	Class 3 estimate (-20% to +30%)	Class 3 estimate (-20% to +30%)

***+ $** Eligible for cost sharing with other levels of government*

Main project driver

REGULATORY

Description	The proposed project includes improvements to the power supply and headworks facilities, biosolids facilities, and nutrient removal facilities at the North End Sewage Treatment Plant (NEWPCC). The scope of work includes upgrading the NEWPCC to meet new regulatory licence requirements, add wet weather treatment capability, treat sludge, and replace end-of-life equipment.
Need / rationale	The provincial government requires reduced nutrient loading as part of the NEWPCC's operating licence, which includes new limits for phosphorous and nitrogen along with the requirement to sustainably re-use biosolids. New licence requirements cannot be met by the existing plant processes. Several plant components and facilities have reached the end of their service life and must be replaced to maintain reliable operation. The existing biosolids facility is nearing capacity and cannot service expected population growth of the city.
Short-term risks of not proceeding	Delaying work at NEWPCC wil result in numerous long-term risks, which includes non compliance with the provincial regulatory licence, insufficient capacity in the existing biosolids facility to service expected growth of the city, failure of plant components that have reached end of life, and construction cost escalation.
Status	The preliminary design is complete and an administrative report addressing project procurement was presented to Council at the February 2019 meeting at which Council approved funding for the first phase of the project: Power Supply and Headworks Facilities. The power supply component is currently under construction.
Project duration	Once construction budget is approved by council, the estimated project duration for: Phase 1 is 7 years. Phase 2 is 8 years. Phase 3 is 9 years.

Southwest Interceptor–Phase 2

CURRENT COST ESTIMATE

$32 million

Costed in 2026 dollars

Class 5 estimate

(-50% to +100%)

***+ $** Eligible for cost sharing with other levels of government*

Main project driver

GROWTH

Description	The proposed project involves the completion of the Southwest Interceptor and construction of approximately four kilometres of sewer works from the Red River crossing (Phase 1) to the South End Sewage Treatment Plant (SEWPCC).
Need / rationale	Currently, all sewage generated in the southwest quadrant of Winnipeg flows to the D'Arcy Lift Station on Bishop Grandin Boulevard. From here, it is pumped across the Red River and then flows by gravity to the SEWPCC. The D'Arcy Lift Station is nearing capacity. A new interceptor is required to provide servicing for the full development of the Waverley West area; without it, it will limit growth in the southwest quadrant of the city. The interceptor will also provide redundancy to critical river crossing assets.
Short-term risks of not proceeding	Development in the Waverley West area will be limited if sewer infrastructure is insufficient to service the area. There are ongoing operations and maintenance costs associated with pumped sewage required if sewer services are inadequate.
Status	Options are currently being reviewed before a conceptual plan and pipe sizing can be developed.
Project duration	Once construction budget is approved by council, the estimated project duration is 4 years.



More information

For more information regarding the City's major capital projects, please see: **winnipeg.ca/infrastructure**

Photo credits

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Aaron Cohen
INSIDE COVER

Mike Peters
PAGE 9 & 16

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Agenda – Executive Policy Committee – June 11, 2019

REPORTS

Item No. 10 Unfunded Major Capital Projects

WINNIPEG PUBLIC SERVICE RECOMMENDATION:

1. That the Public Service report back to Council before the end of 2019 with a City Infrastructure Plan which will comprise prioritized capital projects, including the listing of unfunded major capital projects outlined in this report, using the revised version of the asset management prioritization model.

2. That the Public Service incorporates the information from this report as well as the forthcoming City Infrastructure Plan into the Multi-Year Budget review.

3. That the proper officers of the City be authorized to do all things necessary to implement the intent of the foregoing.

ADMINISTRATIVE REPORT

Title: **Unfunded Major Capital Projects**

Critical Path: **Executive Policy Committee – Council**

AUTHORIZATION

Author	Department Head	CFO	CAO
R. Taylor, Manager, Major Capital Projects Oversight	G. Chartier, Chief Asset and Project Management Officer	P. Olafson, Acting CFO	M. Ruta, Acting CAO

EXECUTIVE SUMMARY

The 2018 State of the Infrastructure report outlined the City's infrastructure deficit, across all city services, which totaled $6.9 billion over 10 years (2018-2027), for both new and existing infrastructure. This Unfunded Major Capital Projects report provides a summary of current information on 22 proposed unfunded major capital projects over the next 10 years. The unfunded major capital projects detailed in this report range in costs from $24 million to $1.8 billion. These 22 unfunded major capital projects have a total cost of over $4.9 billion of which nearly $4.5 billion is unfunded and together these projects comprise about 60% of the City's infrastructure deficit.

With several projects having recently completed preliminary designs, this report is meant to provide City Council and the public with an overview of these 22 unfunded major capital projects prior to Council making decisions on individual projects.

In addition, this report provides a financial / affordability context by outlining assumed possible federal and provincial funding, debt financing costs along with equivalent property tax increases and water and sewer rates increases needed to pay for the projects outlined in this report.

The City has significant financial challenges in funding operating expenditures as well as funding needed capital infrastructure projects. In order to assist Council in making capital budget decisions, the Public Service will develop a City Infrastructure Plan which will prioritize capital projects and will include the unfunded major capital projects outlined in this report. This information will be considered within the Multi-Year Budget review.

RECOMMENDATIONS

1. That the Public Service report back to Council before the end of 2019 with a City Infrastructure Plan which will comprise prioritized capital projects, including the listing of unfunded major capital projects outlined in this report, using the revised version of the asset management prioritization model.

2. That the Public Service incorporates the information from this report as well as the forthcoming City Infrastructure Plan into the Multi-Year Budget review.

3. That the proper officers of the City be authorized to do all things necessary to implement the intent of the foregoing.

REASON FOR THE REPORT

On March 20, 2019, as part of the 2019 budget recommendations, Council directed that the Chief Administrative Officer report back in 2019 with a prioritization list of unfunded major capital projects. This report provides context in advance of the full prioritization report.

IMPLICATIONS OF THE RECOMMENDATIONS

The Public Service will report back to Council with additional information on project prioritization as well as include the information from this report into Multi-Year Budget discussions.

HISTORY/DISCUSSION

Background

In March of 2018, the City released its first State of the Infrastructure Report with a companion website, along with its first City Asset Management Plan. This information outlined the City's infrastructure deficit which totals $6.9 billion. Also in March of 2018, the City created the Unfunded Major Capital Projects website with basic project information.

Departments have recently completed preliminary design studies with corresponding Class 3 cost estimates for three major capital projects: Arlington Bridge Replacement, Chief Peguis Trail Extension West – Main to Brookside, and North End Sewage Treatment Plant (NEWPCC) Upgrades. On February 28, 2019 Council approved the NEWPCC preliminary design. Concurrent with this report, the Public Service is submitting reports on the preliminary designs for both the Arlington Bridge Replacement and the Chief Peguis Trail Extension West for Council's consideration.

The threshold for major capital projects is approved as part of the Capital Budget. The 2019 threshold is $23 million and is adjusted annually for construction inflation.

Unfunded Major Capital Projects

This report provides a summary of current information on 22 proposed unfunded major capital projects over the next 10 years. The unfunded major capital projects, detailed in this report, range in costs from $24 million to nearly $1.8 billion.

The project listing of proposed unfunded major capital projects is not a priority ranking. The projects are categorized alphabetically by department, and further by project name.

Community Services (over $200 million)

1. East of the Red Rec Plex

   South Winnipeg Recreation Campus (3 phases)
2. Phase 1 – YM/YWCA
3. Phase 2 – Community Centre
4. Phase 3 – Library

   Southeast Winnipeg Recreation & Library Facilities (2 phases)
5. Phase 1 – Community Centre
6. Phase 2 – Library

Public Works (over $1.7 billion)

7. Arlington Bridge Replacement
8. Chief Peguis Trail Extension West – Main to Brookside
9. Lagimodiere Twin Overpasses Rehabilitation
10. Louise Bridge Replacement
11. Marion Transportation Improvements
12. Route 90 Improvements – Taylor to Ness
13. St. Vital Bridge Rehabilitation
14. William Clement Parkway – Grant to Ridgewood

Winnipeg Transit (over $1 billion)

15. Electric Bus Pilot Project
16. North Transit Garage Replacement
17. Rapid Transit Corridors (3 corridors)

Water & Waste (over $1.8 billion)

18. Airport Area West Water and Sewer Servicing

    North End Sewage Treatment Plant (NEWPCC) Upgrades
19. Phase 1 – Power Supply and Headworks Facilities
20. Phase 2 – Biosolids Facilities
21. Phase 3 – Nutrient Removal Facilities

22. Southwest Interceptor – Phase 2

These 22 unfunded major capital projects have a total cost of over $4.9 billion of which nearly $4.5 billion is unfunded and together these projects comprise over 60% of the City's infrastructure deficit.

Estimated project costs for the 22 proposed projects are outlined on page 14, in the attached Unfunded Major Capital Projects Detail. These projects are costed in the year to meet level of service needs; or the earliest a Class 3 cost estimate is anticipated to be available; or due to project phasing.

This report is meant to provide order of magnitude costing information. Most of these unfunded major capital projects are at a class 5 cost estimate. The following outlines the accuracy range for the class of cost estimate:

Class 5:	-50% to +100%
Class 4:	-30% to +60%
Class 3:	-20% to +30%

The following three sections reference information relating to possible federal & provincial funding, debt & affordability outlined on page 15 in the attached Unfunded Major Capital Projects Detail. This attached information outlines assumed possible federal and provincial funding, debt financing costs along with equivalent property tax increases and water and sewer rates increases needed to pay for the projects outlined in this report.

Federal and Provincial Funding

If all of these proposed projects proceeded over the next 10 years, additional funding of nearly $4.5 billion would be required.

The primary current federal funding program is the Investing in Canada Infrastructure Program (ICIP) but the program has specific criteria / outcomes which projects need to meet. The program is focused on funding projects related to public transit, protecting the environment (including water and sewer projects) and community facilities such as recreation complexes and libraries. In addition there are funding limits as outlined in the Canada-Manitoba bilateral agreement. To access this federal funding, provincial participation is required. Currently, this federal funding program excludes roads and bridges.

This report assumes possible federal and provincial combined funding in excess of $1.2 billion:

- $97 million for community projects
- $734 million for transit projects
- $450 million for North End Sewage Treatment Plant (NEWPCC) Upgrades

Currently there are no intergovernmental funding project agreements in place for these projects.

City Debt Strategy

The tax supported unfunded major capital projects have combined project costs totaling $3.0 billion. After subtracting assumed possible federal and provincial funding of $0.8 billion, these tax supported projects have a remaining unfunded amount which totals nearly $2.2 billion.

The City's Debt Strategy outlines parameters which establish debt limits. The City's remaining capacity to borrow and stay within the Debt Strategy is approximately $150 million. Thus, if the City issued $2.2 billion of additional debt to fund these projects, it would greatly exceed the Debt Strategy.

Affordability

For the tax supported projects listed in this report, if debt were used to fund the remaining City share, annual borrowing costs plus incremental operating costs would accumulate over the next 10 years to approximately $170 million per year. This would translate to an equivalent property

tax increase of roughly 30% over the next 10 years or averaging 3.0% property tax increase annually for 10 years.

In addition to debt financing, an additional funding tool for growth-related projects is the use of impact fee revenue. Use of the impact fee revenue would decrease the need for debt.

Water and sewer rates would need to increase by roughly 37% over the next 10 years to pay for the $1.4 billion of the City's share of water and sewer project costs through cash and debt financing.

Project Prioritization and Forthcoming City Infrastructure Plan

The Public Service is currently reviewing its asset management prioritization model. Having been in use since the 2013 budget, the City has recently carried out a review and is in the process of incorporating improvements to the model to address limitations of the current model. Once the revised version of the asset management prioritization model is completed, the Public Service would then assess these projects using the revised model to develop a prioritized listing with a corresponding cost benefit point ratio.

Conclusion

These 22 unfunded major capital projects have a total cost of over $4.9 billion of which nearly $4.5 billion is unfunded and together these projects comprise about 60% of the City's infrastructure deficit.

With several projects having recently completed preliminary designs, this report is meant to provide City Council and the public with an overview of these 22 unfunded major capital projects prior to Council making decisions on individual projects.

The City has significant financial challenges in funding operating expenditures as well as funding needed capital infrastructure projects. In order to assist Council in making capital budget decisions, the Public Service will develop a City Infrastructure Plan which will prioritize capital projects and will include the unfunded major capital projects outlined in this report. This information will be considered within the Multi-Year Budget review.

FINANCIAL IMPACT

Financial Impact Statement **Date:** **May 22, 2019**

Project Name: Unfunded Major Capital Projects

COMMENTS:

There are no financial implications to the recommendations of this report.

(Original signed by T.Yanchishyn)
Tanis Yanchishyn
Manager of Finance (Campus)
Corporate Finance Department

CONSULTATION

This Report has been prepared in consultation with:

- Public Works
- Winnipeg Transit
- Community Services
- Water and Waste
- Corporate Finance
- Legal Services
- Customer Service & Communications

OURWINNIPEG POLICY ALIGNMENT

Provide efficient and focused civic administration and governance. (p.49)

- Continue to implement life-cycle costing for capital projects and consider all relevant financing and delivery options.

Maintain strong intergovernmental cooperation. (p.50)

- Pursue cost-effective sharing agreements with other governments and with the private sector for priority infrastructure projects.

SUBMITTED BY

Department: Office of the CAO
Division: Infrastructure Planning Office
Prepared by: Rob Taylor, Manager, Major Capital Projects Oversight
Date: May 29, 2019

Attachments: Unfunded Major Capital Projects Detail