

**Roads, Storm Drainage &
Watercourses Business Plan**

City of Mississauga

2011-2014



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Roads, Storm Drainage & Watercourses Services Amendments 2011-2014 Business Plan & Budget

Council has reviewed the 2011-2014 Business Plan and Budget and has approved the following changes.

Initiative	BR #	Decision		
		Details	Amount (000's)	FTE
Labour and benefit adjustment	BASE	To reflect revised labour and benefit costs as approved by Council	-283	
Cycling Master Plan Implementation	211	Reduce budget by \$250,000. Initiatives impacted include bike lane maintenance, bike parking, bike storage expansion, and hiring of a trail inspector	-250	-1
Amended Minimum Maintenance Standards – Sign Inventory, Sidewalk patrol, & Street Lighting	270	Program to commence mid-year. Reduction of sign replacements	-150	
Infrastructure Asset Management Program Implementation - New Asset Inventories & Reporting	64	Delete initiative	-43	-1
Integrated Surveys & Control Network	31	Land Surveyor		
City Centre Off-Street Parking	146	Reduction of \$25,000	-25	
Cooksville Creek	PN11-141	Reduction to Pre-Engineering Budget	-2,500 (Capital)	
Noise Wall Program	PN11-161	Reduction to program	-1,800 (Capital)	

This page has been generated as the most efficient way to update the Service Area Business Plans based on Council's decisions, rather than re-writing the full document. The City wide plan has been amended in full.



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Existing Core Services

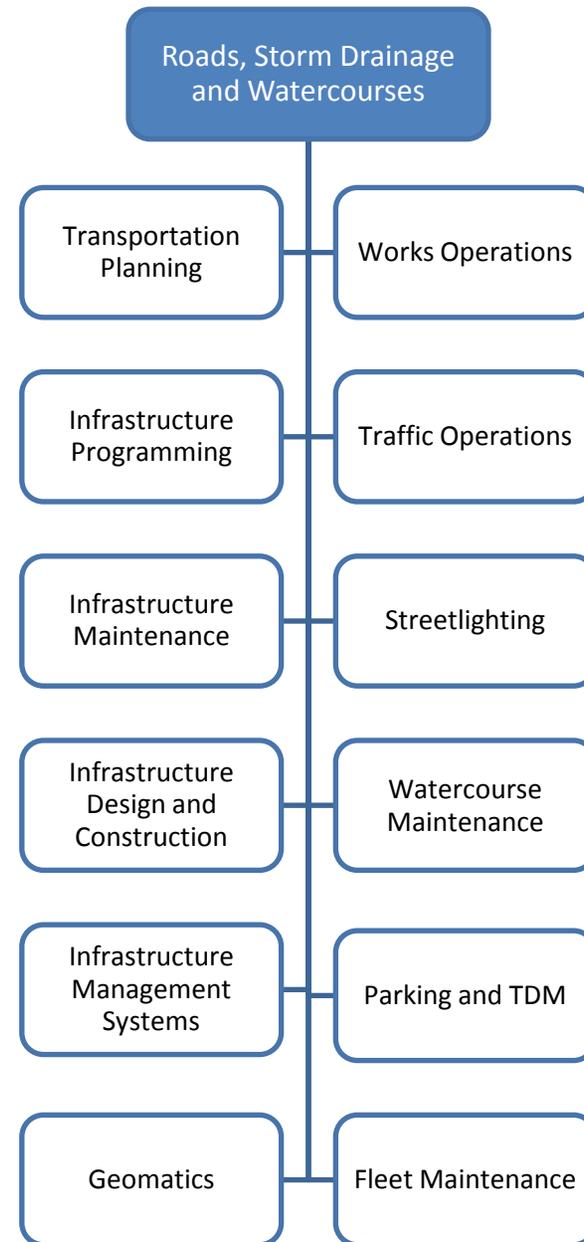
1.0 Vision and Mission

The vision for the Roads, Storm Drainage and Watercourses (RSDW) service area is to be a leader in delivering and managing safe and functional municipal transportation and storm water infrastructure.

The mission is two-fold:

To plan, develop, construct and maintain a multi-modal transportation system which efficiently and safely moves people and goods, respects the environment and supports the development of Mississauga as a 21st Century city, while serving the Municipality's social, economic and physical needs.

To plan, develop, construct and maintain a storm water management system which safeguards public and private infrastructure and property from erosion and flooding and enhances water quality.



2.0 Service Delivery Model

The RSDW service area operates out of the Transportation and Works Department and is responsible for the planning, construction, maintenance and overall management of Mississauga's roadways, bridges, sidewalks, storm water management systems and related assets. Infrastructure that is managed as part of this service also includes streetlighting, municipal parking, noise barriers, watercourses, the cycling network, and the City's fleet of vehicles.

The management of infrastructure assets is accomplished through a number of operational activities including: infrastructure planning and programming, transportation planning, infrastructure design and construction, infrastructure maintenance and repair, geomatics and public works operations such as winter maintenance, street sweeping, graffiti cleaning and litter pick up, traffic management and crossing guards.

This service area has a number of linkages and dependencies with other City service areas including Land Development Services, Legal Services, Business Services, Strategic Policy, Transit, and Recreation Services.

Key Documents that shape our Business Plan

- Strategic Plan
- Official Plan
- 'The Big Move' – Metrolinx Regional Transportation Plan
- GO Transit Capital Plan
- Hurontario/Main Street Corridor Master Plan
- Downtown 21 Master Plan
- Ministry of Transportation Capital Plan
- City of Mississauga 10 year Capital Plan
- Infrastructure Asset Management Implementation Plan
- Cycling Master Plan and Implementation Strategy
- Parking Strategy
- Credit Valley Conservation and Toronto Regional Conservation Authority Plans
- Mississauga Storm Water Quality Control Strategy Update
- Action Plan: Southwest GTA, Oakville-Clarkson Airshed Taskforce
- Transportation Association of Canada – Design Standards and Guidelines
- Ontario Traffic Manual
- Ontario Regulation 23/10 Amendment to Municipal Maintenance Standards
- Mississauga Salt Management Plan
- Traffic Management Centre

3.0 Past Achievements

Some of this service area's recent accomplishments are listed below.

Awards

- 2010 Ontario Public Works Association – Project of the Year Over \$10 Million – Burnhamthorpe Road West Bridges over the Mullet Creek & Credit River;
- 2010 North American Salt Institute Award (New Facility);
- 2010 Smart Commute Regional Employer of the year;
- 2009 Canadian Public Works Association - National Public Works Week (Metro Centre Award); and
- 2009 North American Salt Institute Award (Continuity of Good Practice for Salt Storage).

Accomplishments

- 2010 – Cycling Master Plan and Implementation Strategy completion;
- 2009 Implementation of on-street paid parking in the City Centre;
- Completion of the Environmental Assessment for the Square One Drive extension which includes an innovative flush street design giving priority to the needs of pedestrians and cyclists, including an urban roundabout;
- Completion of the Burnhamthorpe Road Environmental Assessment east of Arista Way which is an example of context sensitive design where transit priority and other related amenities will be implemented instead of additional, general purpose traffic lanes;
- Completion of the design of the Elm Drive low impact development project which includes installing cycling

lanes and parking lay-bys with permeable pavers and rain gardens;

- Between 2009 and 2010 used a combination of City funds and infrastructure stimulus funds to resurface 103 km of roads, replaced seven km of noise barriers, and install of 30 km of new sidewalks and trails; and
- Installation of the Living Wall pilot project, a green alternative to traditional concrete noise barrier located on Rathburn Road East.



Living Wall located on Rathburn Road East

4.0 Opportunities and Challenges

Within the four year time frame of the 2011-2014 Business Plan, many factors will influence planning and service delivery for this service area. Addressing these factors is the focus of this business plan.

Mississauga is maturing. The city is becoming increasingly urbanized, its infrastructure is getting older, and the demand for a more sophisticated, multi-modal transportation system and supporting traffic and maintenance operations is growing. Suburban, greenfield design standards for road rights-of-way are changing to those more suited for an urban environment and culture. Climate change and environmental accountability are key public policy concerns. Higher order transit along Hurontario and Dundas corridors is being pursued.

These are occurring in the context of financial challenges for the City, including reduced economic and development growth, and the continuing growth of neighbouring municipalities which adds pressure to Mississauga's transportation and storm water infrastructure.

Important opportunities have been created through the approval of public policy plans at various levels of government. The Province's *Places to Grow* plan has identified Mississauga's downtown as an Urban Growth Centre, Metrolinx's *Regional Transportation Plan* shows several higher order transit corridors in Mississauga, and Mississauga's *Strategic Plan* highlights the need to develop a transit-oriented city, a connected city and a green city.

Although this plan contains provisions for developing new infrastructure where needed, there is a shift to enhancing or retooling existing infrastructure to maximize the effectiveness of what we already have in place. Over-arching themes for this service area continue to be public safety and

the responsible maintenance of infrastructure to maintain a state of good repair.



Confederation Bridge in the heart of Mississauga provides residents with greater access to the Downtown.

5.0 Current Service Levels

This service area provides services to the residents and businesses within Mississauga and to all users of the City's transportation infrastructure. Key service levels include the following:

Average Road Network Condition - Maintain the road network at an average Overall Condition Index of 70, or "Good" rating.

Capital Construction - Adhere to all provincial standards and codes for construction and safety.

Customer Service - Respond to all emergency related service requests as soon as practical; investigate all non-emergency service requests within three days and respond to them within ten days; process permit applications within three days and deliver other counter services and products.

Development Applications - Review and process all development applications in a timely manner with appropriate recommendations with respect to engineering matters.

Fleet Services - Ensure that vehicles and equipment are ready when required.

Geomatics - Collect and maintain geographic information and core data on City assets to support service expectations and critical business decision systems.

Infrastructure Programming - Develop appropriate ten year Capital Budget in accordance with lifecycle asset management practices and meet budget preparation and construction timelines.

Long-range Planning and Policy Development - Develop and implement appropriate plans and strategies to guide decision making related to the city's transportation and storm water management infrastructure.

Minimum Maintenance Standards - Meet or exceed Provincial Minimum Maintenance Standards for the city's roadways and related assets.

Parking Infrastructure and Transportation Demand Management (TDM) - Implement the City Centre Parking Strategy.

Storm Sewer Network - Inspect and capture video of all storm sewers a minimum of every ten years.

Street Lighting - Maintain and ensure the operation of the street light network in accordance with established service response times.

Permits – Review and process permit applications in accordance with city standards.

Traffic Management - Manage traffic operations in accordance with provincial regulations and design standards.

Watercourses - Carry out full inspection a minimum of every five years and review identified "hot spots" annually.

Winter - For an average winter storm, clear major arterial and collector roads within twelve hours after the end of the storm; clear residential roads, priority sidewalks and bus stops within twenty-four hours after the storm ends.

5.1 Maintaining Our Infrastructure

The estimated replacement value of the City's road, storm drainage and related infrastructure is \$10.7 billion. The infrastructure managed by this service area includes:

- 5,480 lane km of road network;
- 2,272 km of sidewalks and trails;
- 1,991 km of storm sewer network including 200 km of watercourses and 55 storm water management facilities;
- 49,000 street lights;
- 750 signalized intersections (523 under the City's jurisdiction);
- 217 bridges and culverts;
- 148 km of bicycle lanes and boulevard multi-use trails;
- 50 km of noise barriers; and
- 17 at-grade parking facilities, four below-grade parking facilities, 113 on-street pay and display machines within two on-street parking districts.

Maintaining infrastructure in a state of good repair is one of the priorities of this service area. Staff provide recommendations to Council as to where and when to spend money on infrastructure maintenance, in order to maximize asset life cycle and minimize the funding required to do so. This is accomplished by applying sound asset management practices: inventorying what the city owns, conducting regular inspections, prioritizing work needs, preparing appropriate ten year capital budgets and programs to address needs, and monitoring and reporting on projected asset condition. However, with the aging of the city's infrastructure, the capital maintenance requirements to maintain assets are increasingly difficult to fund. This

infrastructure funding deficit remains one of the most important budget issues for the city.

Additional information about the city's plan to maintain infrastructure can be found within section 10.0 under the heading Capital Changes, Asset Management section.



2010 Duke of York Road resurfacing improvements

6.0 Looking Ahead: Goals over the next 4 years

Deploying sound asset management and maintenance practices, developing and managing a multi-modal transportation network and responding to environmental issues and opportunities are the main goals of this plan. In respect of tight budgets and in accordance with best business practices, staff will continue to identify and implement ways to deliver the same service levels at reduced cost or increase service levels without increased budgets. This is an important ongoing element of business planning particularly for the big budget, on-street operational activities of this service area such as winter maintenance, road maintenance and city cleanliness.

The operational objectives of this service area over the next four years are highlighted below.

Asset Management

- Maintain a state of good repair for roads, bridges/culverts, noise barriers, sidewalks, signs, street lighting, traffic signals and watercourses;
- Leverage technology to further integrate asset management strategies;
- Respond to legislative changes with respect to Ontario's Accessibility Standards and Minimum Maintenance Standards for municipal assets; and
- Develop a model for the storm drainage network to improve forecasting capability.

Multi-Modal Transportation Network

- Develop and implement a Transportation Master Plan;
- Implement the Cycling Master Plan;
- Develop and implement transportation demand management plans and policies which includes expanding the paid parking program;
- Undertake various transportation studies and capital improvements to support city building, with an emphasis on the downtown network;
- Work with the provincial Ministry of Transportation to encourage the widening of Highway 401 to improve the movement of goods through the city; and
- Eliminate gaps in the sidewalk network to improve access to transit stop and to connect our neighbourhoods.



Roads like Confederation Parkway are being redesigned to include cycling and transit facilities.

Higher Order Transit

- Continue with the planning and design of higher-order transit infrastructure along the Hurontario and Dundas corridors in support of the Mississauga Transit service area;
- Plan road infrastructure to support transit priority initiatives along the Mississauga Transit express bus network; and
- Work with Metrolinx to encourage the advancement of Mississauga GO Rail and GO Bus Service.

Traffic Management Centre

- Upgrade the capabilities of the central traffic control system;
- Install Intelligent Transportation Systems, including video monitoring and changeable message signs;
- Leverage technology to maximize existing road infrastructure, for example by integrating evolving services such as transit with transit signal priority measures; and
- Migrate from predictive traffic management to pro-active traffic control management, with dedicated staff monitoring the operation.

Continuous Improvement

- Pursue cost savings for leaf collection, street cleaning, street lighting and winter maintenance activities;
- Implement new operations facilities for Works; and
- Continue with the implementation of an Integrated Road Safety Program.

Greening – Environmental Stewardship

- Increase watercourse management activities and advance plans for capital improvements to address flooding;
- Utilize alternative winter de-icing materials;
- Update and enhance the city's rain gauge network;
- Implement energy efficient street lighting;
- Recycle and use recycled materials whenever possible;
- Upgrade, right size and "green" the city's fleet; and
- "Green" the design of capital projects where appropriate and encourage lot level controls in developed areas to improve storm water quality.

2007 Cooksville Creek step pools installed to reduce erosion



7.0 Engaging our Customers

Citizens and stakeholders are engaged during decision making processes in a number of ways:

- Public meetings are held to inform and engage stakeholders with respect to projects affecting their community;
- The City's website offers significant information regarding public works operations, such as the status of snow clearing operations and capital projects;
- Door flyers are used to inform residents of maintenance and construction works in their immediate area;
- National Public Works Week is celebrated every year by inviting residents and school children to participate in a number of events, including facility tours, equipment displays and a family fun day in the downtown; and
- Taxpayers are encouraged to contact the City about any concerns they have with respect to the city's services or the condition of infrastructure by calling 311.

The most recent public engagement survey shows that the residents of Mississauga are generally satisfied with the level of service of the road system, environmental planning and traffic flow services.



National Public Works Week Equipment Display



An employee from the City's Traffic Section explains how traffic signals work during Mississauga's Public Works Week festivities.

Proposed Changes

This part of the Business Plan deals with proposed changes to the 2011-2014 Business Plan & Budget. To assist the reader, the table below summarizes the drivers of these changes including both operating and capital. Individual tables with a brief description of the change follow.

Drivers of Operating Costs

Description (\$ 000's)	2011	2012	2013	2014
Prior Year Budget	63,768	65,599	69,140	72,655
Base Changes & Impact of Capital Projects				
Base Changes	2,262	2,692	2,430	2,011
Impact of New Capital Projects	10	10	0	0
Continuous Improvements				
Efficiencies	(1,882)	0	50	(50)
Budget Reductions	0	0	0	0
Total Changes to Base and Continuous Improvement	390	2,702	2,480	1,961
Total Cost to Deliver Our Existing Services	64,158	68,301	71,620	74,616
Proposed Changes				
Growth Driven Initiatives	192	47	22	22
New Service Level/New Initiatives - Funded from Tax or Reserves	1,249	792	1,013	704
New Revenues	0	0	0	0
Total - Proposed Changes	1,441	839	1,035	726
Total Budget	65,599	69,140	72,655	75,342

Note: Numbers may not balance due to rounding

8.0 Base Changes

This section highlights changes that are required to maintain current service levels, it is not a reconciliation of all budget changes. They reflect increases for items such as economic adjustments awarded in collective agreements and to non-union staff, third party contracts, electricity, fuel and inflationary pressures on goods and materials. Increases or decreases in revenue that are a result of changes in usage are also included in this table.

Highlights of Base Budget Changes

Description (\$ 000's)	FTE	2011	2012	2013	2014	Total Net Costs
Labour cost increases (reflects performance pay, economic adjustments, and fringe benefit changes).	0.0	951	1,264	1,157	740	4,112
Labour Gapping	0.0	(263)	0	0	0	(263)
Winter - Contractor & Professional Services	0.0	550	572	570	593	2,285
Winter - Materials, Supplies & Other Services	0.0	199	206	215	223	843
City Centre On-Street Paid Parking- Revenue Adjustment	0.0	500	0	0	0	500
Hydro Street lighting, Traffic Signals & Bollards	0.0	100	100	100	100	400
Reduction in Development Revenue - Engineering Fees	0.0	100	25	25	25	175
Corporate Asset - Civic Addresses and Street Names	0.0	0	50	(50)	0	0
Utilities - Hydro	0.0	(7)	11	8	8	20
On-Street Paid Parking & BIA Parking Facilities	1.0	(18)	13	(14)	(14)	(33)
City Centre Parking (Transfer to reserve CC24012)	0.0	(350)	0	0	0	(350)
Total Base Budget Highlights	1.0	1,762	2,241	2,011	1,675	7,689

Note: Numbers may not balance due to rounding

The proposed update and expansion of the City's rain gauge network, which measures and analyzes rainfall data from various monitoring stations throughout the City, will require a small increase in annual operating costs as indicated below.

Operating Impacts from Capital Projects

Description (\$ 000's)	BR #	FTE	2011	2012	2013	2014	Total Net Costs	Area of Focus	Strategic Pillar
Update and Enhancement of the Rain Gauge Network	272	0.0	10	10	0	0	20	Maintaining a state of good repair for our infrastructure	
Total Operating Budget Impact		0.0	10	10	0	0	20		

Note: Numbers may not balance due to rounding

9.0 Continuous Improvement

These initiatives represent opportunities to continually improve by reducing operating costs from existing budgets by exploring reduction, efficiency and best practice opportunities. Where a Budget Request (BR) number is noted, more information regarding this can be found in Volume 2 of the documentation.

Program Reduction Highlights

The reduction achieved in the Business Services division translates into a reduction in service contracts, office equipment and funds used for staff recognition.

Recommended Program Reductions

Description (\$ 000's)	BR #	FTE	2011	2012	2013	2014	Total Net Costs	Area of Focus	Strategic Pillar
Reductions in Business Services Division - Transportation and Works Department *	533	0.0	(53)	0	0	0	(53)	Continuous improvement	
Total Operating Budget Impact		0.0	0	0	0	0	0		

* Cost for this Roads initiative have been identified, but is part of Departmental Business Services budget operationally.

Efficiency and Best Practices Highlights

The proposed changes for the 2011 Leaf Vacuum Program are a result of reducing the number of collections from three to two more intense collections per area. The overall program objective is still maintained as leaves will be vacuumed during the peak fall periods and completion will coincide with the ending of the Region of Peel's Yard Waste Program. The City's program compliments the Region of Peel's yard waste program which picks up bagged leaves and other yard waste in lighter treed areas on regular waste collection days. The City's program will continue to expand each year in areas that meet the minimum criteria.

The spring and regular street sweeping programs are performed by contracted street sweeping resources. Recently, the tenders and contracts have been redesigned to pay contractors on an area completion basis in accordance with established levels of service rather than paying on an hourly basis. This change has resulted in substantial annual savings and has not compromised service levels.

The winter maintenance program review conducted prior to the award of the current five year contract, adjusted the levels of city vehicles used for winter maintenance to ensure full usage of in-house resources. This change resulted in a reduction in city vehicles and a corresponding reduction in the capital amount budgeted to replace vehicles no longer required in house. During the 2009/2010 winter season, changes were also made to the contracted equipment requirements to increase the level of service for winter maintenance for priority sidewalks, bus stops, intersections and crossings. Minor resource realignment is proposed for the upcoming winter season which will provide cost savings

without compromising the increased levels of service for winter maintenance. The adjustments affect the annual quantities for labour, equipment, materials and contract hours budgeted. An analysis of the past five years shows that these resources have decreased and therefore the budget request has been adjusted to reflect the five year trend.

Preliminary results from a recent two year study conducted jointly by the City and Credit Valley Conservation indicate that magnesium chloride treated salt may have less of an environmental impact when compared to using a sand/salt mixture on secondary roads and priority sidewalks. The elimination of using a sand/salt mixture during the winter not only is anticipated to reduce the impact of winter materials on the environment, but will produce a savings in the handling and processing of waste material collected during spring clean-up activities.

The recommended reduction in the Professional Services and various administrative budgets in the Transportation and Infrastructure Planning Division reflect recent actual costs and efficiencies obtained by keeping certain work in-house.

The implementation of ProjectWise will enable the City to dramatically improve project production, collaboration, retention of data and control of information. This project targets the Public Utilities Coordination Committee (PUCC) approval process as the first effort in re-engineering, simplifying and standardizing a new process.

Efficiencies

Description (\$ 000's)	BR #	FTE	2011	2012	2013	2014	Total Net Costs	Area of Focus	Strategic Pillar
Leaf Collection - improving the efficiency of the operation	263	-2.2	(100)	0	0	0	(100)	Continuous improvement	
Street Cleaning - Improving efficiency	264	-1.1	(350)	0	0	0	(350)	Continuous improvement	
Winter Maintenance Review	265	-3.0	(1,282)	0	0	0	(1,282)	Continuous improvement	
Salt Management - Alternative de-icing materials	266	0.0	(50)	0	0	0	(50)	Continuous improvement	
Budget Reduction - Professional Services and Administration (RSDW Service Area)	512	0.0	(100)	0	0	0	(100)	Continuous improvement	
Sharing spatial information in project areas using ProjectWise application	274	0.0	0	0	50	(50)	0	Continuous improvement	
Total Operating Budget Impact		(6.2)	(1,882)	0	50	(50)	(1,882)		

Note: Numbers may not balance due to rounding

10.0 Proposed Changes

These changes are recommended and impact the ability to either maintain or enhance service levels within the service area. Full explanations of each initiative can be found within Volume 2 of the 2011-2014 Business Plan and Budget.

Growth Driven Highlights

The City's Infrastructure Asset Management (IAM) Strategy and Tangible Capital Asset Reporting policy requires the creation and maintenance of accurate inventories of the City's physical assets. The new Minimum Maintenance Standards regulation requires accurate inventories and processes to manage risks along the city's right's of way. Continuing to implement the IAM strategy will promote the better management of our assets over their entire lifecycle. The creation of asset inventories will enable staff to create lifecycle strategies for maintenance and rehabilitation of all the city's major physical assets, similar to the way pavement, bridges and noise barriers are managed today. The replacement value of the four new inventories that will be added through this initiative is estimated at two billion dollars.

This service area includes plans for improved management of on-street parking and municipal parking facilities in Business Improvement Areas (BIA's) over the next four years. While revenue from on-street paid parking in the City Centre was lower than projected for 2009 and 2010 because of lower than expected demand attributed to the continued availability of off-street free parking, the demand for on-street parking is expected to increase as a result of current and future high-density developments, particularly in the City Centre. The on-street paid parking program reflects the city's efforts to improve management of on-street parking and

encourage on-street turnover and availability of convenient on-street parking in areas where such demand exists. In alignment with efforts to deliver on initiatives within the Strategic Action Plan, the on street paid parking program will be expanded in City Centre as well as Port Credit, Clarkson and Cooksville throughout 2011-2014. Further expansion of the on-street paid parking program into additional BIA's and municipal parking lots is anticipated to begin in 2013 pending the completion of a parking strategy and Council approval of paid parking expansion into these areas. Post 2014, it is projected that new municipal paid parking structures will be required in the City Centre and Port Credit areas.

New Provincial Government legislation requires all boundary surveys to be tied into the City's existing horizontal and vertical control networks and that surveys must be fully coordinated with true ground values. The survey control network has not been maintained since 2005. Degradation of the network is normal as points are destroyed during capital improvement projects and other activities. Regular maintenance work is required to meet minimum maintenance standards. The requested funding will be used to verify monument locations, replace damaged monuments or install new monuments as required.

Growth Driven Service Costs

Description (\$ 000's)	BR #	FTE	2011	2012	2013	2014	Total Net Costs	Area of Focus	Strategic Pillar
Infrastructure Asset Management Program Implementation - New Asset Inventories & Reporting	64	1.0	43	53	20	20	136	Maintaining a state of good repair for our infrastructure	
City Centre Off-Street Parking	146	2.0	100	(55)	2	2	49	Delivering on initiatives within the Strategic Action Plan	Move
Integrated Surveys and Control Network	31	1.0	49	49	0	0	98	Maintaining a state of good repair for our infrastructure	
Total Operating Budget Impact		4.0	192	47	22	22	283		

Note: Numbers may not balance due to rounding

Increased Service Levels and New Initiatives

This section summarizes all of the new initiatives and/or service level increases recommended over the next four years of the Roads Storm Drainage and Watercourses Service Area Business Plan.

Traffic Management

The City's road network is nearing maturity and there will be limited new roads and road widening. The Traffic Management Centre (TMC) will help to maximize roadway efficiencies to help deal with continued increased demand from motor vehicles and pedestrian mobility, transit, accessibility, and cycling. Implementation of the TMC involves migrating from predictive traffic management to a pro-active traffic control management with dedicated staff monitoring operations. Implementation will include upgrading the central traffic control system, installing video monitoring and changeable message signs and leveraging technology to maximize existing road infrastructure and to integrate evolving transit services and transit signal priority.

The ultimate goals of the Integrated Road Safety Program (IRSP) are to improve safety, maximize the capacity of city roadways and mitigate congestion. It has two major components: a data collection, analysis and reporting component, and an outreach component intended to leverage and provide synergy amongst the multi-jurisdictional and road safety stakeholder entities already involved in road safety. The IRSP will formalize a process to identify, plan, design, prioritize and implement safety-related projects that involves all stakeholders and are evidence-based decision-making. Through the implementation of IRSP measures, the City wishes to enhance the safety and

efficiency of the city's roads for all road users, while ensuring the City is making the most of available resources.

The Traffic Signal Capital Enhancement initiative includes additional maintenance funding to support the installation of various component enhancements at ten intersections per year. These systems include accessible pedestrian signals, pedestrian count down timers, transit signal priority, fire pre-emption, and uninterrupted power supply.

Discount Transit Program - a rider comments:

"Having one has made my transportation easier and more comfortable because I don't have to worry about expired transfers. I can have more time to be out and complete errands. ...just wanted to let you know that I am very happy with this program. Now I don't have to stand in line for my passes and truly love it."

Multi-Modal Transportation Network

Now that key foundational pieces are complete, such as the city's *Strategic Plan*, new *Official Plan*, *Master Plan for Rapid Transit along the Hurontario Corridor and Cycling Master Plan*, much of the service area's focus over the next four years will turn to implementation. However, there is a need to bring the various elements of transportation policy together in one document, and the upcoming *Transportation Master Plan* (included in the capital program as a work plan item) will provide the broad policy framework to move forward.

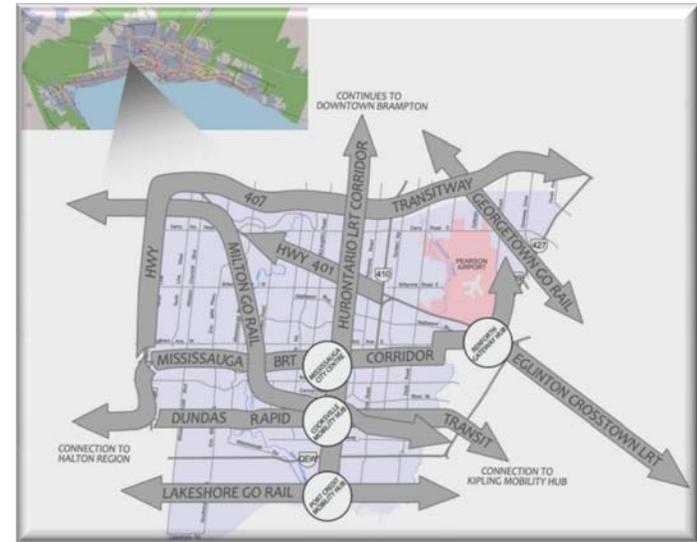
Work has begun on the retrofit of the City's road network to make streets safer and more pleasant for walking and cycling and to give transit priority movement along key corridors, as well as to facilitate freight movements to and from key hubs such as Pearson Airport.

The *Cycling Implementation Strategy* calls for the establishment of a Cycling Office to oversee 79 actions in support of the development of an integrated cycling network over 20 years. The Strategy includes the addition of an average of 30 kilometres per year of new network in the capital plan and a number of tax funded operational items such as pavement markings, signage and education. Appropriate annual funding is incorporated into this business plan.

The business plan also emphasizes transportation planning in Mississauga's downtown, including a number of technical studies, various steps towards the development of a compact road network in the downtown that promotes walking and cycling, and planning for the retrofit of Burnhamthorpe Road through the City Centre to accommodate light rapid transit, conventional bus transit,

cycling, pedestrians, vehicles and urban design considerations. All of these items are shown in the capital program table. Because the pavement condition for Burnhamthorpe Road through the City Centre is poor, in 2011, the City will rehabilitate the pavement surface, provide a temporary cycling connection, improve the intersection at Kariya Gate and complete the sidewalk connections.

The capital plan also provides for the accelerated expansion of the sidewalk network to improve pedestrian connectivity to transit. This directly supports the *Mississauga Transit Accessibility Plan*.



Important connections showing how Mississauga is linked to other cities and the Region.

Greening – Environmental Stewardship

This plan contains a number of projects and funding proposals related to the management of the city's storm water. An updated Storm Water Quality Study is nearing completion, and the capital program from 2012 onward includes low impact development measures within the road right-of-way where appropriate; post-2012 it includes increased operating funding to promote lot level water quality improvements in existing developments.

In recognition of flooding issues, the business plan includes permanent operating funding for increased creek inspection and maintenance along Cooksville Creek and anticipates the expansion of this program to all creeks within the City in 2012. In addition, the timing of several capital projects along Cooksville Creek has been moved forward to 2011 through 2014, including funding for pre-engineering, design and easement works. To enable the City to predict the effects of intensification, climate change, aging infrastructure and other factors influencing the storm drainage system, the development of a hydrologic/hydraulic network model is proposed in 2011 and 2012.

A small increase in operating funding is needed in 2011 to increase the efficiency and frequency of street sweeping in the Clarkson area industrial district, in recognition of the recommendations of Dr. Basillie's Task Force on the Clarkson-Oakville air shed.

Works Service Level Increases

The *Ontario Minimum Maintenance Standards (OMMS)* regulation was created in 2002 by the *Provincial Government of Ontario* in order to provide municipalities with a set of minimum standards towards maintaining public safety as it relates to infrastructure. Since its introduction the City has adopted and complied with this regulation. In 2010, the OMMS underwent a review and has been amended to include three new areas previously not covered by the regulation. The revised standards include provisions for inspecting and maintaining sidewalks, street signs and street lighting. Labour, equipment and material resources are required to comply with the new regulation.



Storm water quality control pond at Mattamy Lorne Park helping to improve water quality along Credit River.

Increased Service Levels/New Initiatives - Funded from Tax

Description (\$ 000's)	BR #	FTE	2011	2012	2013	2014	Total Net Costs	Area of Focus	Strategic Pillar
Cycling Master Plan Implementation	211	4.0	502	386	329	284	1,501	Delivering on initiatives within the Strategic Action Plan	Connect
Traffic Signal Enhancement Installation	354	0.0	50	50	50	50	200	Maintaining a state of good repair for our infrastructure	
Watercourse Management Implementation	382	3.0	126	288	29	0	443	Maintaining a state of good repair for our infrastructure	
Transportation Demand Management & Smart Commute Support **	213	0.0	80	0	(40)	0	40	Delivering on initiatives within the Strategic Action Plan	Move
Amended Minimum Maintenance Standards - Sign Inventory, Sidewalk Patrol, Street Lighting	270	3.3	546	0	0	0	546	Maintaining a state of good repair for our infrastructure	
Clarkson Air Quality Improvements	442	0.0	25	0	0	0	25	Maintaining a state of good repair for our infrastructure	
Integrated Road Safety Program (IRSP)	335	1.0	0	68	43	0	111	Delivering on initiatives within the Strategic Action Plan	Connect
Expanded use of Hansen IMS to enhance T&W permit and dispatch services *	359	0.0	0	0	12	(1)	11	Continuous improvement	
Traffic Management Centre	222	8.0	0	0	362	370	732	Maintaining a state of good repair for our infrastructure	
Mississauga Storm Water Quality Control Strategy Implementation	401	0.0	0	0	200	0	200	Delivering on initiatives within the Strategic Action Plan	Green
Total Operating Budget Impact		19.3	1,249	792	1,013	704	3,809		

* Cost for this Roads initiative have been identified, but is part of Departmental Business Services operationally.

** Cost for this Roads initiative have been identified, but is reflected in the Transit service.

Capital Changes

Asset Management

The City's bridge inventory is the most critical of our assets to maintain from a safety perspective, and this business plan recommends the allocation of additional funding to bring average annual expenditures to the levels recently recommended by the City's structural engineering consultants (\$4.5 million annually).



The Credit River bridge on Lakeshore Road
Originally built in 1960 and rehabilitated in 2007

The target annual funding allocation for road rehabilitation (resurfacing and reconstruction) is \$30 million. Funding has been provided at an average of \$23.5 million annually, leaving a funding gap of about \$6.5 million per year to maintain the road network at its planned service level. This is managed at present by placing priority on the major and industrial road network first (the roadways most heavily

travelled and most critical to the City's economic health). Late in 2010, the results from an update to the City's Pavement Management System will be available, and this data will be used to determine if forecasts are still valid and to refresh annual funding targets. This information will be factored into corporate financial planning with respect to the infrastructure funding gap.

In the interim, this business plan reflects the above approach, with the exception of 2011. The *Region of Peel* obtained funding from the Infrastructure Stimulus Fund (ISF) for a watermain replacement program, and the City's road resurfacing program has been increased in 2011 to resurface the Mississauga roads affected by the Region's watermain works. The 2011 plan is to resurface all ISF related residential streets as well as the majority of adjacent streets requiring work. Resurfacing of industrial streets will be delayed to 2012.

The business plan also allocates sufficient funding to complete the replacement of high priority deteriorated noise attenuation barriers over three years.

As a companion program to the Traffic Management Centre an important and cost-effective approach to maximizing existing road infrastructure is the implementation of Transportation Demand Management (TDM) initiatives that are intended to support multi-modal transportation choices and discourage single occupant vehicle use. Over the time period 2011 to 2014, this service area plans to advance TDM initiatives through the extension of the Discount Transit Program pilot (2011-2012) and support for the establishment of a car share service in the City Centre. In addition, the service area plans to continue to support *Smart Commute Mississauga* and an internal Employee Smart Commute

program aimed at encouraging transit, active transportation and carpooling among city staff. The *Discount Transit Program* was established as a pilot with *Smart Commute Mississauga* to develop and assess an employer-based initiative aimed at promoting public transit use. An extension to the pilot is being proposed with the intention of attracting increased participation from city staff and additional employers. The availability of a car share service in the City Centre (consisting of short-term rental vehicles provided by a third-party vendor) has been identified as an important element to support the planned introduction of employee paid parking, given that such a service would reduce the need for employees to use a personal vehicle for work. The car share service would also be available for residents who only need to use a vehicle on an occasional basis, thereby reducing the need for vehicle ownership or a second household vehicle.

In alignment with efforts to deliver on initiatives within the Strategic Action Plan, an off-street paid parking program is being introduced for municipal parking facilities in the City Centre in 2011. The introduction of parking pricing for these facilities is a reflection of the City's Parking Strategy goals of improved parking supply management and efforts to influence commuter mode choice by encouraging the use of transit, active transportation and carpooling. Paid parking in the municipally-owned parking garages in the City Centre has been approved by City Council and is planned to be introduced in April 2011. In addition, municipally owned and operated paid parking will be provided in the form of two off-street surface lots. These two surface lots will be associated with the Sheridan College Mississauga Campus and are scheduled to begin operations in September 2011.

The Public Works and operations activity currently serves the City through four area Works Yards. A review of this function identified that the north-central section of the City is under-served. With increasing demands for services and maintenance as a result of infill development and aging infrastructure, space constraints on current facilities, and increased traffic volumes, a new north-central Works yard is required to ensure that current levels of service will be maintained.



7 km of noise barrier have been replaced since 2009

The tables that follow summarize the changes to the capital plan relative to the plan approved in 2010. For the full details of the proposed 2011-2020 capital plan see Volume II Appendix 5.

2011 - 2014 Net Capital Detail Changes

Program Expenditures (\$ 000's)	BR #	2011 Budget	2012 Budget	2013 Forecast	2014 Forecast	Post 2014 Forecast	Total (\$)	Area of Focus	Strategic Pillar
Permanent Snow Storage Sites	267	150	2,500	0	7,100	5,400	15,150	Continuous improvement	
Winter Maintenance Review	265	(50)	(50)	(50)	(50)	(300)	(500)	Continuous improvement	
DT21 Transportation Functional Design Studies	350	200	200	0	0	0	400	Delivering on initiatives within the Strategic Action Plan	Connect
Transit Accessibility Plan - Sidewalk Program	355	1,250	1,250	1,250	1,250	(2,894)	2,106	Delivering on initiatives within the Strategic Action Plan	Move
On-Street Paid Parking and BIA Parking Facilities	280	300	298	460	160	10,000	11,218	Delivering on initiatives within the Strategic Action Plan	Move
Transportation Master Plan	121	50	0	0	0	0	50	Delivering on initiatives within the Strategic Action Plan	Move
Roadway Rehabilitation Program	63	5,800	0	0	0	0	5,800	Maintaining a state of good repair for our infrastructure	
Cooksville Creek Capital Projects	404	4,480	1,180	5,130	3,360	(11,150)	3,000	Maintaining a state of good repair for our infrastructure	
Bridge/Culvert Rehabilitation Program	94	2,175	4,175	2,375	2,375	18,745	29,845	Maintaining a state of good repair for our infrastructure	
Noise Attenuation Barriers	62	350	0	2,622	1,178	3,563	7,713	Maintaining a state of good repair for our infrastructure	

2011 - 2014 Net Capital Detail Changes

Program Expenditures (\$ 000's)	BR #	2011 Budget	2012 Budget	2013 Forecast	2014 Forecast	Post 2014 Forecast	Total (\$)	Area of Focus	Strategic Pillar
Amended Minimum Maintenance Standards - Sign Inventory, Sidewalk Patrol, Street Lighting	270	200	0	0	0	0	200	Maintaining a state of good repair for our infrastructure	
Update and Enhancement of the Rain Gauge Network	272	67	21	0	0	0	88	Maintaining a state of good repair for our infrastructure	
Integrated Surveys and Control Network	31	35	35	35	35	210	350	Maintaining a state of good repair for our infrastructure	
Storm Drainage Network Modelling	403	(150)	(500)	250	250	0	(150)	Maintaining a state of good repair for our infrastructure	
Mississauga Storm Water Quality Control Strategy Implementation	401	0	250	250	250	1,500	2,250	Delivering on initiatives within the Strategic Action Plan	Green
Burnhamthorpe Road through City Centre (Arista Way to Mavis Road)	80	1,250	(2,500)	0	0	30,000	28,750	Delivering on initiatives within the Strategic Action Plan	Move
Expanded use of Hansen IMS to enhance T&W permit and dispatch services	359	0	0	116	0	0	116	Continuous improvement	
New North Central Works Yard	398	0	0	50	50	100	200	Maintaining a state of good repair for our infrastructure	
Traffic Signal Capital Installation	354	0	0	0	0	1,500	1,500	Maintaining a state of good repair for our infrastructure	

2011 - 2014 Net Capital Detail Changes

Program Expenditures (\$ 000's)	BR #	2011 Budget	2012 Budget	2013 Forecast	2014 Forecast	Post 2014 Forecast	Total (\$)	Area of Focus	Strategic Pillar
Goreway Drive Grade Separation	N/A	(2,000)	(4,000)	0	0	8,000	2,000	Grade Separation	
Drew Road Grade Separation - Construction	N/A	0	0	0	(14,000)	14,000	0	Grade Separation	
Creebank Road Extension Structure over Hwy 401	N/A	0	0	(11,302)	0	11,302	0	Road Improvements	
Dundas Street West - Winston Churchill Boulevard to Glen Erin Drive	N/A	0	0	0	0	(4,390)	(4,390)	Road Improvements	
Ninth Line Widening - Eglinton Avenue West to Britannia Road West	N/A	0	0	0	0	(9,010)	(9,010)	Road Improvements	
Tenth Line - Derry Road to Argentia Road	N/A	0	0	0	0	(4,850)	(4,850)	Road Improvements	
Creebank Road Extension - Enterprise Drive, Shawson Drive and Britannia Road East	N/A	(6,000)	6,000	0	0	0	0	Property Acquisition	
Sheridan Creek Erosion Control - Clarkson Road to Meadow Wood Road	N/A	(1,340)	1,340	0	0	0	0	Erosion Control	
Retrofit - Mullet Creek SWM Pond #5401 - West of Argentia Road and North of Derry Road West	N/A	(3,592)	3,590	0	0	0	(2)	Storm Water Management	

2011 - 2014 Net Capital Detail Changes

Program Expenditures (\$ 000's)	BR #	2011 Budget	2012 Budget	2013 Forecast	2014 Forecast	Post 2014 Forecast	Total (\$)	Area of Focus	Strategic Pillar
Mullet Creek Erosion Control - Burnhamthorpe Road West to behind Woodchuck Lane	N/A	(1,500)	1,490	0	0	0	(10)	Erosion Control	
Retrofit - Mullet Creek SWM Pond #5402 - North of Derry Road West and West of Syntex Drive	N/A	0	(7,610)	7,610	0	0	0	Storm Water Management	
Total Net Expenditures		1,675	7,669	8,796	1,958	71,726	91,824		

Note: Numbers may not balance due to rounding.

Required Resources

11.0 Human Resources

This service area will face a number of human resource challenges over the next four years. In order to address those challenges the following strategies will be implemented:

- Leverage corporate and service area programs on talent management, succession planning and staff development to address changing priorities and upcoming vacancies;
- Utilize organizational development resources to align resources, skills, processes and structures with service delivery priorities;
- Re-negotiation of CUPE collective agreement;
- Promote cross-departmental staff teams for project delivery;
- Attract talented multi-disciplinary people; and
- Provide opportunities to encourage innovative and creative thinking.

Human Resources Requirement

Description	Total FTE
2010 Restated Complement	417.5
2011 Budget Requirement	420.9
2012 Budget Requirement	425.6
2013 Forecast	430.6
2014 Forecast	434.6



The motto in the Transportation and Works Department is: "We are Powered by our Employees, Focused on Safety, Innovation and Excellence, We Deliver".

This table represents changes to staff complement by program area over the course of the business plan.

Human Resources Requirement Distribution

Program	2010	2011	2012	2013	2014
Maintenance Control	124.5	118.3	118.3	118.3	118.3
Engineering & Capital Works	59.4	59.4	59.4	59.4	59.4
Development Construction	12.0	12.0	12.0	12.0	12.0
Corporate Fleet Maintenance	27.7	27.7	27.7	27.7	27.7
Crossing Guards	68.9	68.9	68.9	68.9	68.9
Traffic Management	49.5	52.8	53.8	57.8	61.8
Transportation & Infrastructure Planning	44.5	46.8	49.5	50.5	50.5
Parking Facilities	1.0	3.0	4.0	4.0	4.0
Geomatics	30.0	32.0	32.0	32.0	32.0
Total Service Distribution	417.5	420.9	425.6	430.6	434.6

12.0 Technology

The successful implementation of technology is critical to the operational effectiveness of the Roads, Storm Drainage and Watercourses service area. This service area relies on a number of acquired enterprise systems to perform work and manage day to day transactions and processes.

The Hansen Enterprise system is used to track and process customer service requests, inventory infrastructure, manage work orders and issue permits. Bentley Micro-station is used to undertake computer aided design for transportation and storm drainage projects.

Specialized systems and software are also acquired and utilized for traffic, pavement and bridge management including capital and maintenance planning and network optimization. This service area is presently using Pave-Pro for pavement management, Bridge TMS for Bridge and Culvert Management and Fastracs T2000 for Traffic Management.

The four year business plan includes a number of initiatives to further improve decision making and effectiveness in day to day and strategic operations of this service area:

- Migrate from Hansen 7 to Hansen 8 and expand infrastructure system functionality to advance the infrastructure asset management objectives and manage new legislated standards for minimum maintenance;
- Leverage and expand Automated Vehicle Locator (AVL) and GPS technologies to mitigate risks and improve efficiencies;
- Upgrade and replace supporting equipment and networks;

- Implement project management software to identify resource requirements;
- Develop and implement customer self-serve options for on-line business transactions and to streamline various business processes by managing these processes in an enterprise system;
- Implement a new Traffic Management Centre and other Intelligent Transportation Systems in order to leverage technology to maximize existing roadway capacity and to ensure maximum efficiency of integration with future LRT/BRT initiatives; and
- Implement a new communication system to accommodate traffic signal and integrated transportation system applications, as well as future wireless applications within City limits.



The Roads, Storm Drainage and Watercourses service area receives and responds to over 5,000 service requests annually using the Hansen Customer Service System.



13.0 Facilities

This service area operates out of six facilities:

- The Commissioner's Office, Transportation and Infrastructure Planning Division, Business Services Division, and the Parking/TDM Division work out of the seventh and eighth floors of 201 City Centre Drive;
- The Customer Service Counter, Engineering and Works, Dispatch and the IMS Section work out of 3185 Mavis Road; and
- Four Public Works Yards are located at 3185 Mavis Rd., Malton, Meadowvale, Clarkson.

A reconfiguration of office space at 201 City Centre Drive will be required to support the growth of the new Cycling Office and additional staff required for watercourse management.

A reconfiguration of the administrative building at 3185 Mavis Road will be required to support the growth required for the New Traffic Management Centre.

During the term of this business plan, planning and design will begin for the building of the new North-Central Works facility.



In the summer of 2008, the administration and planning staff serving Roads, Storm Drainage and Watercourses moved into the 7th and 8th floors of 201 City Centre Drive.

14.0 Budget

The following table provides a concise overall summary of the 2011-2014 operating budget and forecast relative to the 2010 Budget.

4 Year Budget and Forecast

(\$ 000's)	2010 Budget	2011 Budget	2012 Budget	2013 Forecast	2014 Forecast
Labour Costs	25,602	26,395	28,090	29,760	30,904
Other Operating Expenses	43,784	44,350	46,328	48,128	49,629
Total Costs	69,386	70,745	74,418	77,888	80,533
Total Revenues	(7,824)	(7,307)	(7,604)	(7,657)	(7,680)
Net Cost	61,563	63,438	66,814	70,232	72,853
Allocations	2,206	2,161	2,325	2,423	2,488
Net of Allocations	63,768	65,599	69,140	72,655	75,342

Note: Numbers may not balance due to rounding.

Additional details regarding program changes relative to the 2010 Budget and 2009 expenditure levels are provided in the table below.

2011 Net Budget by Program

Program Expenditures (\$ 000's)	2009 Actual	2010 Budget	2011 Base Budget	Base Change %	2011 Program Changes	2011 Request	2011 Change	2011 Change (%)
Maintenance Control	9,542	7,998	7,843	-1.9	(59)	7,784	(213)	-2.7
Sewer Bridges & Watercourses	1,638	1,206	1,303	8.1	60	1,363	158	13.1
Winter Maintenance	14,605	19,213	19,838	3.2	(1,169)	18,669	(545)	-2.8
Roads and Sidewalk Maintenance	4,065	4,483	4,703	4.9	0	4,703	220	4.9
Cleaning and Litter Pickup	2,993	3,908	4,097	4.9	(450)	3,647	(260)	-6.7
Development Construction	1,027	1,050	1,088	3.6	0	1,088	38	3.6
Engineering & Capital Works	(677)	140	349	149.4	0	349	209	149.4
Corporate Fleet Maintenance	1,087	1,169	1,341	14.7	0	1,341	171	14.7
Transportation & Infrastructure Planning	2,913	4,018	4,210	4.8	478	4,688	670	16.7
Streetlighting	7,050	7,049	7,149	1.4	0	7,149	100	1.4
Crossing Guards	2,379	2,432	2,473	1.7	0	2,473	41	1.7
Traffic Management	7,646	8,537	8,775	2.8	517	9,292	755	8.8
Parking Facilities	90	(432)	(208)	51.8	100	(108)	323	74.9
Geomatics	2,811	2,999	3,071	2.4	92	3,163	165	5.5
Net Program Impact	57,170	63,768	66,030	3.5%	(431)	65,599	1,831	2.9%

Note: Numbers may not balance due to rounding.

The following table summarizes the requested and forecasted operating budget by program for the 2011 to 2014 Business Plan.

2011 - 2014 Net Operating Budget by Program

Program Expenditures (\$ 000's)	2011 Budget	2012 Budget	2013 Forecast	2014 Forecast
Maintenance Control	7,784	8,218	8,581	8,796
Sewer Bridges & Watercourses	1,363	1,582	1,586	1,590
Winter Maintenance	18,669	19,463	20,265	21,098
Roads and Sidewalk Maintenance	4,703	4,832	4,887	4,942
Cleaning and Litter Pickup	3,647	3,720	3,792	3,864
Development Construction	1,088	1,148	1,207	1,249
Engineering & Capital Works	349	486	623	695
Corporate Fleet Maintenance	1,341	1,490	1,639	1,748
Transportation & Infrastructure Planning	4,688	5,450	6,262	6,730
Streetlighting	7,149	7,249	7,349	7,449
Crossing Guards	2,473	2,487	2,501	2,513
Traffic Management	9,292	9,684	10,413	11,045
Parking Facilities	(108)	(145)	(152)	(160)
Geomatics	3,163	3,477	3,704	3,784
Net Program Impact	65,599	69,140	72,655	75,342

Note: Numbers may not balance due to rounding.

The following table is a summary of the requested and forecasted capital budget, by program and year, for 2011 to 2014, as well as the balance for the ten year plan (2015-2020), which is summarized in the Post 2014 Forecast column.

2011 - 2020 Total Net Capital Program

Program Expenditures (\$ 000's)	2011 Budget	2012 Budget	2013 Forecast	2014 Forecast	Post 2014 Forecast	Total (\$)
Bridge & Structure Rehabilitation	4,500	4,500	4,500	4,500	27,000	45,000
Major Roads	11,231	12,148	13,620	20,958	116,990	174,947
Other Engineering	22,012	27,562	21,362	24,917	123,196	219,050
Roadway Rehabilitation	22,908	15,374	16,224	23,900	144,450	222,855
Storm Drainage	6,977	17,311	19,710	12,230	37,050	93,078
Total Net Expenditures	67,628	76,895	75,416	86,505	448,686	755,130

Note: Numbers may not balance due to rounding.

Performance Measures

15.0 Balanced Scorecard

A Balanced Scorecard identifies measures for four key areas for an organization's performance: Financial; Customers; Employees; and Business Processes.

By paying attention to all four areas an organization can retain balance to its performance and know that it is moving towards the attainment of its goals.

About the Measures for Roads, Storm Drainage and Watercourses

Financial Measures

The average road and storm water maintenance operating costs is a measure that indicates the city's ability to manage cost pressures associated with aging infrastructure and climate change respectively. Without compromising public safety, this service area will continue to apply best practices and find efficiencies in day to day operations while providing consistent service levels.

The average winter maintenance operating cost is a measure of the city's ability to balance winter maintenance operating costs with defined service levels. Without compromising public safety, this service area will continue to apply best practices and find operating efficiencies throughout all winter maintenance activities.

The annual gross revenue for parking is a measure of the city's ability to introduce new parking management initiatives and adjust parking rates. The city's objective is to implement improvements to parking management in strategic areas

which is expected to increase parking revenues over the term of this business plan.

Customer Measures

The percentage of customer requests meeting target response dates is a measure that indicates the service area's ability to respond to resident and Council service requests according with established response times and service levels.

Citizen satisfaction is a measure that indicates how satisfied residents are with services on roads, traffic flow and environmental planning. The scale for this measure is from one to ten with ten being the highest level of satisfaction.

Employee Measures

Overall employee engagement is a measure which indicates the extent to which employees value, enjoy and believe in what they do. The employee engagement survey is conducted every two years and it enables employees to rate how they feel about the City of Mississauga as an Employer of Choice

Employee engagement survey participation is a measure indicating the percentage of employees participating in the Employee Engagement Survey. This statistic is measured every two years. It is important to the City that employees continue to participate in this survey and express how they feel about working at the city.

Employee engagement with professional and personal development is a measure which indicates employee's opportunities for personal and professional growth. This statistic is measured every two years as part of the Employee engagement survey.

Business Process Measures

The percentage of roads in “good” condition or better is a measure that indicates the city’s ability to manage lifecycle asset management programs for roads. A pavement condition survey is conducted every three years whereby a condition rating is applied to every city owned road in Mississauga.

The percentage of bridges and culverts in “good” condition or better is a measure that indicates the City’s ability to manage lifecycle asset management programs for bridges and culverts. A mandatory bridge and culvert condition survey is performed every two years whereby a condition rating is applied to every city owned bridge and culvert in Mississauga.

The percentage of City owned intersections that function at or above capacity is a measure that indicates the efficiency with which traffic moves through intersections within the City. While the percentage of intersections operating at or above capacity has not changed in recent years, the delay experienced by vehicles has increased.

The number of collisions per thousand population is a measure that indicates the city’s ability to provide safe traffic management programs. This measure is very sensitive and will fluctuate from year to year.

The percentage of time that established winter maintenance response times are met is a measure that indicates the frequency with which the city meets its service level objectives for winter operations. The extent and severity of winter events will have an impact on this measure.

The percentage of scheduled fleet converted to Green Fleet Standards is a measure that indicates the city’s responsiveness to environmental initiatives contained within the Green Fleet Plan. By 2011, it is expected that the city will reach its Green Fleet objective. The conversion of 113 of the 211 (54%) vehicles that were identified for down-sizing, improved fuel efficiency and hybrid electric vehicles will have been completed. The Green Fleet Standards will need to be updated in 2011.

Measures for Roads, Storm Drainage and Watercourses

	Objective	Measure	2008 Actual	2009 Actual	2010 Planned	2011 Planned	2012 Planned	2013 Planned	2014 Planned
Financial	Without compromising public safety continue to find efficiencies in day to day operations while providing consistent service levels.	Average Road Maintenance Operating Cost Per Lane Km	\$1,552	\$1,989	\$2,000	\$2,000	\$2,000	\$2,000	\$2,500
		Average Storm Water Management Operating Cost per Km of Storm Sewer	\$1,067	\$1,235	\$1,300	\$1,300	\$1,350	\$1,400	\$1,400
		Average Winter Maintenance Operating Cost Per Lane Km	\$4,356	\$2,877	\$3,500	\$3,500	\$3,500	\$3,500	\$3,500
	Planned increase in parking revenues over time with the introduction of new parking facilities	Annual Gross Parking Revenues	\$182,357	\$209,204	\$255,000	\$709,000	\$1,031,000	\$1,109,000	\$1,157,000
Customers	Adhere to service request response Level	Percentage of customer requests meeting target response date	54%	68%	75%	80%	90%	90%	90%
	Citizen Satisfaction	Average citizen satisfaction rating for roads, traffic and environmental planning	7.1	7.1	7.5	7.5	8	8	8
Employees	Employee Satisfaction	Overall employee engagement for Transportation and Works	65%	65%	66%	67%	68%	69%	70%
		Employee engagement survey participation for Transportation and Works	45%	45%	48%	48%	51%	51%	55%
		Employee satisfaction professional and personal development for Transportation and Works	62%	62%	63%	64%	65%	66%	67%

Measures for Roads, Storm Drainage and Watercourses

Internal Business Processes	Objective	Measure	2008 Actual	2009 Actual	2010 Planned	2011 Planned	2012 Planned	2013 Planned	2014 Planned
	Adhere to planned asset condition levels while maintaining public safety	Percentage of Roads in Good Condition Or Better	81%	77%	76%	75%	74%	73%	72%
		Percentage of Bridges in Good Condition Or Better	87%	90%	90%	90%	90%	90%	90%
	Move traffic efficiently, volume to capacity ratio	Percentage of City owned intersections that function at or above capacity	14%	14%	14%	15%	15%	15%	15%
	Traffic Safety	Number of Collisions per 1000 population	8	8	8	8	8	8	8
	Adhere to operational service levels	Percentage of Time that Winter Response Times Were Met	100%	100%	100%	100%	100%	100%	100%
	Adhere to Green Fleet Plan	Percentage of scheduled fleet converted to Green Fleet Standards	70%	80%	90%	100%	100%	100%	100%
