Roads, Storm Drainage & Watercourses - Service Summary 2011-2014

BR#	Service	Initiative Description	Category	FTE	2011	2012	2013	2014	Total Operating	Capital 2011-2014
272	Roads, Storm Drainage & Watercourses	Update and Enhancement of the Rain Gauge Network	Operating Impacts from Cap Projects	0.0	10	10	0	0	20	88
263	Roads, Storm Drainage & Watercourses	Leaf Collection - improving the efficiency of the operation	Efficiencies	(2.2)	(100)	0	0	0	(100)	0
264	Roads, Storm Drainage & Watercourses	Street Cleaning - Improving efficiency	Efficiencies	(1.1)	(350)	0	0	0	(350)	0
265	Roads, Storm Drainage & Watercourses	Winter Maintenance Review	Efficiencies	(3.0)	(1,282)	0	0	0	(1,282)	(200)
266	Roads, Storm Drainage & Watercourses	Salt Management - Alternative de-icing materials	Efficiencies	0.0	(50)	0	0	0	(50)	0
274	Roads, Storm Drainage & Watercourses	Sharing spatial information in project areas using ProjectWise application	Efficiencies	0.0	0	0	50	(50)	0	0
512	Roads, Storm Drainage & Watercourses	Budget Reduction - Professional Services and Administration (RSDW Service Area)	Efficiencies	0.0	(100)	0	0	0	(100)	0
		Subtotal	**Efficiencies**	**(6.2)**	**(1,882)**	**0**	**50**	**(50)**	**(1,882)**	**(200)**
533	Roads, Storm Drainage & Watercourses	Reductions in Business Services Division - Transportation and Works Department	Service Level Adjustments	0.0	(53)	0	0	0	(53)	0
31	Roads, Storm Drainage & Watercourses	Integrated Surveys and Control Network	Growth	1.0	49	49	0	0	98	140

Roads, Storm Drainage & Watercourses - Service Summary 2011-2014

BR#	Service	Initiative Description	Category	FTE	2011	2012	2013	2014	Total Operating	Capital 2011-2014
64	Roads, Storm Drainage & Watercourses	Infrastructure Asset Management Program Implementation - New Asset Inventories & Reporting	Growth	1.0	43	53	20	20	136	0
121	Roads, Storm Drainage & Watercourses	Transportation Master Plan	Growth	0.0	0	0	0	0	0	50
146	Roads, Storm Drainage & Watercourses	City Centre Off-Street Parking	Growth	2.0	100	(55)	2	2	49	0
350	Roads, Storm Drainage & Watercourses	DT21 Transportation Functional Design Studies	Growth	0.0	0	0	0	0	0	400
398	Roads, Storm Drainage & Watercourses	New North Central Works Yard	Growth	0.0	0	0	0	0	0	100
428	Roads, Storm Drainage & Watercourses	T&W Capital Works - Implementation of Hansen Contracts Module (Work Plan Item)	Growth	0.0	0	0	0	0	0	0
430	Roads, Storm Drainage & Watercourses	Storm Sewer TV Inspections Hansen Implementation (Work Plan Item)	Growth	0.0	0	0	0	0	0	0
		Subtotal	**Growth**	**4.0**	**192**	**47**	**22**	**22**	**283**	**690**
62	Roads, Storm Drainage & Watercourses	Noise Attenuation Barriers	New Service Levels	0.0	0	0	0	0	0	4,150
80	Roads, Storm Drainage & Watercourses	Burnhamthorpe Road through City Centre (Arista Way to Mavis Road)	New Service Levels	0.0	0	0	0	0	0	(1,250)

Roads, Storm Drainage & Watercourses - Service Summary 2011-2014

BR#	Service	Initiative Description	Category	FTE	2011	2012	2013	2014	Total Operating	Capital 2011-2014
211	Roads, Storm Drainage & Watercourses	Cycling Master Plan Implementation	New Service Levels	4.0	502	386	329	284	1,501	0
213	Roads, Storm Drainage & Watercourses	Transportation Demand Management & Smart Commute Support	New Service Levels	0.0	80	0	(40)	0	40	0
222	Roads, Storm Drainage & Watercourses	Traffic Management Centre	New Service Levels	8.0	0	0	362	370	732	0
267	Roads, Storm Drainage & Watercourses	Permanent Snow Storage Sites	New Service Levels	0.0	0	0	0	0	0	9,750
270	Roads, Storm Drainage & Watercourses	Amended Minimum Maintenance Standards - Sign Inventory, Sidewalk Patrol, Street Lighting	New Service Levels	3.3	546	0	0	0	546	200
332	Roads, Storm Drainage & Watercourses	New Streetlighting Technologies	New Service Levels	0.0	0	0	0	0	0	0
335	Roads, Storm Drainage & Watercourses	Integrated Road Safety Program (IRSP)	New Service Levels	1.0	0	68	43	0	111	0
354	Roads, Storm Drainage & Watercourses	Traffic Signal Enhancement Installation	New Service Levels	0.0	50	50	50	50	200	0
355	Roads, Storm Drainage & Watercourses	Transit Accessibility Plan - Sidewalk Program	New Service Levels	0.0	0	0	0	0	0	5,000
359	Roads, Storm Drainage & Watercourses	Expanded use of Hansen IMS to enhance T&W permit and dispatch services	New Service Levels	0.0	0	0	12	(1)	11	116

Roads, Storm Drainage & Watercourses - Service Summary 2011-2014

BR#	Service	Initiative Description	Category	FTE	2011	2012	2013	2014	Total Operating	Capital 2011-2014
382	Roads, Storm Drainage & Watercourses	Watercourse Management Implementation	New Service Levels	3.0	126	288	29	0	443	0
401	Roads, Storm Drainage & Watercourses	Mississauga Storm Water Quality Control Strategy Implementation	New Service Levels	0.0	0	0	200	0	200	750
404	Roads, Storm Drainage & Watercourses	Cooksville Creek Capital Projects	New Service Levels	0.0	0	0	0	0	0	14,150
442	Roads, Storm Drainage & Watercourses	Clarkson Air Quality Improvements	New Service Levels	0.0	25	0	0	0	25	0
		Subtotal	**New Service Levels**	**19.3**	**1,329**	**792**	**985**	**703**	**3,809**	**32,866**
63	Roads, Storm Drainage & Watercourses	Roadway Rehabilitation Program	Capital Only	0.0	0	0	0	0	0	5,800
94	Roads, Storm Drainage & Watercourses	Bridge/Culvert Rehabilitation Program	Capital Only	0.0	0	0	0	0	0	11,100
403	Roads, Storm Drainage & Watercourses	Storm Drainage Network Modelling	Capital Only	0.0	0	0	0	0	0	(150)
		Subtotal	**Capital Only**	**0.0**	**0**	**0**	**0**	**0**	**0**	**16,750**
Total Service Budget Impact				**17.1**	**(404)**	**849**	**1,057**	**675**	**2,177**	**50,194**

Business Plan and Budget

City of Mississauga

Budget Request # 31

Description of Proposed Initiative

Integrated Surveys and Control Network

Service Area

Roads, Storm Drainage & Watercourses

Department

Transportation and Works

Impacts (000s)	2010 & Prior	2011	2012	2013	2014
Net Operating	2,678	49	49	0	0
Net Cost Funded from Tax Levy	2,678	49	49	0	0
Net Impact on Tax Levy		0.02 %	0.02 %	0.00 %	0.00 %
FTE	30	1	0	0	0
Capital Approved Forecast					
Net Incremental Capital	0	35	35	35	35

Details of Service Change

New Provincial Government legislation requires all boundary surveys be tied into the City's existing horizontal and vertical control networks (reference points located across the city which are vital to surveys), and that the survey must be fully coordinated with true ground values.

This change in legislation impacts the City in two areas: First, an increase in workload to manage City surveying work. Current staffing levels are not sufficient to meet these additional needs. Without additional staff, added work will have to be outsourced to survey firms. The cost of contracting out work is twice as expensive compared to completing the work "in-house". An additional staff position is required to meet the legislative requirements and save the City significant contracting costs.

Second, the City has a requirement to increase the density of the current control network and perform regular maintenance of control points. Without the proposed position, this work will be entirely outsourced to private survey firms. The City owns the horizontal and vertical control networks within the City limits. Capital funding is currently not in place to perform the required maintenance. An allocation of $35,000, annually, is required to meet state of good repair requirements for control networks.

Service Impact

With legislative requirements, current service levels can't be maintainable without an increase in resources. A reduction of service levels would not be sufficient to allow a single Land Surveyor to meet the critical minimum turnaround time for Capital and Legal Survey requirements. Outsourcing additional work to meet service needs would increase costs to all operating departments, resulting in increases in operational and capital budgets. This cost would be greater than the cost of adding a new position.

Comments

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 required capital funding, on an annual basis, will be used to contract out the services needed to verify monument locations and for the replacement of damaged monuments or the installation of new monuments.

Business Plan and Budget

City of Mississauga

Budget Request # 62

Description of Proposed Initiative

Noise Attenuation Barriers

Service Area

Roads, Storm Drainage & Watercourses

Department

Transportation and Works

Impacts (000s)	2010 & Prior	2011	2012	2013	2014
Net Operating	0	0	0	0	0
Net Cost Funded from Tax Levy	0	0	0	0	0
Net Impact on Tax Levy		0.00 %	0.00 %	0.00 %	0.00 %
FTE	0	0	0	0	0
Capital Approved Forecast	5,949	1,500	3,000	378	378
Net Incremental Capital	0	350	0	2,622	1,178

Details of Service Change

On December 9, 2009, Council approved a report entitled *Noise Attenuation Barrier Replacement Program -Change to City/Resident Cost Sharing Formula and Repayment to Participating Residents*.

Funding is requested to complete the replacement of all of the remaining NOW and 1-5 year rated noise barriers by the end of 2013 at 100% City cost.

In addition, a study to determine the implications of a potential retrofit (new) noise barrier program amendment along Major Collector Roads will be undertaken in 2010 / 2011 in accordance with the Council report. Funding for the installation of new noise barriers along Major Collector roads is not included in this budget request.

Service Impact

Feedback about the 2009 ISF-related noise barrier replacement work has been positive, both from affected residents and the general public. Work completed to date has enhanced road rights-of-way and the City's image.

An additional $4.15 million ($9.4 million total) will be required to replace the remaining NOW and 1-5 year rated noise barriers by 2013 and start on the next round of priorities in 2014. It is expected that there will be considerable public interest in completing these noise wall replacements as soon as possible, given the shift to 100% City funding. Replacement priorities will be presented to Council for approval each year, in accordance with deterioration level and risk.

Comments

Upon completion of the 2011 Major Collector roads noise barrier needs study, a report will be prepared for General Committee.

Business Plan and Budget

City of Mississauga

Budget Request # 63

Description of Proposed Initiative

Roadway Rehabilitation Program

Service Area

Roads, Storm Drainage & Watercourses

Department

Transportation and Works

Impacts (000s)	2010 & Prior	2011	2012	2013	2014
Net Operating	0	0	0	0	0
Net Cost Funded from Tax Levy	0	0	0	0	0
Net Impact on Tax Levy		0.00 %	0.00 %	0.00 %	0.00 %
FTE	0	0	0	0	0
Capital Approved Forecast	66,674	17,108	15,124	15,974	23,650
Net Incremental Capital	0	5,800	0	0	0

Details of Service Change

The 2004 Pavement Management Study recommended a long term road rehabilitation budget target of $30 million annually, with $18 million going to major, industrial and collector roads and $12 million to local residential roads.

For affordability reasons, only $23.5 million has been funded annually on average, leaving a road rehabilitation infrastructure deficit of about $65 million over the next ten years (2004 dollars unadjusted for inflation). An upgrade to the existing Pavement Management System is underway, with analysis results expected later this year. The updated review will refresh these findings.

With respect to this business plan cycle, the annual budget allocation for Years 2011 through 2013 was reduced last year because funding was front-ended in 2009 to cover the City's portion of road resurfacing works under the federal/provincial Infrastructure Stimulus Fund (ISF).

Additional funding of $5.8 million is required in 2011 over and above the adjusted base budget. This funding is required to resurface the many roads included in the Region of Peel's ISF-funded 2010 watermain replacement program. With this funding, the ten year infrastructure deficit is reduced to $59 million.

Service Impact

The additional funding of $5.8 million will mean that all of the ISF related streets in residential areas will be resurfaced in 2011, one year after the watermain replacement has occurred. It also means that the majority of the adjacent residential streets having immediate pavement needs will be resurfaced at the same time, providing for more cost-effective contracts and minimizing neighbourhood disruption.

One outcome of this approach is that industrial ISF related streets will be delayed to 2012. It is expected that the quality of the temporary restoration of the watermain trenches on these industrial roads will allow this one year delay.

If the additional $5.8 million is not approved, some residential areas will experience road construction three years in a row.

Comments

Presently, the City's pavement management system is showing that 78% of roads in the City's network are rated as "Good" or better. This percentage has been slowly decreasing over the past few years. This is a planned reduction over time to achieve an average target of 70% to reflect the City's aging roads while still spending the right amount of money at the right time to maximize pavement lifecycle and minimize capital costs.

Business Plan and Budget

City of Mississauga

Budget Request # 64

Description of Proposed Initiative

Infrastructure Asset Management Program Implementation - New Asset Inventories & Reporting

Service Area

Roads, Storm Drainage & Watercourses

Department

Transportation and Works

Impacts (000s)	2010 & Prior	2011	2012	2013	2014
Net Operating	2,678	43	53	20	20
Net Cost Funded from Tax Levy	2,678	43	53	20	20
Net Impact on Tax Levy		0.01 %	0.02 %	0.01 %	0.01 %
FTE	30	1	0	0	0
Capital Approved Forecast					
Net Incremental Capital	0	0	0	0	0

Details of Service Change

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 of way.

Building on the success of the City's road network inventory and pavement management system, the City's goal is to create and maintain all major infrastructure related inventories in the same manner as the road system. Over the next four years, the City is planning to create and maintain four new infrastructure asset inventories for storm sewers, sidewalks/trails, street lighting, and street signs. The combined replacement value of the four new inventories is estimated at $2 billion.

The major service change is that the City will be moving away from graphical (map based) representations of inventories for the Storm Drainage, Street-lighting and Pedestrian Networks towards digital inventories that contain important data like age, condition and work history. The regulatory signs inventory is a completely new inventory that is required by the new Minimum Maintenance Standards regulations and will be created using mobile field technology.

Residents will see an improvement in the way we manage and maintain our physical infrastructure assets and they will also see an improvement in the way decision making takes place on infrastructure investment.

The addition of one full time position, the conversion of two contract positions into permanent positions and addition of $20,000 in 2013 and 2014 to cover the costs associated with collection of additional inventories will be required for this initiative.

Service Impact

The continued implementation of the IAM strategy promotes the better management of our assets over their entire lifecycle. The 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

Completion of the pedestrian network will enhance the City's ability to plan to make improvements to the pedestrian active transportation mode in support of the MOVE and CONNECT strategic plan pillars as well as allow the City to initiate more effective asset management practices and technology for the inspection of sidewalks and trails to meet the new Minimum Maintenance Standard regulations.

The creation of a comprehensive storm drainage network is fundamental to evaluating the effectiveness of the City's storm sewer watercourse and storm water management network.

Converting the street light network inventory into a City owned database will enable better management and control of light poles and luminaire replacement and gives the City the ability to set up inspection programs using technology already available.

The creation of a sign inventory will enable the City to manage risk with respect to missing regulatory signs and signs which have lost their night time visibility. This will enable the City to meeting the new Minimum Maintenance Standards regulations.

Finally, all the inventories listed will enable the City to better reconcile asset inventories for Tangible Capital Asset Reporting.

Comments

This resources required for this initiative also supports initiative number 270 - Amendments to Minimum Maintenance Standards and the ongoing annual requirements for tangible capital asset reporting.

This initiative speaks to creating the line and node work required for the remaining major asset classes.

Business Plan and Budget

City of Mississauga

Budget Request # 80

Description of Proposed Initiative

Burnhamthorpe Road through City Centre (Arista Way to Mavis Road)

Service Area

Roads, Storm Drainage & Watercourses

Department

Transportation and Works

Impacts (000s)	2010 & Prior	2011	2012	2013	2014
Net Operating	0	0	0	0	0
Net Cost Funded from Tax Levy	0	0	0	0	0
Net Impact on Tax Levy		0.00 %	0.00 %	0.00 %	0.00 %
FTE	0	0	0	0	0
Capital Approved Forecast	500	3,500	2,500		
Net Incremental Capital	0	1,250	-2,500	0	0

Details of Service Change

Burnhamthorpe Road through the City Centre is identified as a multi-modal corridor in the City's Strategic Plan. The Downtown 21 Master Plan has proposed a new concept for the street which incorporates improved multi-modalism through a number of potential changes. The proposed changes, which will be evaluated by a multi-disciplinary staff team and engineering / planning consultant through a Municipal Class Environmental Assessment (EA), could include on-road protected cycling lanes, completion of the Burnhamthorpe Trail, satellite transit facilities as a precursor to a potential Light Rapid Transit (LRT) service, improved pedestrian crossings, decorative centre median, upgraded streetscaping, and the burial of the Enersource hydro transmission cables. This work is proposed for 2015 and 2016, after this business plan cycle, as this timing will allow for the Hurontario LRT EA process to determine the design elements to be incorporated from Hurontario Street to Living Arts Drive.

Because the pavement condition for Burnhamthorpe Road through the City Centre is poor, $4.75 million is proposed in 2011 to rehabilitate the pavement surface, provide a temporary cycling connection, improve the intersection at Kariya Gate and complete the sidewalk connections.

Service Impact

The works proposed in 2011 are rehabilitative in nature and will improve the road surface condition, provide a temporary cycling connection through the City Centre, improve pedestrian safety at the intersection of Kariya Gate and upgrade the existing sidewalk on the south side of Burnhamthorpe Road. The implementation of any or all of the changes to Burnhamthorpe Road as proposed in 2015 and 2016 through the Downtown 21 Master Plan could have the following impacts:

- City building - creation of urban corridor
- Satellite transit facilities - may reduce congestion at City Centre Transit Terminal
- Increased cycling and pedestrian service levels - reduced auto dependency, support multi-modalism, increase connectivity
- Reduced traffic service levels - could be partially off-set by transit and cycling initiatives - will create additional congestion and delay during peak hours and some weekend hours - impacts should be confirmed through more detailed transportation study

Comments

The road rehabilitation work is required immediately and cannot be postponed until the completion of the

Environmental Assessment for Burnhamthorpe Road.

The background studies for the Transit Project Assessment Process (TPAP) will commence in 2011. The EA's for the remainder of Burnhamthorpe Road (from Arista Way to Hurontario Street and from Living Arts Drive through to Mavis Road) will commence in late 2011 or early 2012 depending on the progress of the Hurontario LRT projects. These studies, building on the vision of the DT 21 Master Plan, will determine the ultimate design for Burnhamthorpe Road.

The $30 million total costs split over 2015 and 2016 assumes $5 million for burial only of lower utility lines and $25 million for transit facilities, centre median, enhanced streetscape works and separated cycling lanes. A more accurate costing will be provided subsequent to the completion of the EA.

Light Rapid Transit (LRT) costs and the burial of high-voltage transmission line costs are not included.

Business Plan and Budget

City of Mississauga

Budget Request # 94

Description of Proposed Initiative

Bridge/Culvert Rehabilitation Program

Service Area

Roads, Storm Drainage & Watercourses

Department

Transportation and Works

Impacts (000s)	2010 & Prior	2011	2012	2013	2014
Net Operating	0	0	0	0	0
Net Cost Funded from Tax Levy	0	0	0	0	0
Net Impact on Tax Levy		0.00 %	0.00 %	0.00 %	0.00 %
FTE	0	0	0	0	0
Capital Approved Forecast	4,500	2,325	325	2,125	2,125
Net Incremental Capital	0	2,175	4,175	2,375	2,375

Details of Service Change

Prior to 2007, bridge/culvert structures were maintained based on a "worst first" method, since the structures were primarily young and in good condition. However, as the City's inventory ages it is important to utilize a bridge management system which recommends the right treatment on the right structure at the right time, using a philosophy of safety first, followed by maximizing the benefit/cost ratio of maintenance activities based on the life cycle of each structure.

In 2007, T&W entered into an agreement with EMSi to utilize their Bridge Total Management System (BTMS) to manage the City's bridge/culvert inventory with respect to the overall condition index and provide long term financial forecasts. Deliverables include the bi-annual inspection (Ontario Regulated) of the City's 217 structures. The current agreement expires in October 2011 and an update is required.

The BTMS analysis indicates that on average, an additional $2.5 million is required annually ($4.5 million per year in total) in the Capital Budget for the next 10 years to undertake bi-annual inspections, provide the required maintenance/rehabilitation for an average of 7 structures per year, and conduct detailed condition surveys for each of the identified structures.

Service Impact

Annual expenditures on bridge/culvert capital maintenance and rehabilitation will increase in accordance with the recommendations of the City's structural engineering consultants. This will allow for additional structures to be rehabilitated every year to ensure safety and to maximize the benefit/cost ratio for bridge asset management based on the life cycle of each structure.

Appropriate structure life cycle management will reduce long term repair and replacement costs.

Comments

Business Plan and Budget

City of Mississauga

Budget Request # 121

Description of Proposed Initiative

Transportation Master Plan

Service Area

Roads, Storm Drainage & Watercourses

Department

Transportation and Works

Impacts (000s)	2010 & Prior	2011	2012	2013	2014
Net Operating	0	0	0	0	0
Net Cost Funded from Tax Levy	0	0	0	0	0
Net Impact on Tax Levy		0.00 %	0.00 %	0.00 %	0.00 %
FTE	0	0	0	0	0
Capital Approved Forecast					
Net Incremental Capital	0	50	0	0	0

Details of Service Change

The Transportation Master Plan (TMP) is a new initiative for the City. The purpose of the TMP is to provide a policy framework to move forward with transportation elements of the City's Official Plan and Strategic Plan. The TMP will guide the City's transportation decision making process to build a multi-modal transportation network.

Service Impact

The Transportation Master Plan is required to develop a policy framework to move forward with transportation elements of the City's Official Plan and Strategic Plan pillars and is a key deliverable for the Transportation and Works Department. The majority of work for the development of the Master Plan will be conducted by internal staff from the Transportation Planning Section.

Comments

Description

The Transportation Master Plan (TMP) will be a multi-modal transportation plan for the City of Mississauga that speaks to following key transportation issues:

- Development of the Mississauga City Centre transportation network
- Future planning of transit priority corridors, Mississauga BRT, inter-regional connections and Mobility Hubs
- Advancing the Hurontario LRT and Dundas Street Higher Order Transit
- Advancing Mississauga's cycling network
- Developing a goods movement network for Mississauga
- Retrofitting the City's network for multi-modal transportation through context sensitive road design guidelines
- Implications of GTHA growth pressures on Mississauga's transportation network
- Ensuring pedestrian mobility is safe and functional

Key Goals of the Master Plan will be to:

1. Support Intensification

2. Increase Transit Ridership
3. Provide "CHOICE" for travel
4. Support the Local Economy
5. Support Sustainable Environmental Practices
6. Support Mobility for the Elderly

Purpose
The Transportation Master Plan will build upon existing transportation planning initiatives such as the Cycling Master Plan, the Mississauga BRT and the City's long-term transit network to develop specific actions, programs and policies to assist internal staff consideration of transportation related matters. Actions from the Master Plan will support the 2011-2014 Business Plan and Capital Budget time horizon and recommend actions for the 2015 to 2031 time horizon. The Master Plan will be reviewed every five years to coincide with the City’s Official Plan review process.

Linkages to Strategic Plan
The Transportation Master Plan has direct linkages to the Strategic Plan actions related to state of good repair for infrastructure, moving people by transit, connecting our neighbourhoods, promoting active transportation through walking and cycling, supporting the economy and sustainable environmental practices.

Budget Implications
Funding for the Transportation Master Plan is allocated in the City’s Development Charge revenues of approximately $800,000.00 over a 21 year period. Use of these funds will be required for consultants to conduct surveys and undertake specialized pieces of work such as the collection of goods movement data and development of goods movement policies. $50,000 (2011) is being requested within this four year business planning cycle.

Business Plan and Budget

City of Mississauga

Budget Request # 146

Description of Proposed Initiative

City Centre Off-Street Parking

Service Area

Roads, Storm Drainage & Watercourses

Department

Transportation and Works

Impacts (000s)	2010 & Prior	2011	2012	2013	2014
Net Operating	-371	100	-55	2	2
Net Cost Funded from Tax Levy	-371	100	-55	2	2
Net Impact on Tax Levy		0.03 %	-0.02 %	0.00 %	0.00 %
FTE	1	2	0	0	0
Capital Approved Forecast	7,575				
Net Incremental Capital	0	0	0	0	0

Details of Service Change

CURRENT SERVICE LEVEL
On-street paid parking is now in place in the City Centre with approximately 60 pay and display (P&D) machines installed. Paid parking in all three municipally-owned parking garages (Living Arts Centre, Civic Centre and Central Library) has been approved by City Council and is planned to be introduced simultaneously in April 2011 once work is complete on the Civic Square and Library Square redevelopment. Modifications that are currently underway in the Civic Centre and Central Library parking garages will facilitate the introduction of paid parking. Municipally owned and operated paid parking, in the form of two off-street surface lots, will be provided for Sheridan College Mississauga Campus which is scheduled to begin operations in September 2011.

CUSTOMERS
Municipal employees and visitors, City Centre residents, visitors and businesses, patrons of Central Library and the Living Arts Centre as well as staff, students and visitors of Sheridan College Mississauga Campus will be impacted by this initiative.

CURRENT BUDGET
The Current Capital Budget includes funds for Civic Centre, Central Library and Living Arts Centre parking garage modifications and parking equipment as well as the construction of two municipal parking lots associated with Sheridan College. The Current Operating Budget includes projected gross revenue from paid parking in the City Centre garages in 2010, but implementation was delayed to 2011, so projected revenue will be recovered from Reserve for 2010. The current level of maintenance of City Centre garages (including cleaning, electricity, security, etc.) is budgeted by Facilities and Property Management.

FUTURE OPERATING COSTS
Operating costs will be influenced by administrative costs (including labour for one staff person for permit processing as well as supplies of permit hangtags, marketing materials and parking permit management software licensing). Operating costs are also influenced by maintenance and operations of the facilities

including paid parking machine operating costs, collections staff (including labour for one staff person for collections) and increased level of service for maintenance of the three garages as well as new maintenance costs associated with the two surface parking lots (winter maintenance, cleaning, pavement, traffic, storm water, electricity).

FUTURE REVENUE
It is estimated that the introduction of paid parking in the three municipal garages and two municipal parking lots should generate modest incremental gross revenue for 2011(due to the base budget revenue that was established for 2010) with increased gross revenue in 2012 and annually thereafter.

Service Impact

REACTION FROM COMMUNITY / INTERNALLY
Employees may initially react negatively to the introduction of paid parking in the City Centre garages. The public is accustomed to on-street paid parking in the City Centre which should help with the transition to off-street paid parking in the area. Sheridan College is accustomed to paid parking at other campuses and it is not anticipated that any concerns will arise for paid parking at the Mississauga Campus. Consultation with the Library Board, Living Arts Centre management, City Centre business owners and Square One management is ongoing throughout the process. The Parking Strategy for Mississauga City Centre recommends the introduction of paid parking in the municipal garages, including paid parking for employees along with the implementation of transportation demand management initiatives to support transportation alternatives. The Strategy was endorsed by City Council in February 2009 and the introduction of off-street paid parking in the City Centre was approved by City Council in July 2010.

IMPACTS OF REVENUES / COSTS
Fifty percent (50%) of net revenue will be allocated to the City Centre Parking Reserve Fund for future parking facilities with the remaining 50% being used to off-set the cost of "Smart Commute" initiatives and compensate for the initial investment in the parking program.

Comments

The following reports have been presented to Leadership Team and Council regarding this initiative:

- A Parking Strategy for Mississauga City Centre was endorsed by City Council in February 2009.
- A report entitled "Proposed Master Plan, Ground Lease Arrangements, Funding Considerations and Municipal Parking Program Lands within City Centre Planning District Sheridan Mississauga Campus Development (Ward 4)" was presented in-camera to City Council in October 2009 and subsequently approved to move forward to construct two municipally owned and operated parking lots for the Sheridan College Mississauga Campus.
- A report entitled "Municipal Paid Parking – Civic Centre and Central Library Parking Garages (Ward 4)" was brought before General Committee in November 2009 was subsequently approved by City Council to undertake parking garage modifications for the introduction of paid parking in the Civic Centre and Central Library parking garages as an element of the redevelopment of Civic and Library Square.
- A report entitled "City Centre On-Street Paid Parking (Ward 4)" was brought before City Council in December 2009 and subsequently approved to decrease on-street parking rates in the City Centre from $2 per hour to $1 per hour to be consistent with the rate charged elsewhere in the City to be reviewed again for potential increase when paid parking is implemented in the City Centre garages.
- Reports entitled "Off-Street Paid Parking in the City Centre (Ward 4)" and "Follow Up - Off-Street Paid Parking in the City Centre (Ward 4)" were brought before General Committee in June 2010 and recommendations to implement off-street paid parking were approved by City Council in July 2010 including a City Centre Off-Street Municipal Parking Fee Structure and policy for employee paid parking effective April 4, 2011.

Business Plan and Budget

City of Mississauga

Budget Request # 211

Description of Proposed Initiative

Cycling Master Plan Implementation

Service Area

Roads, Storm Drainage & Watercourses

Department

Transportation and Works

Impacts (000s)	2010 & Prior	2011	2012	2013	2014
Net Operating	0	502	386	329	284
Net Cost Funded from Tax Levy	0	502	386	329	284
Net Impact on Tax Levy		0.17 %	0.12 %	0.10 %	0.09 %
FTE	0	2	1	1	0
Capital Approved Forecast	3,770	3,770	3,770	3,770	3,770
Net Incremental Capital	0	0	0	0	0

Details of Service Change

In order to implement the new Cycling Master Plan, the following will be required:

- the creation and staffing of a new 4 person Cycling Office requiring an increase of 3 FTE's
- the design and construction including pavement markings of an average of 30 km of new cycling facilities annually (funded through a combination of taxes and the new DC By-law)
- the installation of new bike racks and storage facilities requiring $60k annually
- the implementation of education and safety programs and monitoring / reporting on the safety and efficiency of facilities at $25k annually
- an annual increase in road, boulevard path and trail maintenance, snow clearing and leaf pick-up of $5k per new lane km of cycling. (This is an estimate only and may encompass funding for increased maintenance service levels for existing cycling infrastructure, on and off road, which will need to be assessed as part of the Cycling Implementation Plan)
- an additional FTE in Community Services for a Trail Route Inspector for asset management and maintenance standards compliance

Service Impact

1. Cycling Office - 1 new FTE annually, 3 additional in total (2011-2013) including space and furniture, assuming conversion of existing position in 2010. Functions include infrastructure planning coordination, data collection, surveys, analysis and education, communication and promotion programs (expectations of cycling community).
2. Construction - 30 new km of cycling facilities annually for next 20 years. Requires support for the design of infrastructure, signs and permanent markings, cross-rides, bike racks and storage (expectations of cycling community). It is expected that capital requirements will be accommodated through DC funding in the new Development Charges By-Law (when in effect) and taxes.
3. Operations / Maintenance - for existing and new facilities for both the winter and non-winter seasons. For safety reasons, on-road facilities will require additional road sweeping, leaf pickup and general road surface / pothole maintenance. Park trails require additional inspection, general maintenance and tree trimming . Additional maintenance of signs and pavement markings will be necessary. Detailed service levels for these items as well as selected winter maintenance

are under review. A need for one additional FTE for inspection / maintenance is anticipated for Community Services in 2011 for the off-road trail system.

Comments

Master Plan updates were presented to LT during spring and fall 2009. The draft Master Plan was presented to GC in March 2010 for information and to the public in April. In September, the Master Plan is expected to be approved by Council and the Implementation Plan will be presented for information.

Business Plan and Budget

City of Mississauga

Budget Request # 213

Description of Proposed Initiative

Transportation Demand Management & Smart Commute Support

Service Area

Roads, Storm Drainage & Watercourses

Department

Transportation and Works

Impacts (000s)	2010 & Prior	2011	2012	2013	2014
Net Operating	47	80	0	-40	0
Net Cost Funded from Tax Levy	47	80	0	-40	0
Net Impact on Tax Levy		0.03 %	0.00 %	-0.01 %	0.00 %
FTE	1	0	0	0	0
Capital Approved Forecast	380				
Net Incremental Capital	0	0	0	0	0

Details of Service Change

CURRENT SERVICE LEVEL

The City of Mississauga has been a participating municipality in the Greater Toronto and Hamilton Area wide Smart Commute Initiative since it was conceived to implement Transportation Demand Management (TDM) initiatives in 2003. The City played a key role in the establishment of Smart Commute Mississauga in 2005 and continues to support the association.

In 2009 a Discount Transit Program pilot was initiated in partnership with Smart Commute Mississauga for employers throughout the City. An Employee Smart Commute program is ongoing which includes carpool and cycling promotion, events and incentives. The Discount Transit Program is available to City staff along with an Emergency Ride Home program. Plans for secure and sheltered bike parking facilities are underway.

Over 2011 to 2014, TDM initiatives will continue through the extension of the Discount Transit Program pilot, establishment of a car share service in the City Centre on a pilot basis, support for Smart Commute Mississauga, as well as the development of the City's ongoing role in transportation demand management including the review of TDM Plans as part of the approval process for significant developments.

CUSTOMERS
Promotional events like Bike to Work Day are aimed at increasing awareness and participation in sustainable transportation by Mississauga residents. The Employee Smart Commute program is directed at City staff. Smart Commute Mississauga works with private employers located in Mississauga to implement various TDM initiatives.

EXISTING BUDGET
The existing budget includes a TDM Coordinator to lead TDM initiatives and small budget for promotions and related events.

The 2010 capital plan includes a Bicycle Storage Facilities project that is to be funded from the BikeLinx allocation from Metrolinx. An additional one-time grant was received in 2010 from the Ministry of

Transportation's "Ontario TDM Municipal Grant Program" for promotions and outreach of secure bike parking. Note: future budgets for Secure Bike Parking will be addressed in the Cycling Master Plan Implementation.

The cost of funding a Discount Transit Program was projected to result in net revenue from transit pass sales through the program attributed to increased ridership. The actual costs and revenues of the pilot have been considerably lower due to low participation rates and feedback from private employers regarding unfavourable economic conditions to provide subsidized transit as a benefit. An evaluation of the pilot was scheduled to take place in 2010 but an extension of the pilot is required in order to offer more time for evaluation.

FUTURE OPERATING BUDGET
The operating budget will be influenced by a vendor contract to station car share vehicles in the City Centre for use by City staff and the public as well as the cost of discounting transit passes. Potential would exist for operating costs of the car share service to be recovered based on usage rates. Revenue collected from discounted transit pass sales would be reflected in Transit Fare Box Revenue.

Service Impact

TDM initiatives are intended to support multi-modal transportation choices and discourage single occupant vehicle use, thus making more efficient use of existing and future transportation infrastructure. TDM initiatives are closely linked to the implementation of paid parking as well as the implementation of promotions and network improvements to transit and cycling facilities.

Comments

The following reports have been presented to Council regarding this initiative:

- In April 2007 a report was brought forward to update Council on the Smart Commute Initiative and subsequently a by-law was enacted to authorize the execution of an Agreement with other municipal partners in the Greater Toronto and Hamilton area with regards to continued participation in the Smart Commute Initiative.
- In October 2008, City Council approved recommendations to work with Smart Commute Mississauga on a pilot Discount Transit Program (DTP) administered by SCM, on behalf of Mississauga Transit, to its member organizations.
- In February 2009, the Parking Strategy for Mississauga City Centre: Final Report Mississauga Plan Review was endorsed by City Council.
- In May 2009, a report was brought forward regarding a Discount Transit Program for City staff and subsequently City Council enacted a by-law to authorize the execution of an agreement with Smart Commute Mississauga to allow the City to participate in the Discount Transit Program as a registered employer.

Business Plan and Budget

City of Mississauga

Budget Request # 222

Description of Proposed Initiative

Traffic Management Centre

Service Area

Roads, Storm Drainage & Watercourses

Department

Transportation and Works

Impacts (000s)	2010 & Prior	2011	2012	2013	2014
Net Operating	0	0	0	362	370
Net Cost Funded from Tax Levy	0	0	0	362	370
Net Impact on Tax Levy		0.00 %	0.00 %	0.11 %	0.11 %
FTE	0	0	0	4	4
Capital Approved Forecast	1,600	200	100	2,100	100
Net Incremental Capital	0	0	0	0	0

Details of Service Change

The Traffic Management Centre is the result of an incremental evolution of traffic control and high technology efficiencies. Its basic components include a replacement state of the art Traffic Signal Control System, a communications medium upgrade, and Intelligent Transportation System (ITS) initiatives. It positions the Traffic Engineering and Operations group from a system of predictive management to a system of proactive traffic management.

The City's road network is nearing maturity and there will be limited new roads and road widening. The Traffic Management Centre helps to maximize roadway efficiencies to help deal with continued increased demand from motor vehicles and rapidly increasing demands from pedestrian mobility, transit, accessibility, and cycling.

Traffic Signal Central Control System: The existing traffic signal central control system is reaching the end of its life cycle. There have been significant technology advancements in this industry over the life of the existing system. An RFI has been prepared and a request for proposal is currently being developed.

All traffic control signals located within the municipal boundaries are attached to the existing system. Input to this project by staff of the Region of Peel, and the Ministry of Transportation Ontario as major stakeholders is included as part of this initiative.

Intelligent Transportation Systems (ITS): ITS systems are those technology based systems that assist staff in effectively managing the Right of Way (ROW), and the activities which take place there.

The City has been implementing and operating some ITS initiatives for many decades through such initiatives as the traffic control system, video camera's, automated telephone next bus arrival systems and automated traffic data collection programs.

Currently, traffic monitoring cameras have been installed at 6 locations to monitor traffic conditions in real time. Operators are able to determine traffic congestion and make adjustments to timings to attempt to mitigate the congestion. This is its infancy, but the indications are that it will be an effective tool. To compliment this, an "incident detection system" could alert operators to perhaps a collision, which in turn can be verified with monitoring cameras, allowing the operator to advise emergency services as required.

The Management Centre is a compilation of various other big step items and is basically a high-tech way of maximizing the traffic capacity of the entire road network. In a nutshell, a modest capital investment of $2 million and a staff increase of 8 persons for a total operating cost of $732,000 annually would provide much efficiency over the entire City.

Service Impact

The Management Centre will effectively change the City's control of traffic from a programmed passive control to an active and dynamic control (decisions and actions can be made on-going and timely). Without this initiative, the service level for traffic operations will decrease significantly as higher traffic demands, transit priority and conflicting interests (cycling, accessibility and cycling) erode available road network capacity. Traffic delays and queuing will tend to be longer and complaints will increase.

Comments

A business case and position paper have been prepared by the Management Consulting Section of the City Managers office outlining the need for a Traffic Management Centre to effectively manage the real-time needs of users of the right of way.

Business Plan and Budget

City of Mississauga

Budget Request # 263

Description of Proposed Initiative

Leaf Collection - improving the efficiency of the operation

Service Area

Roads, Storm Drainage & Watercourses

Department

Transportation and Works

Impacts (000s)	2010 & Prior	2011	2012	2013	2014
Net Operating	985	-100	0	0	0
Net Cost Funded from Tax Levy	985	-100	0	0	0
Net Impact on Tax Levy		-0.03 %	0.00 %	0.00 %	0.00 %
FTE	5.25	-2.16	0	0	0
Capital Approved Forecast					
Net Incremental Capital	0	0	0	0	0

Details of Service Change

Propose to vacuum collect leaves twice during the fall rather than the current three collections.

Service Impact

This service change should have a minimal impact on the current level of service. As always, there is the potential that all leaves would not be picked up depending on the timing of when the leaves fall, as this changes season to season. However, bulk tonnages collected should equal previous years using a concentrated collection schedule. The current program ends by mid December, however with the new proposed changes the last day of leaf pick up would be the end of November. This would correspond with the last week of the Region of Peel's bagged leaf and yard waste pick up program.

Comments

The change in the number of collections from three to two would result in savings in temporary labour and contract costs.

Business Plan and Budget

City of Mississauga

Budget Request # 264

Description of Proposed Initiative

Street Cleaning - Improving efficiency

Service Area

Roads, Storm Drainage & Watercourses

Department

Transportation and Works

Impacts (000s)	2010 & Prior	2011	2012	2013	2014
Net Operating	1,236	-350	0	0	0
Net Cost Funded from Tax Levy	1,236	-350	0	0	0
Net Impact on Tax Levy		-0.12 %	0.00 %	0.00 %	0.00 %
FTE	7.85	-1.08	0	0	0
Capital Approved Forecast					
Net Incremental Capital	0	0	0	0	0

Details of Service Change

Spring and regular street sweeping service levels have not changed. The change was in the structure of sweeping contract. Contractors are now paid on an area street sweeping basis in accordance to the City's current level of service for spring and regular sweeping as opposed previously paying contractors on an hourly basis. This gives contractors more flexibility to carry out their work which in turn enables them to pass on a savings is passed onto the City.

Service Impact

No service level impact.

Comments

The sweeping contracts awarded in 2010 will automatically result in contract and temporary labour savings in future years.

Business Plan and Budget

City of Mississauga

Budget Request # 265

Description of Proposed Initiative

Winter Maintenance Review

Service Area

Roads, Storm Drainage & Watercourses

Department

Transportation and Works

Impacts (000s)	2010 & Prior	2011	2012	2013	2014
Net Operating	8,007	-1,282	0	0	0
Net Cost Funded from Tax Levy	8,007	-1,282	0	0	0
Net Impact on Tax Levy		-0.43 %	0.00 %	0.00 %	0.00 %
FTE	6	-3	0	0	0
Capital Approved Forecast	1,696	1,870	3,802	3,789	3,504
Net Incremental Capital	0	-50	-50	-50	-50

Details of Service Change

The winter of 2009/10 was the first year of a 5 year winter maintenance contract. It is evident that after major equipment level changes in the City's fleet in 2009, that some further adjustments are still required. It is proposed to assign the only 2 sidewalk routes currently maintained by City in house staff to contractors. This would increase the availability of City staff to operate the City's fleet of 22 dual purposes. This change means that the function of maintaining priority sidewalks, bus stops and intersections would be carried by City contractors. Also, a separate winter contract for the maintenance of City parking lots was awarded for 3 years. This function was traditionally performed by City in house full time and temporary staff. The changes in the delivery of priority sidewalk, bus stops, intersections and parking lot maintenance during winter will result in savings in the following 2 areas:

Winter Maintenance Temporary Labourers - Savings $ 140,000
Winter maintenance temporary labourers were hired to help assist full time City staff for the clearing of sidewalks, intersections, bus stops and parking lots. These activities are now performed by contracted forces and no longer requires in house temporary labourers to assist with these activities.

Full Time Staff Overtime - Savings $ 150,000
Similarly to the reduction in temporary labourers required, there is a limited involvement of in house full time staff with the clearing of sidewalks, intersections, bus stops and parking lots which will result in a reduction of overtime paid to in house staff for these activities.

The winter maintenance requested budget amounts are based on the actual average usage of resources (labour, material, equipment and contracted) over the previous 5 winter seasons. Four out of the last five winter seasons have received average to well above average snow amounts and as result have increased budget requests for winter resources. It is anticipated that because of the last mild winter, the 5 year actual average usage of resources cost will be reduced and result in a lower projected budget request for 2011. The following three areas will be affected by the lowering of the 5 averages and will result in budget request savings:

Winter Material - Savings $ 400,000
This is a projected amount in savings due to less salt usage during winter based on a 5 year average including the past winter.

Salt Spreading - Savings $150,000
Similarly to the savings in winter material, based on a 5 year winter average, including the past winter, it is anticipated that the salt spreading budget may be reduced by $ 150,000.

Snow Plowing - Savings $ 392,000
Similarly to the saving in winter material, based on a 5 year average including the past winter, it is anticipated that the snow plowing budget may be reduced by $ 392,000.

One final area for savings comes as a result of the City acquiring three belt loaders in 2009, and no longer has to lease this equipment for loading winter material into the domes. This will result in further savings of $50,000 per winter season.

Service Impact

There would be no impact in winter maintenance service levels.

Comments

Six City owned sidewalk tractors and ten City owned spreader units would no longer be required. The proposed capital savings by not having to replace this equipment has been spread over a period of 10 years starting in 2011.

Business Plan and Budget

City of Mississauga

Budget Request # 266

Description of Proposed Initiative

Salt Management - Alternative de-icing materials

Service Area

Roads, Storm Drainage & Watercourses

Department

Transportation and Works

Impacts (000s)	2010 & Prior	2011	2012	2013	2014
Net Operating	1,783	-50	0	0	0
Net Cost Funded from Tax Levy	1,783	-50	0	0	0
Net Impact on Tax Levy		-0.02 %	0.00 %	0.00 %	0.00 %
FTE	0	0	0	0	0
Capital Approved Forecast					
Net Incremental Capital	0	0	0	0	0

Details of Service Change

The City in collaboration with Credit Valley Conservation is undertaking a treated salt environmental study. Pending final results of the study, the City proposes to eliminate the use of a sand / salt mixture currently used on secondary routes and priority sidewalks, and replace the mixture with the use of a magnesium chloride treated salt. Early results from the previous year indicate that the use of treated salt has less of an impact on the environment when compared to the use of a sand and salt mixture. It is anticipated that the current years study will validate the results from the previous year, leading the way to implement the change in the material. The replacement of the sand and salt mixture will lead to less clean up costs and waste material handling in the spring. Although the up front cost of the treated salt is more expensive than the traditional sand and salt mixture, other benefits from using treated salt also include : a reduced number of applications, achievement of bare secondary roads and sidewalk earlier, cleaner air, and less phosphorus released into the environment.

Service Impact

Improved winter secondary road and priority sidewalk level of service.

Comments

Business Plan and Budget

City of Mississauga

Budget Request # 267

Description of Proposed Initiative

Permanent Snow Storage Sites

Service Area

Roads, Storm Drainage & Watercourses

Department

Transportation and Works

Impacts (000s)	2010 & Prior	2011	2012	2013	2014
Net Operating	0	0	0	0	0
Net Cost Funded from Tax Levy	0	0	0	0	0
Net Impact on Tax Levy		0.00 %	0.00 %	0.00 %	0.00 %
FTE	0	0	0	0	0
Capital Approved Forecast					
Net Incremental Capital	0	150	2,500	0	7,100

Details of Service Change

Currently the City does not have any permanent snow storage sites. Historically, sites that were used are no longer available, and City parks are being used as snow storage sites to deal with shortage of available sites. Due to the damage caused to City parks by snow removal operations, properly engineered permanent snow storage sites are essential to ensure that that the current winter maintenance levels of service can be maintained. As the amount of snow removal areas increase, the need for storage areas becomes more urgent. Conveniently located storage sites are required not only to help contain the costs of snow removal, but help ensure that the snow removal level of service is maintained. There is a need for three storage sites; one in the south, one in the northwest, and one in the central sections of the City. Over the next four years it is recommended that two engineered storage sites be established in the south and northwest sections of the City. The third site is proposed to be constructed beyond 2014.

The first storage site in the south is proposed for 2012 and requires 0.6ha. The second storage site is proposed for 2014 in the northwest section of the City and requires 1.2 ha. The third storage site is proposed beyond 2014 for the central section of the City and requires 1.0 ha. The cost estimates include land acquisition, design and construction costs for the three proposed sites. It is anticipated for the site proposed in the south, that the property requirements can be incorporated with the proposed southeast works yard in the Loreland site. The property for the second snow storage site may also be incorporated with the property requirements for the proposed north central works yard. The property in the central section of the City for beyond 2014 is still to be determined.

Service Impact

Snow storage sites will ensure that winter snow clearing and removal levels of service are maintained in an environmentally responsible manner.

Comments

Business Plan and Budget

City of Mississauga

Budget Request # 270

Description of Proposed Initiative

Amended Minimum Maintenance Standards - Sign Inventory, Sidewalk Patrol, Street Lighting

Service Area

Roads, Storm Drainage & Watercourses

Department

Transportation and Works

Impacts (000s)	2010 & Prior	2011	2012	2013	2014
Net Operating	0	546	0	0	0
Net Cost Funded from Tax Levy	0	546	0	0	0
Net Impact on Tax Levy		0.18 %	0.00 %	0.00 %	0.00 %
FTE	0	3.33	0	0	0
Capital Approved Forecast	1,115	345	600	195	195
Net Incremental Capital	0	200	0	0	0

Details of Service Change

The amended Minimum Maintenance Standards (Regulation 239-02) have added an annual sidewalk review program and a traffic sign (warning and regulatory) annual review and maintenance program. These items were not previously part of the Regulation. The City has complied with the Regulation since adoption by Council in 2002, and current amendments will have an impact on City resources.

Service Impact

It is recommended that the City continue to comply with the amended Regulation 239-02 to reduce liability.

Comments

Sidewalk Review Program - prior to initiating a sidewalk inspection program, a full review of sidewalks is necessary to plan and implement how best to resource and meet the minimum standards for sidewalks. It is anticipated that with the introduction of this program there will be an initial increase in demand to perform sidewalk repairs to remain compliant with the standards. A sidewalk review program will also be necessary on a ongoing basis to ensure that resources are adequately allocated for continued compliance with the sidewalk minimum standards.

Sidewalk Inspection Program - it proposed that an annual sidewalk inspection program be carried out in the summer months to ensure that a proper inspection is performed and documented. The function could be carried out and performed by students enrolled in technical programs. This will have an impact on the annual operating budget and would equate to 1.33 FTE and a vehicle.

Traffic Sign Review and Maintenance Program - it is proposed to review (and where required maintain or replace) all traffic regulatory and warning signs in accordance to the amended regulation. A major component of the function is to test sign reflectivity. This program requires that a full inventory (type, location, condition, size, etc) of signs be performed. This program will require GPS handheld locators, reflectometer with software, a vehicle, and 2 FTEs. Further an initial inventory will require a one time capital cost to set up. A large component of the cost estimate to carry out this program is the cost to replace deficient signs which do meet the minimum standards. Currently signs are replaced on a complaint basis.

The following are details on the operating and capital costs required for this program :

Labour:

Traffic : 1 Full time Driver, 1 Full Time Labourer (with O/T and burdens) (2 FTEs)	$ 127,000
Sidewalk: 4 summer time students (with O/T and payroll burdens) (1.33 FTEs)	$ 63,000
Total Labour	$ 190,000

Material and Equipment:

Traffic : Sign Material for Replacement	$ 300,000
Vehicle operating costs	$ 40,000
Sidewalk: GPS Transmission costs	$ 1,600
Vehicle Rental	$ 14,400
Total Material and Equipment	$ 356,000

Capital:

Traffic : GPS Handheld Units (for 8 existing crews and 1 new crew)	$ 81,000
Truck for new crew	$ 65,000
Relectometer	$ 21,000
Software to gather data	$ 20,000
Sidewalk: 4 GPS Units	$ 13,000
Total Capital	$ 200,000

Business Plan and Budget

City of Mississauga

Budget Request # 272

Description of Proposed Initiative

Update and Enhancement of the Rain Gauge Network

Service Area

Roads, Storm Drainage & Watercourses

Department

Transportation and Works

Impacts (000s)	2010 & Prior	2011	2012	2013	2014
Net Operating	5	10	10	0	0
Net Cost Funded from Tax Levy	5	10	10	0	0
Net Impact on Tax Levy		0.00 %	0.00 %	0.00 %	0.00 %
FTE	0	0	0	0	0
Capital Approved Forecast					
Net Incremental Capital	0	67	21	0	0

Details of Service Change

The equipment and software utilized by the City's existing rain gauge network have been in place since 1990 and require updating to avoid data loss and to allow the identification of long-term trends. In addition, the software is DOS-based, and is no longer supported by current computer operating systems.

It is proposed to replace the existing data loggers with loggers capable of cellular data transmission in near real time. The data will be hosted by a third party who will provide secure data storage, the ability to upload and analyze historical rainfall data, access to web-based analytical tools and event warning and alarming services. It is also proposed to equip the six remaining gauges with heaters and to add three new gauges to improve the rain gauge coverage density.

Service Impact

The proposed improvements to the City's Rain Gauge Network will result in improved data collection and analysis, which in turn will assist in confirming the existing level of service provided by the components of the City's drainage network (ditches, storm sewers, culvert and bridge structures and channels) and also identify any infrastructure improvement pressures. The ability to set rainfall event warning and alarm levels in near real time may also assist in improved operational response to flooding events.

Comments

The storm event of August 4th, 2009, which was centred in the vicinity of the Mississauga Valley Community Centre has been the subject of several Corporate Reports to Council due to the large number of flooding complaints which the storm generated. The City was fortunate to have a Rain Gauge at the Mississauga Valley Community Centre, and analysis of the data which it collected indicated that the storm exceeded the one in one hundred year event. However, this storm also highlighted several weaknesses in the existing Rain Gauge Network: it took several days to download and analyze the data, there is no ability to provide a warning regarding extreme rainfall intensities, and the density of the existing network does not allow for adequate capture of localized, high-intensity storms which are predicted to become more common due to climate change.

Business Plan and Budget

City of Mississauga

Budget Request # 274

Description of Proposed Initiative

Sharing spatial information in project areas using ProjectWise application

Service Area

Roads, Storm Drainage & Watercourses

Department

Transportation and Works

Impacts (000s)	2010 & Prior	2011	2012	2013	2014
Net Operating	0	0	0	50	-50
Net Cost Funded from Tax Levy	0	0	0	50	-50
Net Impact on Tax Levy		0.00 %	0.00 %	0.02 %	-0.02 %
FTE	0	0	0	0	0
Capital Approved Forecast					
Net Incremental Capital	0	0	0	0	0

Details of Service Change

This service pertains to the automation of the process of approvals for work on City owned assets.

The City acquired ProjectWise (a spatially enabled collaboration tool) in 2008. Most project centric groups at the City use "drive mounts" to store current engineering project files and folders. In some instances, local computer drives are used to store valuable data; this is a high loss risk situation for the City. The proposed initiative would enable the City to dramatically improve project production, collaboration, retention of data and control of information.

Presently, Public Utility Coordinating Committee (PUCC) members circulate proposed work to the City and other members in hard copy format. In the application process, engineering drawings are included. Approvals and comments are requested and submitted in hard copy by members. This includes mark ups of the drawings. The whole process is very "paper intensive" and requires a lot of co-ordination.

This project targets the PUCC approval process as the first effort in process re-engineering, simplification and standardization. Additional funding of $50,000 is required to outsource the customization required to enable ProjectWise to be used by City staff and PUCC members.

Service Impact

This initiative requires minimal internal resources from the Information Technology (IT) Enterprise Team in setting up a "sandbox" environment to test and approve various configurations of the ProjectWise software. Outside of simply accessing IT resources to add project areas into ProjectWise, there is minimal impact on resources. Some extensions to project application areas may require future funding for interface modification and configuration.

The City's IT division will need to assist in approving the public facing application for the Utility companies. Positive impacts include better response time from the City on PUCC applications. In addition, the City will use less paper, reduce courier costs and have auditable, detailed tracking of changes/mark ups and approvals by all members.

Comments

The City already has licensing for ProjectWise in place. Leveraging this application will yield efficiencies

and help production areas of the corporation to become more effective, efficient and "green". Subsequent areas within the corporation, for automation, include Capital Works projects within Transportation and Works, Community Services and Corporate Services and various permit application processes such as Planning and Building's Building Permits.

Business Plan and Budget

City of Mississauga

Budget Request # 332

Description of Proposed Initiative

New Streetlighting Technologies

Service Area

Roads, Storm Drainage & Watercourses

Department

Transportation and Works

Impacts (000s)	2010 & Prior	2011	2012	2013	2014
Net Operating	0	0	0	0	0
Net Cost Funded from Tax Levy	0	0	0	0	0
Net Impact on Tax Levy		0.00 %	0.00 %	0.00 %	0.00 %
FTE	0	0	0	0	0
Capital Approved Forecast					
Net Incremental Capital	0	0	0	0	0

Details of Service Change

Streetlighting technologies have evolved and energy reductions and operations efficiencies have the potential to save money and environmental impacts.

It is envisioned that the two projects would evolve from concept, to pilot projects, to business cases, and finally deployment if the savings in energy and operations justify the up front capital costs. On-going programs such as the re-lamping program would be adjusted to compliment the potential retrofit.

Service Impact

New Streetlight Technologies: A retrofit of the existing streetlighting to energy efficient lighting will reduce energy consumption, reduce green house gases and save on maintenance costs. It will also change the character of the lighting from yellow to white light. Crime Prevention Through Environmental Design (CPTED) has also expressed a preference for white light due to the improved identification capabilities at night. The new lights would also be dark sky friendly.

A pilot program to test new lighting technologies is being conducted in 2010, and if successful, a business case for a City wide retrofit will follow in 2011 with possible deployment in 2012. The premise is to do a major capital retrofit and reap savings in energy and maintenance costs.

Inventory via a Streetlight Monitoring System: The wireless monitoring system automatically maintains a current inventory of streetlights in the City. The operation of streetlighting in the City is currently monitored through manual night patrolling. Patrolling covers only the major roads once every six months. A monitoring system will monitor the status of the streetlights in real time and will cover the entire City's streetlight inventory. This will help expedite repair of malfunctioning streetlights.

The initial installation of individual streetlight monitoring devices and the system to monitor their feedback would be an up front capital expenditure. Potential savings would be realized through improved inspection and maintenance, and more accurate energy consumption billing. Energy billing for streetlighting is based on a derived formula. A monitoring system will record actual energy consumed by the streetlighting inventory.

With regard to the service, customers will receive a similar lighting, however the white light produced will

produce truer colours and assist in personal safety.

Comments

The proposed streetlight pilot program has been approved by Council and is now implemented in the field. It is anticipated returning to Council with a report and business case prior to further implementation.

Business Plan and Budget

City of Mississauga

Budget Request # 335

Description of Proposed Initiative

Integrated Road Safety Program (IRSP)

Service Area

Roads, Storm Drainage & Watercourses

Department

Transportation and Works

Impacts (000s)	2010 & Prior	2011	2012	2013	2014
Net Operating	0	0	68	43	0
Net Cost Funded from Tax Levy	0	0	68	43	0
Net Impact on Tax Levy		0.00 %	0.02 %	0.01 %	0.00 %
FTE	0	0	1	0	0
Capital Approved Forecast	200				
Net Incremental Capital	0	0	0	0	0

Details of Service Change

The Integrated Road Safety Program initiative is a pro-active means of improving traffic safety and efficiency. It has two major components:

1. Data collection, analysis and reporting.

2. An outreach component intended to leverage and provide synergy amongst the multi-jurisdictional and road safety stakeholder entities already involved in road safety.

The City of Mississauga is at a cross-road in that the typical traffic service is being challenged by a rebalancing of traffic focus. In particular, the City has recognized the need to provide better mobility for certain traffic stakeholders, including pedestrians (various ages and abilities), cyclists, transit, and rapid transit.

The City of Mississauga has routinely incorporated road safety into daily activities throughout the corporation. While many other municipalities have no established safety groups, the City has well established safety groups consisting of the Mississauga Traffic Safety Council, Road Safety Mississauga (formerly Safe Driving Committee), Mississauga Accessibility Advisory Committee, and Mississauga Cycling Advisory Committee. The Transportation and Works Department continues to be an integral and active component of each safety group, contributing traffic data and technical expertise in support of the safety groups' goals and initiatives.

As part of an earlier traffic initiative, Traffic Engineering and Operations met with various stakeholders including the safety groups, a variety of City departments, and various other external agencies to discuss road safety. It was evident that the City's existing road safety groups are very effective in promoting traffic safety and continue to maintain excellent programs with well established goals, members and initiatives. In an effort to utilize the expertise of the existing safety groups, it was recommended that the majority of the development of a new initiative, the Integrated Road Safety Program (IRSP), would be most suitable at the City staff level.

An IRSP provides the opportunity to increase the availability and accuracy of information to the safety groups and other City departments. An increased focus on traffic safety, together with additional time and

resources dedicated to furthering various traffic safety related initiatives will result in the availability of superior information and improved communication between stakeholders.

The core of an IRSP initiative is to formulate a process to proactively identify, prioritize, and implement safety-related improvements. For example, the production of network screening methods result in the creation of a list of intersections or road segments that are ranked based on their potential for safety improvement. Network screening applies more recent analytical methods to a review of specific locations in comparison to locations with similar attributes and provides an opportunity to determine whether collision trends are unusual or unexpected compared to similar locations throughout the City.

The Transportation and Works Department is the recommended custodians of the IRSP. This role entails being responsible for the development and maintenance of the program, keeping inventory of all related resources, and continued involvement with the safety groups. Representatives will liaise between internal and external agencies and will be a catalyst for sophisticated safety analysis. The ability identifies priority safety issues and countermeasures will permit City staff to provide a higher level of service and allocate resources strategically. Similarly, a more focused role for City staff would also include improved communication and transfer of information between the various safety groups and other IRSP stakeholders.

An IRSP strategy has been established and an IRSP coordinator hired. Initial efforts have been focused on an outreach of improving efficiencies and communications of existing committees/agencies to leverage on synergies. The next level of development includes the replacement/upgrade of the Traffic Database Management System (existing budget of $200K for 2010). In order to make better use of the data and analysis capabilities, it is proposed to introduce a technologist position (at an annual estimated cost of $86,000) to focus on analysis and reporting, which will form a basis recommended action, decision making and on-going monitoring. It is also proposed to collect more data at an annual cost of $25,000 to enable proper analysis.

Pedestrian safety initiatives, including enhanced pavement markings and signage, countdown timers and audible pedestrian signals, have also been identified in the Capital/Current budget process and implementation guidelines established.

Service Impact

The development of the IRSP component will help to maximize the effectiveness of current and future initiatives. This approach would enable the Transportation and Works Department to assist in prioritizing various City programs ensuring they receive the greatest safety improvement for the funds and effort invested. This quantitative data analysis translates into solid supporting documentation for actions taken or not taken by the City.

Comments

The ultimate goals of the Integrated Road Safety Program (IRSP) are to improve safety (measured as reduction in future frequency and severity of road collisions), maximize the capacity of City roadways and mitigate congestion – which are also directly affected by the safety improvements. Through the implementation of an IRSP, 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 core of an IRSP is to formalize a process to identify, plan, design, prioritize and implement safety-related projects that involves all stakeholders and are evidence-based decision-making.

The IRSP plan has been presented and embraced by the Road Safety Mississauga.

Business Plan and Budget

City of Mississauga

Budget Request # 350

Description of Proposed Initiative

DT21 Transportation Functional Design Studies

Service Area

Roads, Storm Drainage & Watercourses

Department

Transportation and Works

Impacts (000s)	2010 & Prior	2011	2012	2013	2014
Net Operating	0	0	0	0	0
Net Cost Funded from Tax Levy	0	0	0	0	0
Net Impact on Tax Levy		0.00 %	0.00 %	0.00 %	0.00 %
FTE	0	0	0	0	0
Capital Approved Forecast	400				
Net Incremental Capital	0	200	200	0	0

Details of Service Change

The DT21 Master Plan identifies several road network changes, reductions and additions which require feasibility and EA studies. There are proposed connections with the Hwy. 403 / Hurontario St. interchange and a flyover across Hwy. 403 which will require significant discussion with the MTO. There are potential synergies with the LRT and BRT systems which need to be explored.

It is estimated that an additional $200k is required in each of 2011 and 2012 for engineering consulting services due to the complexity and detailed scope of these transportation studies.

Service Impact

- Short term traffic impacts as a result of road narrowing in the City Centre are expected to be relatively minor and delays to motorists should be manageable
- Longer term impacts including congestion and delay may be significant, particularly if the LRT is not funded and modal split forecasts are inaccurate
- The studies will need to determine the order in which new roads and links are required as others are reduced in capacity.

Comments

Council has been advised that various transportation studies are required in support of the DT21 Master plan.

Business Plan and Budget

City of Mississauga

Budget Request # 354

Description of Proposed Initiative

Traffic Signal Enhancement Installation

Service Area

Roads, Storm Drainage & Watercourses

Department

Transportation and Works

Impacts (000s)	2010 & Prior	2011	2012	2013	2014
Net Operating	2,127	50	50	50	50
Net Cost Funded from Tax Levy	2,127	50	50	50	50
Net Impact on Tax Levy		0.02 %	0.02 %	0.02 %	0.02 %
FTE	0	0	0	0	0
Capital Approved Forecast	2,577	3,327	2,202	2,202	2,202
Net Incremental Capital	0	0	0	0	0

Details of Service Change

The Traffic Signal Capital Installation program includes new or rebuilt traffic signals and various related components.

Traffic Signal Installations:
This program is for the installation of new traffic signals, where justification for such installation has been achieved, and the rebuilding of existing traffic signal infrastructure, where it has been determined that the exiting infrastructure is difficult or expensive to maintain, given the age of the equipment.

Traffic Signal Enhancements:
There is a direct connection to other program initiatives including the Integrated Road Safety Program (IRSP), which identifies the programming aspects of accessibility and pedestrian safety. This program enhances the operation of traffic signals when such enhancements are identified as follows:

Accessible Pedestrian Signals: This equipment produces audible tones indicating the right of way clear for the visually impaired, and may include push button locator tones, and tactile measures to assist. The annual capital budget has been set at $40,000.

Uninterruptible Power Supplies (UPS): This is used at intersections where short power outages may cause a greater amount of hazard than at conventional signalized intersections such as intersections close to Rail crossings.

Pedestrian Countdown Timers: This is a visual indication to the pedestrian as to how much time remains for clearing the intersection before right of way terminates and is given to another direction.

Traffic Signal LED Replacement: Conversion of traffic signal displays from incandescent lamps to LED conversion kits was completed 6 years ago through a joint project with the Region Peel, and the City of Brampton.
The warrantee period for these LED kits was 5 years, and as this technology is relatively new for this application, a life expectancy has not been determined, however 7 to 10 years is generally accepted as reasonable amongst industry experts. It is proposed that the LED lamps be replaced through a joint municipal replacement program.

Traffic Signal Transit Signal Priority and Fire Vehicle Pre-emption: The existing Fire Pre-emption System for Signalized intersections is becoming aged and in need of replacement. The same equipment has been used to provide transit priority in some jurisdictions and the City has tried a pilot project with the current equipment. Newer technology is emerging that provides enhanced capability and reliability. The objective of this initiative is to ensure a safe and effective fire pre-emption system, while enabling an efficient Transit Priority system gets developed.

Service Impact

The Traffic Signal Capital program will ensure that equipment is in a state of good repair and that traffic and transit mobility is maximized. The traveling public will notice an erosion in traffic capacity if the program does not proceed.

Comments

The traffic signal build/rebuild program is detailed annually in a report to General Committee. The traffic signal LED replacement program and Fire Vehicle Pre-emption / Transit Signal Priority program are being reviewed and will be reported once the technical and business details have been established.

Business Plan and Budget

City of Mississauga

Budget Request # 355

Description of Proposed Initiative

Transit Accessibility Plan - Sidewalk Program

Service Area

Roads, Storm Drainage & Watercourses

Department

Transportation and Works

Impacts (000s)	2010 & Prior	2011	2012	2013	2014
Net Operating	0	0	0	0	0
Net Cost Funded from Tax Levy	0	0	0	0	0
Net Impact on Tax Levy		0.00 %	0.00 %	0.00 %	0.00 %
FTE	0	0	0	0	0
Capital Approved Forecast	2,383	994	994	994	994
Net Incremental Capital	0	1,250	1,250	1,250	1,250

Details of Service Change

The request is to front-end DC funding for new sidewalk installation as part of the capital sidewalk program, to focus on meeting Transit Accessibility planning. Priority has been given to accessibility needs where transit ridership is greatest (22 transit routes totalling 63 km), which will require an additional $1.25 million annually ($5 million total) over the next four years. This funding request does not cover complete accessibility of all transit routes.

It should be noted that where these sidewalks are proposed for construction along a street identified as part of the Mississauga Cycling Master Plan, a multi-use trail will be constructed in lieu of a sidewalk if feasible.

Service Impact

This initiative will improve the sidewalk network to support Transit Accessibility initiatives. It is also anticipated that where multi-use trails can be constructed in lieu of a sidewalk, there will be improvements to the cycling network.

Comments

The funding for this initiative is required to meet Transit 's accessibility goal, and achieve substantial completion by 2014.

Business Plan and Budget

City of Mississauga

Budget Request # 359

Description of Proposed Initiative

Expanded use of Hansen IMS to enhance T&W permit and dispatch services

Service Area

Roads, Storm Drainage & Watercourses

Department

Transportation and Works

Impacts (000s)	2010 & Prior	2011	2012	2013	2014
Net Operating	0	0	0	12	-1
Net Cost Funded from Tax Levy	0	0	0	12	-1
Net Impact on Tax Levy		0.00 %	0.00 %	0.00 %	0.00 %
FTE	0	0	0	0	0
Capital Approved Forecast					
Net Incremental Capital	0	0	0	116	0

Details of Service Change

To expand the use of the Hansen 8 enterprise system in three key areas:

To facilitate the development and implementation of customer self-serve options such as on-line electronic business transactions by leveraging Hansen's enterprise system functionality. Types of on-line business transactions would include permit applications and payments for T&W Counter permits, Parking Considerations, PUCC (Public Utility Coordination Committee) applications, and newspaper vending boxes inventory and permits.

To streamline various business processes by direct management of these processes within Hansen or development of system interfaces to create simplified and integrated flows of information. Types of business processes would include PES (Parking Enforcement System), ProjectWise (Map and drawing based document management), and Hansen Map Drawer (GIS functionality).

To facilitate the tracking of business related operational data within T&W and provide more detailed and accurate reporting abilities and enhance managerial decision making. Types of data would include Customer Service Counter sales data and Hansen Service Requests for T&W Dispatch to align with the 3-1-1 Call Centre.

It should be noted that in order to process credit card payments on line, Hansen 8 will have to meet Payment Card Industry Data Security Standards. This is included in the capital cost.

Service Impact

By leveraging the feature rich Hansen 8 enterprise system and offering on-line access to T&W counter services for permits and other activities, T&W will meet the growing demand by customers for on-line services and offer a "green" alternative to visiting the Counter for business transactions. There will be fewer manual processes and more consistent procedures. By expanding the data collected in Hansen, information on past/current and future activities will be tracked and management reports will be provided to support decision making and risk mitigation.

Comments

Business Plan and Budget

City of Mississauga

Budget Request # 382

Description of Proposed Initiative

Watercourse Management Implementation

Service Area

Roads, Storm Drainage & Watercourses

Department

Transportation and Works

Impacts (000s)	2010 & Prior	2011	2012	2013	2014
Net Operating	1,019	126	288	29	0
Net Cost Funded from Tax Levy	1,019	126	288	29	0
Net Impact on Tax Levy		0.04 %	0.09 %	0.01 %	0.00 %
FTE	9	1.33	1.67	0	0
Capital Approved Forecast					
Net Incremental Capital	0	0	0	0	0

Details of Service Change

The Transportation and Works Department manages the watercourses in the City , while the Community Services Department manages the lands along the watercourses, including woodlots, parks and trails, where public ownership or easements are in place.

The Transportation and Works and Community Services Departments have inspection, clean-up and maintenance practices in place related to watercourses, community parks, greenbelts and woodlands which are focused on storm drainage inlets and outlets, watercourse erosion and litter. In addition, Parks and Forestry follows best practices in the management of natural woodlands in that downed wood material is left in place and dead trees are left standing where they do not pose a hazard. However, concern has been expressed by residents that higher maintenance standards are required for the management of woody debris in the Cooksville Creek area to reduce the risk of downstream blockages and flooding.

In response, staff has developed a recommended watercourse debris management program to establish inspection and maintenance protocols to manage debris accumulation and to minimize the risk of blockages to flow and localized flooding. This program has been developed to deal with the Cooksville Creek initially, given the large number of homes and other structures situated within its Regulatory Flood Plain. Further development of the Strategy is needed to address similar needs of other creeks in the City of Mississauga (City-wide Strategy).

In the development of the program, critical locations along the Cooksville Creek were identified based on their potential risk to accumulate debris, create blockages to creek flows and cause flooding problems in the surrounding area. Upstream areas considered to be likely contributors of woody debris to these critical crossings, where public land ownership or easements are in place, have been deemed special management zones as part of this program. These include 3.4 km (2.1 miles) of in-stream areas and 1.2 km (0.75 miles) of woodlot corridors along the creek.

The Transportation and Works Department's role in the program consists of scheduled inspections of the critical crossings and the in-stream portions of the special management zones, followed by the required maintenance activities. The critical crossings and special management zones along the creek will be

inspected four times a year. The creek will also be walked in its entirety within publicly owned or managed areas on an annual basis to identify new locations of concern that may exist outside of the defined special management zones. The inspections and follow-up maintenance activities will focus on the removal of in-stream woody debris, where deemed a hazard, to at least three metres (ten feet) away from the edge of the creek and the complete removal of all urban debris and garbage encountered in the creek.

The Community Services Department's role consists of scheduled inspections of the woodlot areas within the special management zones, as well as the removal of woody debris material within three metres (ten feet) of the edge of the creek as required. Qualified Forestry staff will inspect the woodlots within the special management zones once a month in season, typically during the spring to fall period. In addition, qualified Forestry staff will conduct annual evaluations of the entire natural corridor of the creek, within City-owned or managed areas, to evaluate tree health and identify new forestry related debris issues in the flood plain or woodlot areas outside of the special management zones. Accumulated debris piles in the corridor will be removed and disposed as necessary. Downed material will remain in place except where it lies within three metres (ten feet) of the edge of the creek and is deemed a concern. Standing dead material will be brought down and managed where it presents a hazard.

Service Impact

The implementation of this recommended program represents an increased level of service, requiring changes to existing staff responsibilities and additional resources. The program will focus on Cooksville Creek in 2010 and 2011, then will be expanded City-wide in 2012. The increased level of service to implement the program in 2010 will be funded from operating reserves and existing labour and capital accounts. To continue the program in 2011 increases to the annual Environmental Services Section labour budget and Watercourse Maintenance operating budget will be required. The City-wide program will be developed in early 2011 based on the experience and lessons learned from the Cooksville Creek program in 2010 and implemented in 2012 and beyond. The 2012 and beyond resource requirements will be refined during the Business Planning refresh in 2011.

Comments

Business Plan and Budget

City of Mississauga

Budget Request # 398

Description of Proposed Initiative

New North Central Works Yard

Service Area

Roads, Storm Drainage & Watercourses

Department

Transportation and Works

Impacts (000s)	2010 & Prior	2011	2012	2013	2014
Net Operating	0	0	0	0	0
Net Cost Funded from Tax Levy	0	0	0	0	0
Net Impact on Tax Levy		0.00 %	0.00 %	0.00 %	0.00 %
FTE	0	0	0	0	0
Capital Approved Forecast					
Net Incremental Capital	0	0	0	50	50

Details of Service Change

With the increasing pressures for space on the existing Public Works yards and increases in the volume of traffic, the need for an additional works yard is required to ensure that the level of service for works programs can be maintained. The expenditure in 2013 is required to prepare a business case and establish the scope for the new Works facility. The expenditure in 2014 is required to review available property and determine feasibility of implementing the new proposed Works yard.

Service Impact

The lack of a new works yard will impact the City's ability to continue to provide works programs at the prescribed level of service. Current pressures on existing yards for space and resources will necessitate the use of north central works yard.

Comments

The outcome of the Arterial Road Network Review may affect the timing and scope of this initiative.

Business Plan and Budget

City of Mississauga

Budget Request # 401

Description of Proposed Initiative

Mississauga Storm Water Quality Control Strategy Implementation

Service Area

Roads, Storm Drainage & Watercourses

Department

Transportation and Works

Impacts (000s)	2010 & Prior	2011	2012	2013	2014
Net Operating	194	0	0	200	0
Net Cost Funded from Tax Levy	194	0	0	200	0
Net Impact on Tax Levy		0.00 %	0.00 %	0.06 %	0.00 %
FTE	0	0	0	0	0
Capital Approved Forecast					
Net Incremental Capital	0	0	250	250	250

Details of Service Change

The update to the Mississauga Storm Water Quality Control Strategy will change the focus of how storm water quality is managed in Mississauga, from a sole reliance on storm water quality (or "SWM") ponds to a greater emphasis on lot-level and conveyance measures (also known as "Low Impact Development" or LID). This will have long-term implications for new and re-developments, roads, parks and drainage infrastructure on both public and private lands. As such, consultations with City staff, ratepayers and the industrial, commercial and institutional sectors have been a key part of this initiative. The update to the Strategy will be completed in 2010 and its implementation is expected to span the 2011-2014 business planning cycle and beyond.

The current Strategy is focused on the construction, dredging and rehabilitation of SWM ponds, all of which will continue as previously planned in the 2010-2019 Capital Budget and Forecast for watercourse improvements and storm drainage works. The updated Strategy will also include the implementation of storm water measures on existing residential lands, on new and re-development lands, and within the municipal right-of-way, as described in the following paragraphs.

A program will be developed to encourage the use of lot level controls in existing developed areas. Initially, the program will focus on single-family residential properties, which represent the largest percentage of developed area in the City. The goal for this program is to encourage home owners to change how storm water is managed on their properties through various landscaping and outdoor practices, such as downspout disconnections, rain gardens, permeable pavements, the usage of fertilizers and road salts and car washing. Operating funding requirements for this initiative are identified in this Budget Request.

New and re-developments will be required to include LID measures to reduce storm water volumes and improve storm water quality. Standards for these LID measures will be developed in consultation with the area conservation authorities as the CVC and TRCA roll out their Storm Water Management Guidelines in 2010. These measures will be part of the land development cost.

Road rehabilitation and reconstruction projects completed through Capital Works will include the construction of storm water quality enhancement features within the municipal right-of-way where feasible. Funding should be through the City's on-going roadway rehabilitation and reconstruction

program; however, the base funding for that program is needed for resurfacing therefore additional capital funding is proposed for water quality enhancement features through this Budget Request.

Service Impact

Approximately 15% of the total urban area within the City of Mississauga currently receives storm water quality treatment; primarily from SWM ponds. The completion of the remaining opportunities for new and retrofitted SWM ponds will increase this extent of treatment to nearly 30% of the City's urban area. Implementation of the updated Strategy will improve this percentage by providing storm water quality treatment to urban areas that may not otherwise be serviced by SWM ponds.

Comments

The program for lot level controls for existing development will require operational funding of approximately $400,000 over the 2011-2014 business planning cycle and $100,000 post-2014 to fund the development and production of marketing materials, consulting services and incentives/grants to undertake pilot projects.

The inclusion of LID measures in capital roadway rehabilitation and reconstruction projects is expected to result in a 10% to 15% premium in some cases or a significant cost avoidance in other cases, such as where the construction of storm sewer systems can be avoided through the use of vegetated swale systems.

Business Plan and Budget

City of Mississauga

Budget Request # 403

Description of Proposed Initiative

Storm Drainage Network Modelling

Service Area

Roads, Storm Drainage & Watercourses

Department

Transportation and Works

Impacts (000s)	2010 & Prior	2011	2012	2013	2014
Net Operating	0	0	0	0	0
Net Cost Funded from Tax Levy	0	0	0	0	0
Net Impact on Tax Levy		0.00 %	0.00 %	0.00 %	0.00 %
FTE	0	0	0	0	0
Capital Approved Forecast		250	750		
Net Incremental Capital	0	-150	-500	250	250

Details of Service Change

The City's storm drainage network includes storm sewers, storm water management ponds, engineered channels and other watercourses. This drainage network was designed and built as early as the 1950s to facilitate development, which has moved from a green-field phase to now a built-out phase. The system was designed using standards based on best practices of the day and is generally performing at a standard level of service. The design calculation and documentation methodologies have been facilitated by a non-integrated, paper-based system. As such, the ability to perform network-level assessments is quite limited.

There have been a number of internal and external influencing factors including land use intensification and, in particular, climate change, which has become a major issue for municipalities and recognized by all levels of government. Potential impacts include increased volume or frequency of storm flows, which could lead to inadequate capacity of storm sewer systems, flooding and maintenance issues. It is expected that senior levels of government will provide guidance to municipalities on storm drainage considerations to plan for the potential long term impacts of climate change. Environment Canada and the Ontario Ministry of the Environment are currently conducting research on this matter. Guidance from the Planning and Building Department on anticipated areas of land use intensification will also impact the development of storm drainage modelling initiatives.

Therefore, creation of a hydrologic/hydraulic model of the City's storm drainage network would provide the City with a tool to assess impacts caused by these internal and external factors and allow the City to plan and manage, in a proactive and non-piecemeal way, changes as a result of these factors.

The plan for 2011 is to 'piggy back' on a Credit Valley Conservation flood forecasting study for Cooksville Creek by providing $100,000 in funding for the consultant to undertake storm sewer networking modelling as part of that study. Post 2011, the modelling of different sewer-sheds throughout Mississauga will be undertaken by the City through consulting services. While it is desirable to model the entire City, the initial plan is to focus on the older areas of Mississauga and areas where the storm sewer systems may be taxed.

Service Impact

The creation of a hydrologic/hydraulic model of the City's storm drainage would provide a tool to assess impacts caused by internal and external factors such as land use intensification and climate change. The

modelling efforts would develop a better understanding of the probability, extent and consequence of any such impacts which would then provide technical guidance for the identification of areas of concern and the need for monitoring activities, changes to design standards and improvements to the storm drainage network.

Comments

Business Plan and Budget

City of Mississauga

Budget Request # 404

Description of Proposed Initiative

Cooksville Creek Capital Projects

Service Area

Roads, Storm Drainage & Watercourses

Department

Transportation and Works

Impacts (000s)	2010 & Prior	2011	2012	2013	2014
Net Operating	0	0	0	0	0
Net Cost Funded from Tax Levy	0	0	0	0	0
Net Impact on Tax Levy		0.00 %	0.00 %	0.00 %	0.00 %
FTE	0	0	0	0	0
Capital Approved Forecast					
Net Incremental Capital	0	4,480	1,180	5,130	3,360

Details of Service Change

Several flood remediation projects along the Cooksville Creek are identified in Years 8, 9 and 10 of the City's 2010-2019 Watercourse and Storm Drainage Improvements Capital Budget and Forecast. These include conveyance improvements to several culverts/bridges and channel sections.

In response to a major flooding event which occurred in August, 2009, the Mayor formed a Task Force consisting of staff from the City, Region of Peel, Credit Valley Conservation, the Ministry of Natural Resources, as well as residents and several Ward Councillors. This Task Force is serving as a conduit between the various municipal and agency staff and the residents affected by flooding in the development of flood mitigation measures. It is expected that one recommendation will be to advance Cooksville Creek flood remediation projects in the City's Capital Forecast to within the 2011-2014 Business Planning cycle. These projects are:

- Cooksville Creek, CN Rail crossing improvement
- Cooksville Creek, CP Rail crossing improvement
- Cooksville Creek, The Queensway East crossing improvement
- Cooksville Creek, Channelization from Mississauga Valley Boulevard to CP Rail
- Cooksville Creek, Dyking downstream of Central Parkway East

In addition to the above projects, $3 million is requested to undertake pre-engineering studies along Cooksville Creek. Note that the QEW crossing improvement is currently identified beyond the 10-year Capital Forecast and has not been advanced to the 2011-2014 Business Planning cycle.

In coordination with the Region of Peel, the Basement Flood Remediation and Action Plan program is proposed to be expanded to a second phase to address the 554 houses situated in the areas impacted by the August, 2009 storm events which tested positive through smoke testing for cross-connection between the storm and sanitary drainage systems but did not experience flooding themselves. The City's role in this second phase of the program would be share the cost of conducting household drainage surveys in these houses as well as the cost to disconnect downspouts found to be discharging to the sanitary drainage system. Through on-going discussions with the Region of Peel, consideration will be given to expanding this program to other areas of the City in 2012 and beyond.

Service Impact

These proposed conveyance improvements will reduce the risk of flooding to areas of publicly and privately owned lands along the Cooksville Creek which are currently situated within the Regulatory Floodplain and prone to direct flooding from the creek during large rainfall events.

The proposed second phase of the Basement Flood Remediation and Action Plan program would reduce the amount of storm water entering the sanitary drainage system and, in turn, reduce the risk of basement flooding through surcharging of the sanitary system.

Comments

Business Plan and Budget

City of Mississauga

Budget Request # 428

Description of Proposed Initiative

T&W Capital Works - Implementation of Hansen Contracts Module (Work Plan Item)

Service Area

Roads, Storm Drainage & Watercourses

Department

Transportation and Works

Impacts (000s)	2010 & Prior	2011	2012	2013	2014
Net Operating	0	0	0	0	0
Net Cost Funded from Tax Levy	0	0	0	0	0
Net Impact on Tax Levy		0.00 %	0.00 %	0.00 %	0.00 %
FTE	0	0	0	0	0
Capital Approved Forecast					
Net Incremental Capital	0	0	0	0	0

Details of Service Change

Utilize the Hansen 8 functionality to support and enhance project management processes for Transportation & Works Capital Projects.

Service Impact

Will provide centralized and accessible information regarding T&W Capital projects, develop consistent data collection processes that will support PSAB and IAM Strategy requirements, and integrate data and work processes with existing asset maintenance work management.

Comments

Capital works projects are substantial infrastructure related construction activities and the information pertaining to these projects is essential to any asset management process such as IAMS or PSAB. The management of this project related information in Hansen will integrate directly with existing asset inventories, provide detailed acquisition costs, allow for enhanced work coordination (e.g. maintenance construction, utility works), and over time allow for more accurate estimation of similar construction activities.

Business Plan and Budget

City of Mississauga

Budget Request # 430

Description of Proposed Initiative

Storm Sewer TV Inspections Hansen Implementation (Work Plan Item)

Service Area

Roads, Storm Drainage & Watercourses

Department

Transportation and Works

Impacts (000s)	2010 & Prior	2011	2012	2013	2014
Net Operating	0	0	0	0	0
Net Cost Funded from Tax Levy	0	0	0	0	0
Net Impact on Tax Levy		0.00 %	0.00 %	0.00 %	0.00 %
FTE	0	0	0	0	0
Capital Approved Forecast					
Net Incremental Capital	0	0	0	0	0

Details of Service Change

Storage and maintenance of annual storm sewer TV inspections in Hansen to improve access and retrieval of this information and to integrate with existing asset inventories.

Service Impact

This will provide an easy and efficient client interface and allow service providers to utilize this information when determining asset maintenance requirements.

Comments

Hansen has strong storm sewer management functionality and has developed a CCTV inspection functionality in accordance with accepted industry standards. Managing the City's storm sewer inspections via Hansen will improve accessibility and, therefore, increase the use of this information for asset management decisions.

Business Plan and Budget

City of Mississauga

Budget Request # 442

Description of Proposed Initiative

Clarkson Air Quality Improvements

Service Area

Roads, Storm Drainage & Watercourses

Department

Transportation and Works

Impacts (000s)	2010 & Prior	2011	2012	2013	2014
Net Operating	458	25	0	0	0
Net Cost Funded from Tax Levy	458	25	0	0	0
Net Impact on Tax Levy		0.01 %	0.00 %	0.00 %	0.00 %
FTE	0	0	0	0	0
Capital Approved Forecast		0	0	0	0
Net Incremental Capital	0	0	0	0	0

Details of Service Change

The Ministry of Environment (MOE) has determined that the Clarkson-Oakville air shed is stressed in terms of fine particulates. The Government of Ontario has appointed a Task Force (Dr. David Balsillie) to provide recommendations for improving the air quality in this area. The final report with recommendations has been provided to the Minister at the end of June, 2010. The report contains some recommendations to be implemented by Mississauga and Oakville. Many of the recommendations can be accommodated under existing programs for tree planting, bike lanes, transit improvements and improved traffic flow.

This budget request is to allow for an increase in the frequency of street sweeping within Zone 4 to twice a week using high efficiency sweepers capable of capturing fine particulates.

Service Impact

Street sweeping technology is now available which is capable of removing over 90% of fine particulates (PM10 and PM2.5) from road surfaces (City of Toronto Works Committee Report 7, July 19, 2005). As these machines can cost 40% more than the older technology, the cost to switch to the newer technology City-wide would have a significant impact to the street sweeping budget. However, it may be feasible to switch to the higher-efficiency machines for arterial roads within Clarkson. In addition, it may be possible to negotiate cost-sharing agreements with businesses along the arterials.

Currently, arterial roads are swept weekly within Zone 4.

Comments

The MOE's Clarkson Airshed Study has been the subject of a Corporate Report to General Committee and Council in 2007. Since then, the City has participated on the Clarkson Air Shed Advisory Committee (disbanded by the MOE in 2009) formed by the MOE to develop a community-based ambient air quality monitoring program in the Clarkson air shed study area. Staff subsequently participated on the Community Advisory Committee formed by Dr. Balsillie, to advise him regarding the Action Plan for Improving Air Quality in the Clarkson-Oakville area which was provided to the Minister of the Environment at the end of June, 2010. The Minister of the Environment had not responded to the Action Plan report as of August 16, 2010.

Business Plan and Budget

City of Mississauga

Budget Request # 512

Description of Proposed Initiative

Budget Reduction - Professional Services and Administration (RSDW Service Area)

Service Area

Roads, Storm Drainage & Watercourses

Department

Transportation and Works

Impacts (000s)	2010 & Prior	2011	2012	2013	2014
Net Operating	365	-100	0	0	0
Net Cost Funded from Tax Levy	365	-100	0	0	0
Net Impact on Tax Levy		-0.03 %	0.00 %	0.00 %	0.00 %
FTE	0	0	0	0	0
Capital Approved Forecast					
Net Incremental Capital	0	0	0	0	0

Details of Service Change

It is proposed to reduce the TIP Divisional budget by $100,200 (2%) by reducing various Professional Services and administrative budgets.

Service Impact

These changes can be absorbed with minimal impact, as they are based on past expenditure patterns. One risk is that the divisional Professional Services budgets are reduced significantly, such that any requirements for unanticipated consulting services such as technical peer reviews for environment or transportation matters will be unfunded; however, if necessary this can be managed through a report to Council requesting additional funds. The impact will be a longer time frame for action.

Comments

Business Plan and Budget

City of Mississauga

Budget Request # 533

Description of Proposed Initiative

Reductions in Business Services Division - Transportation and Works Department

Service Area

Roads, Storm Drainage & Watercourses

Department

Transportation and Works

Impacts (000s)	2010 & Prior	2011	2012	2013	2014
Net Operating	1,354	-53	0	0	0
Net Cost Funded from Tax Levy	1,354	-53	0	0	0
Net Impact on Tax Levy		-0.02 %	0.00 %	0.00 %	0.00 %
FTE	10.44	0	0	0	0
Capital Approved Forecast					
Net Incremental Capital	0	0	0	0	0

Details of Service Change

The major components of the proposed $53K reduction are:

- reduction in Professional Services budget - $46K
- reduction in Equipment Costs budget - $5K
- reduction in Recognition/Other budget - $2K

Service Impact

The reduction in the professional services budget reduces the strategic agility of the Department - all consulting will need to be planned one year in advance. The reduction in equipment costs will reduce the Department's ability to respond to equipment failures, potentially causing a loss in productivity.

The 20% reduction in the staff recognition budget will reduce organizational wellness and effectiveness.

Comments