

## Engineering & Construction Services

### 2016 OPERATING BUDGET OVERVIEW

Engineering & Construction Services provides specialized engineering design and construction services to internal clients (Toronto Water, Transportation Services, Solid Waste Management Services, and other City agencies, boards, commissions and divisions), and external clients (development industry, utility companies and other public agencies) creating safe and sustainable municipal infrastructure.

#### 2016 Budget Highlights

The total cost to deliver these services to Toronto residents is \$70.757 million gross and \$7.470 million net as shown below.

(in \$000's)	2015 Budget	2016 Budget	Change	
			\$	%
Gross Expenditures	66,839.0	70,757.0	3,918.0	5.9%
Gross Revenues	59,294.0	63,287.4	3,993.4	6.7%
<b>Net Expenditures</b>	<b>7,545.0</b>	<b>7,469.6</b>	<b>(75.4)</b>	<b>(1.0%)</b>

For 2016, Engineering & Construction Services identified \$0.675 million in opening budget pressures primarily arising from increases in salary and benefit costs and one-time costs to update capital works procedures / field services manuals. The Program was able to offset these pressures through \$0.750 million in service efficiencies and revenue increases, thereby maintaining their service levels in 2016 while at the same time absorbing all operating pressures and achieving the budget target.

[toronto.ca/budget2016](http://toronto.ca/budget2016)

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## Fast Facts

- \$474 million in capital projects delivered in 2015.
- 279 bridge condition inspections completed in 2015.
- 1,614 engineering reviews of development applications completed in 2015.

## Trends

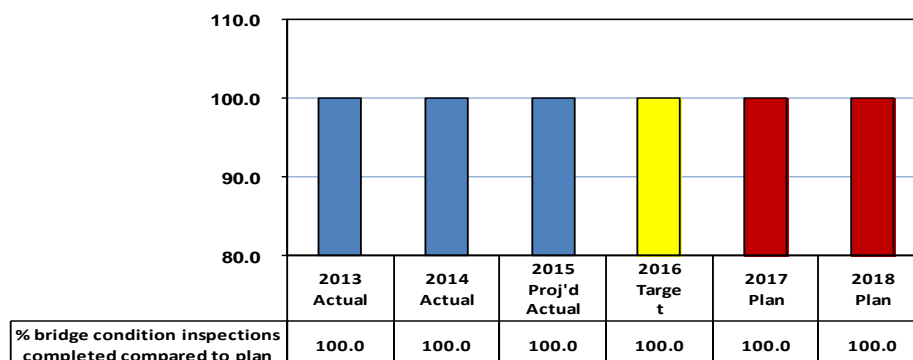
- In 2015, ECS is projecting to again complete 100% of planned bridge condition inspections – 649 bridge spans in total, including 330 bridge spans along the F.G. Gardiner Expressway.
- Ensuring full compliance with regulatory requirements.
- ECS is targeting to maintain a 100% completion rate in 2016 and future years for a 2-year bridge condition inspection cycle that requires a consistent level of effort in each year but produces double the number of inspections in the second year of the cycle.

## Our Service Deliverables for 2016

The 2016 Operating Budget will fund the Program's ability to:

- Sustain capital delivery at an estimated 80% year end actual expenditure as a % of approved capital budget.
- Sustain at least 75% compliance with STAR timelines for review of development applications.
- Maintain 100% completion rate in 2016 and future years for the provincially-legislated 2-year bridge condition inspection cycle.
- Begin implementation of the F.G. Gardiner Strategic Rehabilitation Plan using a public-private partnership approach
- Proactively manage construction-related disruption, including traffic disruption, at the project planning stage and during construction.
- Continue to enhance planning and coordination of Multi-year Capital Coordination process with internal and external stakeholders.
- Continue to work with the construction industry to explore ways to accelerate construction; and with PMMD and Legal Services on innovative procurement and contracts to incentivize acceleration and assign delay costs.
- Improve communication and relations with the public and businesses before, during and after construction.
- Negotiate agreements with Third Parties (e.g., Bell, Metrolinx) to ensure staff resources are appropriate and review responses are timely.
- Provide subject matter expertise to asset owning divisions (e.g., Parks, Forestry & Recreation) and Legal Services to ensure compliance on property use and conveyance of contaminated lands.
- Develop complete asset management system for bridges inspected by ECS to include a SOGR backlog analysis and prioritization of rehabilitation needs, for inclusion in Capital Budget planning.

## % bridge condition inspections completed compared to plan

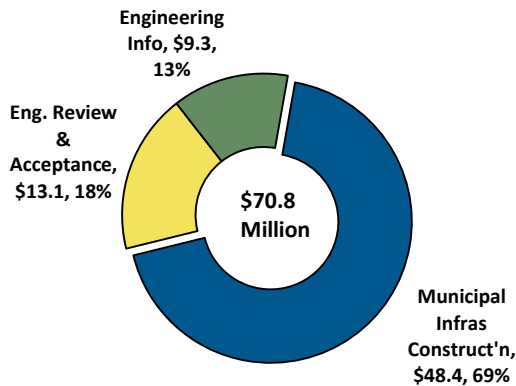


## 2016 Operating Budget Expenses &amp; Funding

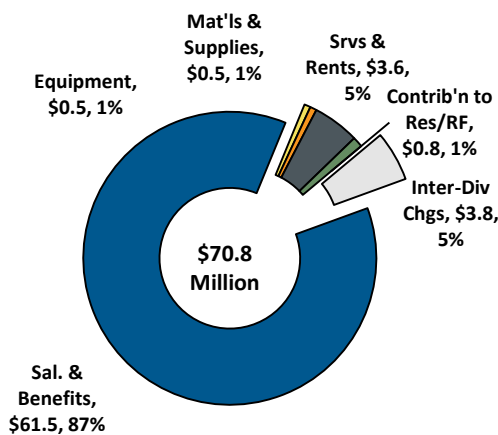
## Our Key Issues &amp; Priority Actions

## Where the money goes:

## 2016 Budget by Service

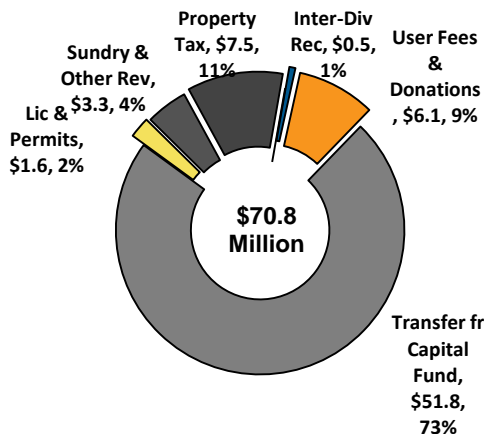


## 2016 Budget by Expenditure Category



## Where the money comes from:

## 2016 Budget by Funding Source



## Minimizing traffic disruption

- ✓ Extend construction working hours to shorten project durations;
- ✓ Improve public awareness and education;
- ✓ Explore the use of incentive-based contracts;
- ✓ Improve work zone management; and,
- ✓ Work to improve the utility locate process with utility companies and the Province of Ontario.

## Increasing delivery capacity

- ✓ Investigate alternative strategies for capital delivery through increased coordination, program management assignments, and bundling of works in the right of way.

## Implementing the Rehabilitation Plan for of the F.G. Gardiner Expressway

- ✓ Recruit the project team of City staff needed to successfully oversee the rehabilitation plan;
- ✓ Finalize the scope of work; and
- ✓ Submit an application and business case for federal funding to support rehabilitation plan implementation.

## Ensure the integrity of City infrastructure is maintained

- ✓ Continue implementation of the Agreement with Metrolinx for ECS staff to undertake needed work; and
- ✓ Move forward with the implementation of the Agreement with Bell Canada for the additional resources required for the Smart City program.

## 2016 Operating Budget Highlights

- The 2016 Operating Budget for Engineering & Construction Services of \$70.757 million in gross expenditures provides funding for three services, Municipal Infrastructure Construction, Engineering Review & Acceptance and Engineering Information.
- The Program has achieved the budget target of a 1.0% decrease from the 2015 Approved Budget through measures taken based on the following criteria:
  - ✓ The identification of sustainable, on-going savings including efficiency savings / productivity gains (\$0.450 million);
  - ✓ Stable revenue adjustments to reflect Metrolinx recoveries (\$0.300 million); and
  - ✓ Target achievement without impacting on Council approved Service Levels.

## Council Approved Budget

City Council approved the following recommendations:

1. City Council approve the 2016 Operating Budget for Engineering & Construction Services of \$70.757 million gross, \$7.470 million net for the following services:

	Gross	Net
<u>Service:</u>	<u>(\$000s)</u>	<u>(\$000s)</u>
Municipal Infrastructure Construction	48,397.6	1,859.0
Engineering Review & Acceptance	13,084.6	2,400.0
Engineering Information	9,274.7	3,210.4
Total Program Budget	<u>70,756.9</u>	<u>7,469.6</u>

2. City Council approve the 2016 service levels for Engineering & Construction Services as outlined on pages 14, 17, and 20 of this report, and associated staff complement of 566.1 positions.
3. City Council approve the 2016 user fee changes above the inflationary adjusted rate for Engineering & Construction Services identified in Appendix 7a, for inclusion in the Municipal Code Chapter 441 "Fees and Charges".

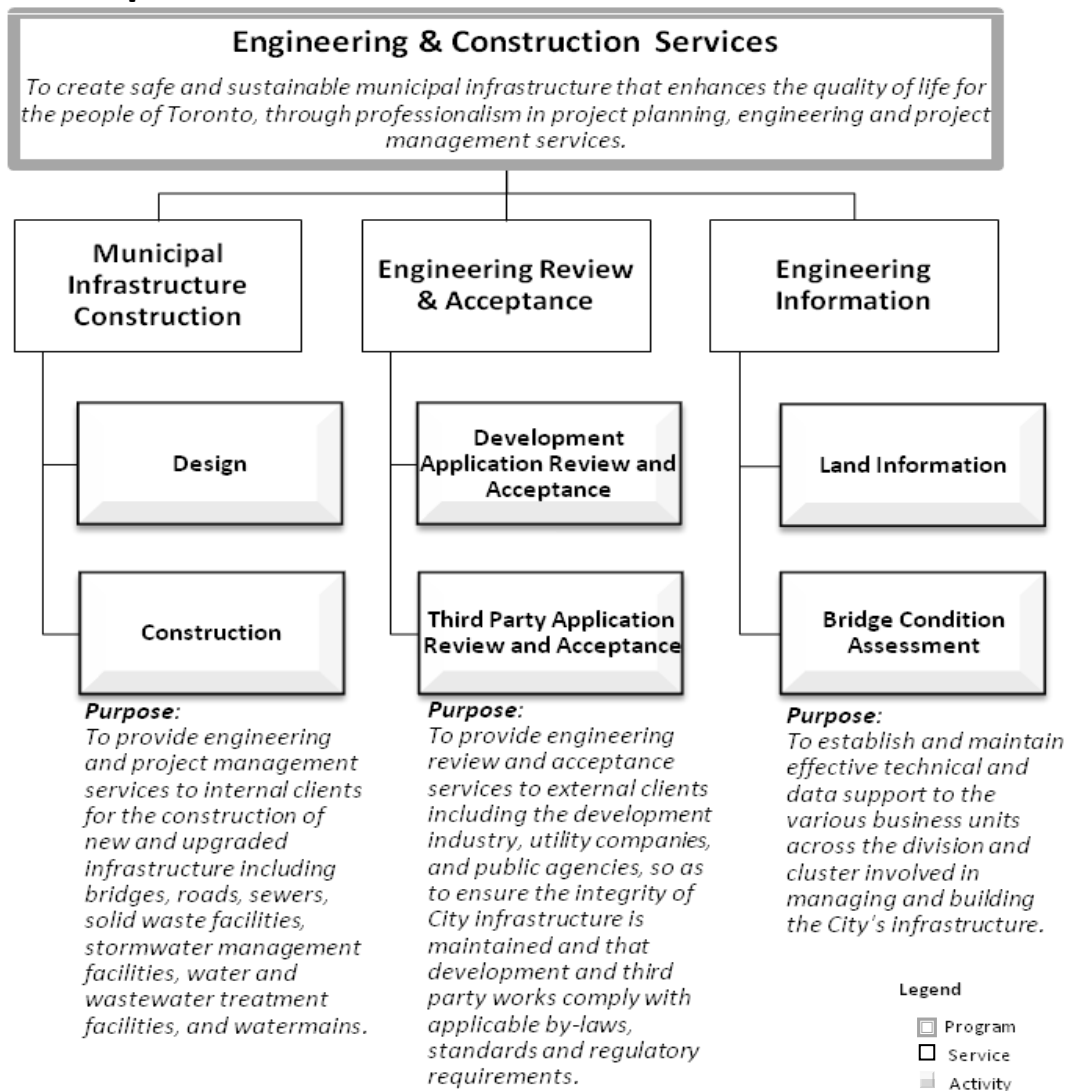


## **Part I:**

2016 – 2018

Service Overview and  
Plan

## Program Map



### Service Customers

#### Municipal Infrastructure Construction

- City Planning
- Economic Development Culture & Tourism, including Business Improvement Areas (BIAs)
- Parks, Forestry and Recreation
- Solid Waste Management
- Toronto Transit Commission (TTC)
- Toronto Water
- Transportation Services

#### Engineering Review & Acceptance

- Agencies
- City Planning
- Development Industry
- Parks, Forestry and Recreation
- Third Parties (Go Transit, Waterfront Toronto, etc.)
- Utility Companies

#### Engineering Information

- Agencies, Boards, Commissions
- City Planning
- Construction and Engineering Consulting Industries
- Development Industry
- Digital Map Owners Group (DMOG)
- Facilities and Real Estate
- Members of Council
- Members of the Public
- Municipal Licensing and Standards
- Parks, Forestry and Recreation
- Solid Waste Management
- Third Parties (Go Transit, Waterfront Toronto, etc.)
- Toronto Water
- Transportation Services

**Table 1**  
**2016 Operating Budget and Plan by Service**

(In \$000s)	2015		2016 Operating Budget			2016 vs. 2015 Budget Changes		Incremental Change 2017 and 2018 Plan			
	Budget	Projected Actual	2016 Base	2016 New/Enhanced	2016 Budget			2017		2018	
By Service	\$	\$	\$	\$	\$	\$	%	\$	%	\$	%
<b>Municipal Infrastructure Construction</b>											
Gross Expenditures	45,588.2	43,438.8	46,652.2	1,745.4	48,397.7	2,809.5	6.2%	136.8	0.3%	451.5	0.9%
Revenue	44,165.9	41,818.6	44,793.2	1,745.4	46,538.7	2,372.8	5.4%	353.8	0.8%	61.2	0.1%
<b>Net Expenditures</b>	<b>1,422.3</b>	<b>1,620.2</b>	<b>1,859.0</b>	<b>0.0</b>	<b>1,859.0</b>	<b>436.7</b>	<b>30.7%</b>	<b>(217.0)</b>	<b>(11.7%)</b>	<b>390.3</b>	<b>23.8%</b>
<b>Engineering Review &amp; Acceptance</b>											
Gross Expenditures	12,360.1	11,777.3	12,113.0	971.6	13,084.6	724.5	5.9%	(27.8)	(0.2%)	143.2	1.1%
Revenue	9,567.0	9,058.6	9,712.9	971.6	10,684.4	1,117.4	11.7%	37.5	0.4%	25.1	0.2%
<b>Net Expenditures</b>	<b>2,793.0</b>	<b>2,718.7</b>	<b>2,400.0</b>	<b>0.0</b>	<b>2,400.1</b>	<b>(392.9)</b>	<b>(14.1%)</b>	<b>(65.2)</b>	<b>(2.7%)</b>	<b>118.1</b>	<b>5.1%</b>
<b>Engineering Information</b>											
Gross Expenditures	8,890.7	8,471.5	9,274.7	-	9,274.7	384.0	4.3%	(18.5)	(0.2%)	66.8	0.7%
Revenue	5,561.0	5,265.5	6,064.3	-	6,064.3	503.3	9.0%	3.0	0.0%	0.5	0.0%
<b>Net Expenditures</b>	<b>3,329.7</b>	<b>3,206.0</b>	<b>3,210.4</b>	<b>-</b>	<b>3,210.4</b>	<b>(119.3)</b>	<b>(3.6%)</b>	<b>(21.6)</b>	<b>(0.7%)</b>	<b>66.3</b>	<b>2.1%</b>
<b>Total</b>											
Gross Expenditures	66,839.0	63,687.7	68,039.9	2,717.0	70,756.9	3,918.0	5.9%	90.5	0.1%	661.4	0.9%
Revenue	59,294.0	56,142.7	60,570.4	2,717.0	63,287.4	3,993.4	6.7%	394.3	0.6%	86.8	0.1%
<b>Total Net Expenditures</b>	<b>7,545.0</b>	<b>7,545.0</b>	<b>7,469.5</b>	<b>0.0</b>	<b>7,469.6</b>	<b>(75.4)</b>	<b>(1.0%)</b>	<b>(303.8)</b>	<b>(4.1%)</b>	<b>574.6</b>	<b>8.0%</b>
<b>Approved Positions</b>	<b>540.1</b>	<b>521.1</b>	<b>540.1</b>	<b>26.0</b>	<b>566.1</b>	<b>26.0</b>	<b>4.8%</b>	<b>-</b>		<b>-</b>	

Note: 2015 Projected Actual Expenditures are System Generated

The Engineering & Construction Services' 2016 Operating Budget is \$70.757 million gross and \$7.470 million net, representing a 1% decrease from the 2015 Approved Net Operating Budget and is in line with the reduction target set out in the 2016 Operating Budget Directions and Guidelines.

- Base pressures of \$0.675 million are mainly attributable to salary and benefits for union/non-union staff (progression pay, step increases, adjustments), one-time cost to update the Program's Capital Works Projects Procurement and Administrative Procedures Manual and the Field Services Manual, and office re-configuration at two locations.
- To more than offset the above pressures, the Program was able to achieve base revenue changes and service efficiency savings of \$0.750 million through line-by-line reviews based on actual experience and reducing the reliance on external engineering services.
- New and enhanced services of \$2.717 million gross and \$0 net are included for work that will be performed on behalf of Metrolinx and for the Bell Smart City project, for the implementation of the F. G. Gardiner Rehabilitation Plan, and work that will mitigate traffic / transit disruption.
- Approval of the 2016 Operating Budget will result in ECS increasing its total staff complement by 26.0 positions from 540.1 to 566.1.
- The 2017 and 2018 Plans reflect increases attributable to progression pay, step and other payroll costs, as well as the reversal of one-time expenditures resulting in a decrease of \$0.304 million in 2017 and an increase of \$0.575 million in 2018.



**Table 2**  
**Key Cost Drivers**

(In \$000s)	2016 Operating Budget						2016 Base Budget	
	Municipal Infrastructure Construction		Engineering Review & Acceptance		Engineering Information		Total	
	\$	Position	\$	Position	\$	Position	\$	Position
<b>Gross Expenditure Changes</b>								
<b>Salary and Benefits Adjustments</b>								
Progression Pay, Step Increases, Re-earnables and	9.8		(88.9)		259.4		180.3	
<b>Other Base Changes</b>								
Capital Works Procedures and Field Services Manual	420.0		120.0		60.0		600.0	
Overtime for standby requirements / overnight contracts	354.1				33.0		387.1	
Office re-configuration (Merton Street and Front Street)	67.5		20.8		15.6		103.9	
Other (IDC increases, materials, equipment, etc.)	212.5		151.1		16.0		379.6	
<b>Total Gross Expenditure Changes</b>	<b>1,064.0</b>		<b>202.9</b>		<b>384.0</b>		<b>1,651.0</b>	
<b>Base Revenue Changes</b>								
Fees from tender deposits (to reflect actual experience)	(65.0)		(15.1)		(18.0)		(98.1)	
Additional recovery from the capital program (standby requirements / overnight contracts; salary & benefits adjustments; IDC increases; materials; equipment)	(547.7)		(95.3)		(177.6)		(820.6)	
Other revenue budget changes and realignments (including Administration Fees to reflect actual experience and TTC /Metrolinx/ Waterfront Toronto)	(14.6)		(35.4)		(7.7)		(57.7)	
<b>Total Revenue Changes</b>	<b>(627.3)</b>		<b>(145.8)</b>		<b>(203.3)</b>		<b>(976.4)</b>	
<b>Net Expenditure Changes</b>	<b>436.7</b>		<b>57.1</b>		<b>180.7</b>		<b>674.6</b>	

Key cost drivers for Engineering & Construction Services are discussed below:

- Salary and Benefit Changes:
  - Non-union progression pay, union step increases and other known salary adjustments of \$0.180 million impact all services. COLA is not included as it is subject to collective bargaining.
- Other Base Changes:
  - One-time contracted services expense of \$0.600 million to update the Program's Capital Works Projects Procurement and Administrative Procedures Manual and the Field Services Manual (i.e. construction inspection), provide peer review, create standards, etc. to improve the delivery of services. This cost increase will primarily impact the Municipal Infrastructure Construction service.
  - Increase in overtime of \$0.387 million for existing staff (engineers, designers, project managers) to accommodate extended hours (standby; overnight contracts; etc.) for capital projects. This is related to the strategy approved by City Council at its February 2015 meeting to mitigate traffic and transit disruption and will mainly occur in the Municipal Infrastructure Construction service.
- Revenue Changes:
  - Increased capital funding of \$0.821 million for expenditures related to the delivery of capital projects primarily in Municipal Infrastructure Construction, but also to a lesser extent in the Engineering Information service.



- Various revenue/recovery adjustments of \$0.156 million to align the budget with actual experience, impacting all three services.

In order to offset the above net pressures, the 2016 service cost changes for Engineering & Construction Services consists of base revenue changes of \$0.300 million net and service efficiencies resulting in savings of \$0.450 million net, for a total reduction of \$0.750 million net as detailed below.

**Table 3**  
**2016 Total Service Change Summary**

Description (\$000s)	2016 Service Changes						Total Service Changes			Incremental Change			
	Municipal Infrastructure Construction		Engineering Review & Acceptance		Engineering Information		\$	\$	#	2017 Plan		2018 Plan	
	Gross	Net	Gross	Net	Gross	Net	Gross	Net	Pos.	Net	Pos.	Net	Pos.
<b>Base Changes:</b>													
<b>Base Revenue Changes</b>													
Line-by-Line Review - Metrolinx revenue (recovered through Legal Services)						(300.0)		(300.0)					
<b>Base Revenue Change</b>						(300.0)		(300.0)					
<b>Sub-Total</b>						(300.0)		(300.0)					
<b>Service Efficiencies</b>													
Reduced reliance on external engineering review service			(450.0)	(450.0)			(450.0)	(450.0)					
<b>Sub-Total</b>			(450.0)	(450.0)			(450.0)	(450.0)					
<b>Total Changes</b>			(450.0)	(450.0)		(300.0)	(450.0)	(750.0)					

### Base Revenue Changes (Savings of \$0.300 million net)

#### Line-by-Line Review

- Additional revenue of \$0.300 million net will be budgeted for ongoing work performed for Legal Services (i.e. surveying for land expropriation, etc. primarily for Metrolinx). This work has been ongoing for a number of years and will now be formalized in the budget of Engineering Information.

### Service Efficiencies (Savings of \$0.450 million gross & \$0.450 million net)

#### Reduced Reliance on External Engineering Review Service

- ECS will achieve efficiency savings of 5.9% by reducing reliance on external engineering services for development engineering and third party and utility reviews.
- ECS will now manage changes in the workload related to these periodic review requirements internally utilizing existing staff within Engineering Review & Acceptance.

**Table 4**  
**2016 Total New & Enhanced Service Priorities**

Description (\$000s)	New and Enhanced						Total New and Enhanced			Incremental Change			
	Municipal Infrastructure Construction		Engineering Review & Acceptance		Engineering Information				Position				
							\$	\$		2017 Plan		2018 Plan	
	Gross	Net	Gross	Net	Gross	Net	Gross	Net	#	Net	Pos.	Net	Pos.
Enhanced Services Priorities													
F. G. Gardiner Strategic Rehabilitation Plan Implementation	700.0						700.0		6.0				
Mitigating Traffic and Transit Disruption	766.7		328.6				1,095.2		11.0				
Review work for Metrolinx			259.4				259.4		2.0				
Sub-Total	1,466.7		588.0				2,054.7		19.0				
New Service Priorities													
Increased work due to Bell Smart City Program	278.8		383.6				662.4		7.0				
Sub-Total	278.8		383.6				662.4		7.0				
Total	1,745.5		971.6				2,717.0		26.0				

### Enhanced Service Priorities (\$2.055 million gross & \$0 net)

#### *F. G. Gardiner Strategic Rehabilitation Plan Implementation (\$0.700 million gross & \$0 net)*

- A new section within ECS will be established to enhance the delivery of services related to implementation of the Strategic Rehabilitation Plan for the F.G. Gardiner Expressway recently approved by City Council. It will serve as a single point of coordination, project planning, procurement, design and construction services, contract administration, quality control, accountability, and information. See Issues section (page 24) of these Notes for further information.
- 6 permanent positions (1 Director, 4 Senior Advisors Corporate Initiatives, 1 Administrative Assistant) will be added, fully funded from the Transportation Services capital program. Positions will start on various dates in 2016, with additional annualized costs of \$0.295 million in 2017.

#### *Mitigating Traffic and Transit Disruption (\$1.095 million gross & \$0 net)*

- 11 permanent seasonal positions (Inspectors Municipal Construction) will be added, fully funded from the Transportation Services and Toronto Water capital programs. Positions will be utilized to enhance delivery of capital projects using extended hours in the Right of Way.
- The additional positions will enable ECS to fulfil Council direction and effectively mitigate traffic and transit disruption impacts of construction within the Right of Way.

#### *Review Work for Metrolinx (\$0.259 million gross & \$0 net)*

- 2 permanent positions (1 Senior Engineer and 1 Project Manager) will be added, fully funded via recovery from Metrolinx, to provide review and approvals for the Eglinton Crosstown and Finch West Light Rail Transit projects.
- These positions are required by ECS to protect the City's interests and infrastructure, and ensure that the City meets its commitments under the agreement with Metrolinx.

**New Service Priorities (\$0.662 million gross & \$0 net)***Increased Work due to the Bell Smart City Project*

- The Smart City project, announced in June 2015, involves the installation of a new internet service to 1.1 million Toronto homes and businesses.
- It will require ECS to process and inspect an additional 7,500 full-stream applications over a 2.5 year period. This represents a 250% increase in the average total number of full-stream applications received annually by ECS from all utility companies. Bell Canada will fund this work as an acknowledgment of the specific workload impact.
- 7 temporary positions (3 Engineering Technologist Technicians (ETT1) and 4 Inspectors Municipal Construction (IMC)) will be added, fully funded via recovery from Bell Canada for the Smart City project.

Approval of the 2016 Budget for Engineering & Construction Services will result in a 2017 decrease in net costs of \$0.304 million and a 2018 incremental increase in net cost of \$0.575 million to maintain the 2016 service levels, as discussed in the following section:

**Table 5**  
**2017 and 2018 Plan by Program**

Description (\$000s)	2017 - Incremental Increase				#	2018 - Incremental Increase				#
	Gross Expense	Revenue	Net Expense	% Change		Gross Expense	Revenue	Net Expense	% Change	
<b>Known Impacts:</b>										
Progression Pay, Step Increases and Other changes to align with actual experience	319.4		319.4	4.3%		672.1		672.1	9.4%	
Additional IDCs	17.8		17.8	0.2%		27.0		27.0	0.4%	
Additional capital recoveries		41.0	(41.0)	(0.5%)			20.6	(20.6)	(0.3%)	
Capital Works Procedures and Field Services Manuals	(600.0)		(600.0)	(8.0%)						
Office re-configuration (Merton St. and Front St.)						(103.9)		(103.9)	(1.4%)	
F. G. Gardiner Strategic Rehabilitation Plan Implementation	294.7	294.7				5.8	5.8			
Mitigating Traffic and Transit Disruption	36.0	36.0				37.0	37.0			
Review Work for Metrolinx	0.9	0.9				1.0	1.0			
Increased Work due to the Bell Smart City Project	21.7	21.7				22.4	22.4			
<b>Total Incremental Impact</b>	<b>90.5</b>	<b>394.3</b>	<b>(303.8)</b>	<b>(4.1%)</b>		<b>661.4</b>	<b>86.8</b>	<b>574.6</b>	<b>8.0%</b>	

Future year incremental costs are primarily attributable to the following:

**Known Impacts:**

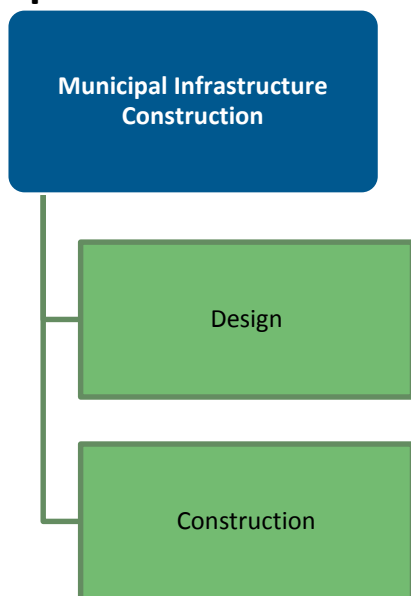
- Progression pay, step and other adjustments will result in increases of \$0.319 million in 2017 and \$0.672 million in 2018. Cost of Living Adjustments (COLA) have not been included in 2017 and 2018 as it is subject to ongoing negotiations.
- The one-time expenditure for updating the Capital Works Procedures and Field Services Manual in 2016 will be reversed in 2017 (\$0.600 million) and the two year expenditure for office reconfiguration in 2016 and 2017 will be reversed in 2018 (\$0.104 million).
- The annualized cost for the new positions starting in 2016 for the F. G. Gardiner Strategic Rehabilitation Plan Implementation will be included in 2017 (\$0.295 million).



## **Part II:**

2016 Budget by  
Service

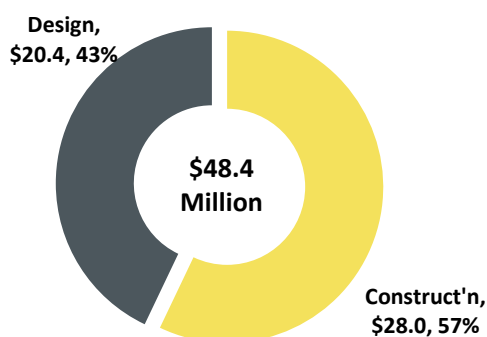
## Municipal Infrastructure Construction



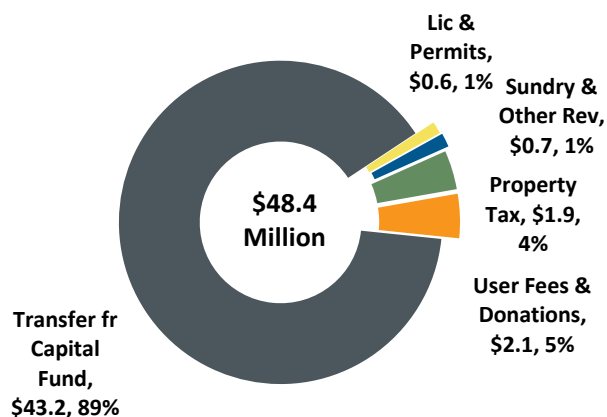
### What We Do

- Provide engineering and project management services to internal clients for the construction of new and upgraded infrastructure including bridges, roads, sewers, solid waste facilities, stormwater management facilities, water and wastewater treatment facilities, and watermains.

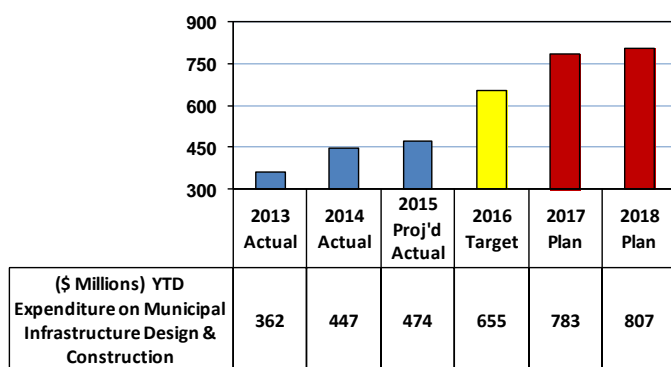
2016 Service Budget by Activity (\$Ms)



Service by Funding Source (\$Ms)



(\$ Millions) YTD Expenditure on Municipal Infrastructure Design & Construction



- ECS continues to experience substantial growth in construction activity for clients' capital programs.
- \$474 million in capital projects are anticipated to be delivered by ECS in 2015.
- The 2016 Operating Budget is targeting the delivery of 80% of the capital budget assigned to the Program, which is estimated to be more than \$650 million in 2016.

## 2016 Service Levels

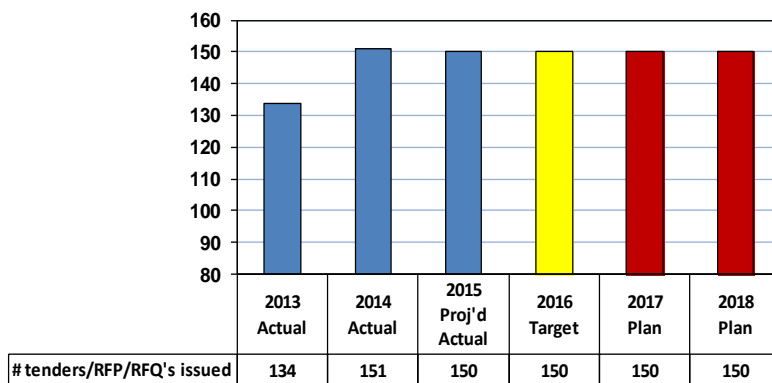
### Municipal Infrastructure Construction

Activity	Sub-Activity/Type	2013	2014	2015	2016
Design	Tenders issued compared to plan	90% as scheduled			90% as scheduled
Construction	Contracts substantially completed compared to plan	90% as scheduled			90% as scheduled
	Year End Actual Expenditure as a percentage of Approved Capital budget	80% Year End Actual Expenditure as a percentage of Approved Capital budget			80% Year End Actual Expenditure as a percentage of Approved Capital budget

Overall, the 2016 Service Levels are consistent with the approved 2015 Service Levels for Municipal Infrastructure Construction.

## Service Performance

### Output Measure – # of tenders/RFPs/RFPs



- The number of tenders, requests for proposals and requests for qualifications increased from 115 in 2012 to 151 in 2014.
- In 2016, ECS expects to issue an estimated 150 tenders for a capital program that is currently valued at over \$650 million.
- Future year estimates are 150 for each of 2017 and 2018, and will be based on client's requirements and the planned continued bundling of construction projects into single tenders.

**Table 6**  
**2016 Service Budget by Activity**

(\$000s)	2015	2016 Operating Budget							2016 Budget vs. 2015 Budget		Incremental Change			
	Budget	Base Budget	Service Changes	2016 Base	Base Budget vs. 2015 Budget		New/Enhanced	2016 Budget			2017 Plan		2018 Plan	
						%				%		%		%
GROSS EXP.														
Construction	25,829.7	26,349.4		26,349.4	519.7	2.0%	1,605.4	27,954.9	2,125.2	8.2%	213.6	0.8%	305.3	1.1%
Design	19,758.5	20,302.8		20,302.8	544.3	2.8%	140.0	20,442.8	684.3	3.5%	(76.7)	-0.4%	146.1	0.7%
Total Gross Exp.	45,588.2	46,652.2		46,652.2	1,064.0	2.3%	1,745.4	48,397.7	2,809.5	6.2%	136.8	0.3%	451.5	0.9%
REVENUE														
Construction	25,260.3	25,570.2		25,570.2	309.9	1.2%	1,605.4	27,175.7	1,915.3	7.6%	284.1	1.0%	52.3	0.2%
Design	18,905.6	19,223.0		19,223.0	317.4	1.7%	140.0	19,363.0	457.4	2.4%	69.7	0.4%	8.9	0.0%
Total Revenues	44,165.9	44,793.2		44,793.2	627.3	1.4%	1,745.4	46,538.7	2,372.8	5.4%	353.8	0.8%	61.2	0.1%
NET EXP.														
Construction	569.4	779.2		779.2	209.8	36.8%	(0.0)	779.2	209.8	36.8%	(70.5)	-9.1%	253.0	35.7%
Design	852.9	1,079.8		1,079.8	226.9	26.6%		1,079.8	226.9	26.6%	(146.4)	-13.6%	137.2	14.7%
Total Net Exp.	1,422.3	1,859.0		1,859.0	436.7	30.7%	(0.0)	1,859.0	436.7	30.7%	(217.0)	-11.7%	390.3	19.2%
Approved Positions	357.6	357.6		357.6			16.5	374.1	16.5	4.6%		0.0%		

The **Municipal Infrastructure Construction Service** provides engineering and project management services to internal clients for the construction of new and upgraded infrastructure including bridges, roads, sewers, solid waste facilities, stormwater management facilities, water and wastewater treatment facilities, and watermain.

The Municipal Infrastructure Construction's 2016 Operating Budget of \$48.398 million gross and \$1.859 million net is \$0.437 million or 30.7% over the 2015 Net Budget.

In addition to base budget pressures common across all services, pressures unique or predominant for Municipal Infrastructure Construction are primarily due to:

- A one-time contracted services expense to update the Program's Capital Works Projects Procurement and Administrative Procedures Manual and Field Services Manual (\$0.420 million);
- An increase in overtime (\$0.354 million) for existing staff (engineers, designers, project managers) to accommodate extended hours (standby, overnight contracts, etc.) for capital projects. Related to the strategy approved by City Council at its Feb. 2015 meeting to mitigate traffic/transit disruption.

These gross expenditure pressures were partially offset by:

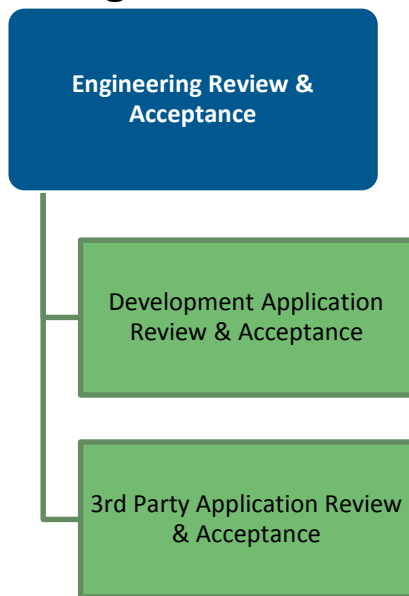
- Increased tender deposit fee revenue and revenue adjustments (\$0.080 million); and
- Additional recovery from the capital program for the overtime costs (\$0.354 million).

The 2016 Operating Budget for Municipal Infrastructure Construction includes funding of \$1.745 million gross and \$0 net for the following new/enhanced initiatives:

- Funding to create a new section comprised of 6 positions to enhance the delivery of services related to implementation of the Strategic Rehabilitation Plan for the F.G. Gardiner Expressway, fully funded via the capital program (\$0.700 million gross and \$0 net);
- Mitigation of traffic and transit disruption with 11 positions to manage the impacts of construction within the Right of Way, fully funded via the capital program (\$0.767 million gross and \$0 net); and
- Inspection of the works associated with an additional 7,500 full-stream applications over a 2.5 year period, fully funded via recovery from the Bell Smart City project (\$0.279 million gross and \$0 net).



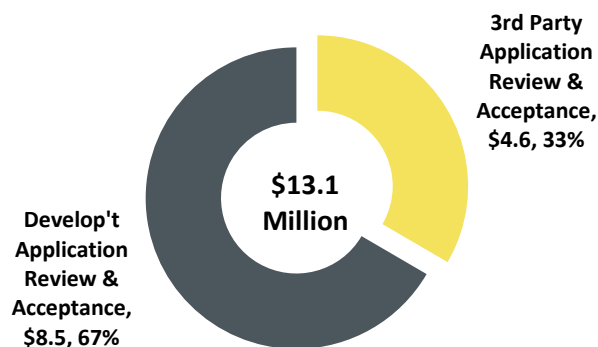
## Engineering Review & Acceptance



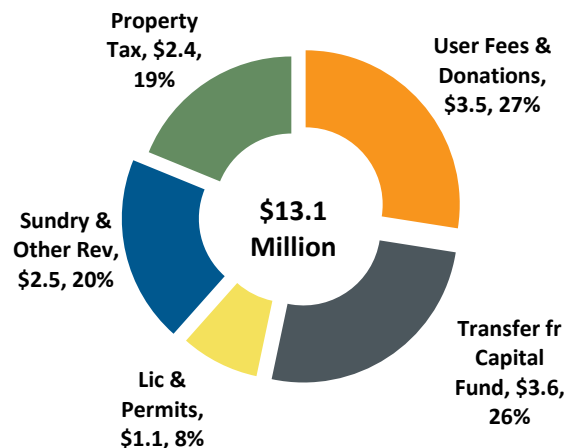
### What We Do

- Provide engineering review and acceptance services to external clients including the development industry, utility companies, and public agencies, so as to ensure the integrity of City infrastructure is maintained and that development and third party works comply with applicable by-laws, standards and regulatory requirements.

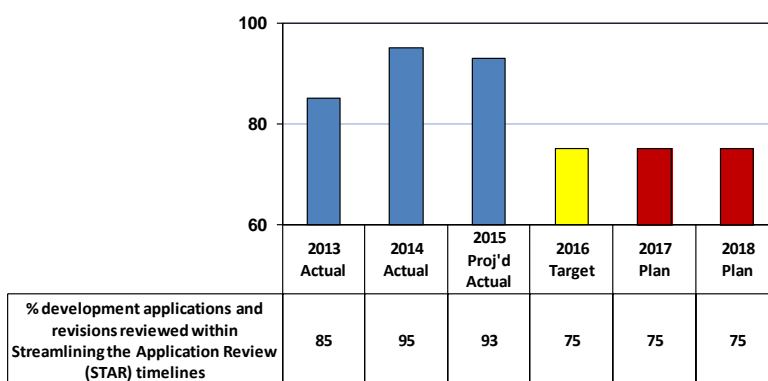
### 2016 Service Budget by Activity (\$Ms)



### Service by Funding Source (\$Ms)



### % development applications and revisions reviewed within Streamlining the Application Review (STAR) timelines



- In 2015, 93% of development applications and revisions by ECS were completed within STAR timelines.
- This high level of achievement builds on the trend set in 2013, when 85% of applications were reviewed within STAR (Streamlining The Application Review) process timelines.
- ECS will continue to target compliance with STAR timelines in 2016 and future years.

## 2016 Service Levels

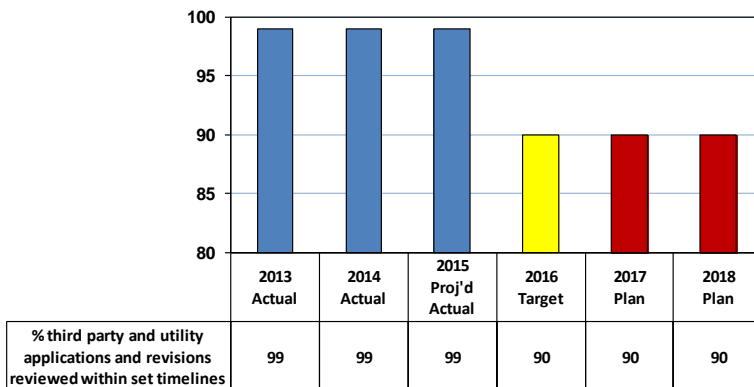
### Engineering Review & Acceptance

Activity	Sub-Activity/Type	2013	2014	2015	2016
Development Applications Review and Acceptance	Development Applications	5% compliance rate within STAR timeline			75% compliance rate
	Engineering Drawings	75% compliance rate			75% compliance rate
Third Party Application Review and Acceptance	Third Party applications	90% compliance within 20 working days			90% compliance within 20 working days

Overall, the 2016 Service Levels are consistent with the approved 2015 Service Levels for Engineering Review & Acceptance.

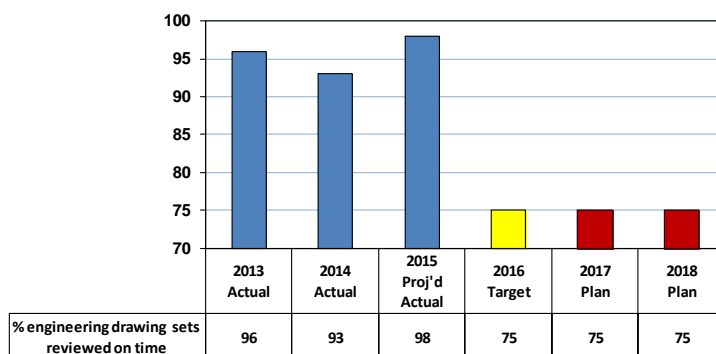
## Service Performance

### Effectiveness Measure – % of 3rd party & utility applications reviewed within set timelines



- In 2015, for the third year in a row, ECS reviewed 99% of third party and utility applications within set timelines.
- This represents a very high level of responsiveness to third party and utility clients.
- 2016 and future year targets will continue to be 90% compliance with set timelines.

### Effectiveness Measure - % of engineering drawing sets reviewed on time



- In 2015, ECS exceeded expectations by reviewing 98% of engineering drawing sets on time.
- This level of service is a significant achievement over the performance target.
- ECS will continue to target 75% compliance for 2016 and future years.

**Table 7**  
**2016 Service Budget by Activity**

(\$000s)	2015	2016 Operating Budget							2016 Budget vs. 2015 Budget		Incremental Change			
	Budget	Base Budget	Service Changes	Base Budget vs. 2015 Budget		New/Enhanced	2016 Budget	2017 Plan			2018 Plan			
				2016 Base	% Change					\$			%	\$
	\$	\$	\$	\$	\$	%	\$	\$	\$	%	\$	%	\$	%
GROSS EXP.														
3rd Party Application Review & Acceptance	4,014.6	4,134.6	(45.0)	4,089.6	75.0	1.9%	500.4	4,590.0	575.4	14.3%	(37.1)	-0.8%	34.3	0.8%
Development Application Review & Acceptance	8,345.4	8,428.4	(405.0)	8,023.4	(322.0)	(3.9%)	471.2	8,494.6	149.1	1.8%	9.4	0.1%	108.9	1.3%
Total Gross Exp.	12,360.1	12,563.0	(450.0)	12,113.0	(247.1)	(2.0%)	971.6	13,084.6	724.5	5.9%	(27.8)	-0.2%	143.2	1.1%
REVENUE														
3rd Party Application Review & Acceptance	3,663.2	3,733.9		3,733.9	70.7	1.9%	500.4	4,234.3	571.1	15.6%	18.3	0.4%	16.1	0.4%
Development Application Review & Acceptance	5,903.8	5,979.0		5,979.0	75.2	1.3%	471.2	6,450.1	546.3	9.3%	19.2	0.3%	8.9	0.1%
Total Revenues	9,567.0	9,712.9		9,712.9	145.8	1.5%	971.6	10,684.4	1,117.4	11.7%	37.5	0.4%	25.1	0.2%
NET EXP.														
3rd Party Application Review & Acceptance	351.4	400.7	(45.0)	355.7	4.3	1.2%	0.0	355.7	4.3	1.2%	(55.4)	-15.6%	18.1	6.0%
Development Application Review & Acceptance	2,441.6	2,449.4	(405.0)	2,044.4	(397.2)	(16.3%)	(0.0)	2,044.4	(397.2)	(16.3%)	(9.8)	-0.5%	100.0	4.9%
Total Net Exp.	2,793.0	2,850.1	(450.0)	2,400.1	(392.9)	(14.1%)	0.0	2,400.1	(392.9)	(14.1%)	(65.2)	-2.7%	118.1	4.8%
Approved Positions	97.1	97.1		97.1			9.5	106.6	9.5	9.8%		0.0%		

The **Engineering Review & Acceptance Service** provides engineering review and acceptance services to external clients including the development industry, utility companies, and public agencies, so as to ensure that the integrity of City infrastructure is maintained and that development and third party works comply with applicable by-laws, standards and regulatory requirements.

The Engineering Review & Acceptance's 2016 Operating Budget of \$13.085 million gross and \$2.400 million net is \$0.393 million or 14.1% under the 2015 Net Budget.

In addition to base budget pressures common across all services, pressures unique to Engineering Review & Acceptance are primarily due to:

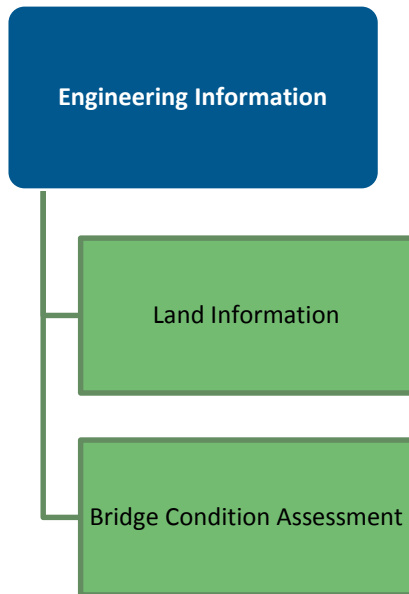
- The inclusion of a portion of the one-time contracted services expense to update the Program's Capital Works Projects Procurement and Administrative Procedures Manual and the Field Services Manual (\$0.120 million); and
- Increases in various IDCs, materials, equipment expense, etc. (\$0.151 million);

In order to offset the above pressures, Engineering Review & Acceptance will reduce reliance on external engineering services for development engineering and third party and utility reviews, resulting in an efficiency savings of \$0.450 million gross and net.

The 2016 Operating Budget for Engineering Review & Acceptance includes funding of \$0.972 million gross and \$0 net for the following new/enhanced initiatives:

- Provide review and approvals for the Eglinton Crosstown and Finch West Light Rail Transit projects, fully funded via recovery from Metrolinx (\$0.259 million and \$0 net);
- Mitigation of traffic and transit disruption with 11 positions to manage the impacts of construction within the Right of Way, fully funded via the capital program (\$0.329 million gross and \$0 net); and
- Processing of an additional 7,500 full-stream applications over a 2.5 year period, fully funded via recovery from the Bell Smart City Project (\$0.384 million gross and \$0 net).

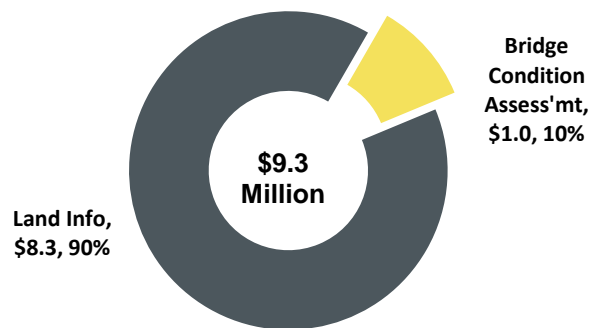
## Engineering Information



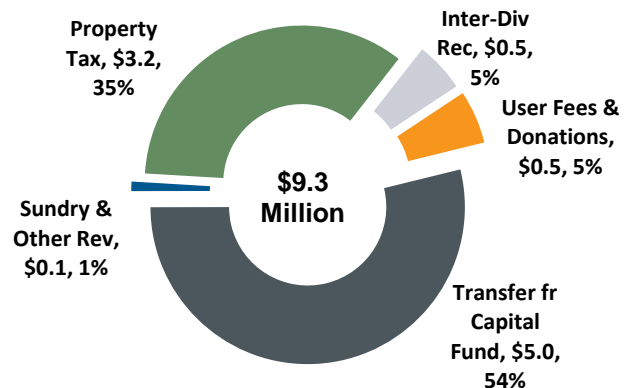
### What We Do

- Establish and maintain effective technical and data support to the various business units across the division and cluster involved in managing and building the City's infrastructure.

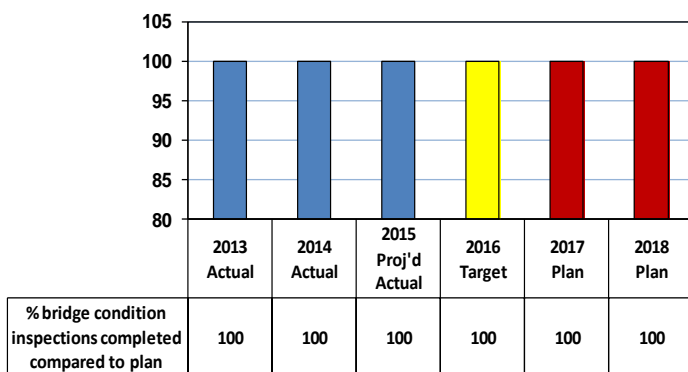
### 2016 Service Budget by Activity (\$Ms)



### Service by Funding Source (\$Ms)



### % bridge condition inspections completed compared to plan



- In 2014, ECS again completed 100% of planned bridge condition inspections.
- ECS is targeting to maintain a 100% completion rate in 2016 and future years for the legislated 2-year bridge condition inspection cycle.

## 2016 Service Levels

### Engineering Information

Activity	Sub-Activity/Type	2013	2014	2015	2016
Land Information	Land Surveying	completed projects by estimate date, 90% of the time			completed projects by estimate date, 90% of the time
	Street Naming	recommendation within 6 months 90% of time			recommendation within 6 months 90% of time
	Municipal Numbering	provide comments within 5 working days, 100% of the time			provide comments within 5 working days, 100% of the time
	Utility Mapping	90% completion of planned km to update			90% completion of planned km to update
Bridge Condition Assessment	Bridge Inspection & Assessment	100% inspection compliance within regulatory timelines			100% inspection compliance

Overall, the 2016 Service Levels are consistent with the approved 2015 Service Levels for Engineering Information.

**Table 8**  
**2016 Service Budget by Activity**

(\$000s)	2015	2016 Operating Budget							2016 Budget vs. 2015 Budget		Incremental Change			
	Approved Budget	Base Budget	Service Changes	2016 Base	Base Budget vs. 2015 Budget	% Change	New/Enhanced	2016 Budget			2017 Plan		2018 Plan	
	\$	\$	\$	\$	\$	%	\$	\$	\$	%	\$	%	\$	%
<b>GROSS EXP.</b>														
Bridge Condition Assessment	869.1	963.8		963.8	94.7	10.9%		963.8	94.7	10.9%	(24.4)	-2.5%	(1.2)	(0.1%)
Land Information	8,021.6	8,311.0		8,311.0	289.3	3.6%		8,311.0	289.3	3.6%	5.8	0.1%	68.0	0.8%
<b>Total Gross Exp.</b>	<b>8,890.7</b>	<b>9,274.7</b>		<b>9,274.7</b>	<b>384.0</b>	<b>4.3%</b>		<b>9,274.7</b>	<b>384.0</b>	<b>4.3%</b>	<b>(18.5)</b>	<b>-0.2%</b>	<b>66.8</b>	<b>0.7%</b>
<b>REVENUE</b>														
Bridge Condition Assessment	803.0	866.9		866.9	63.9	8.0%		866.9	63.9	8.0%	1.1	0.1%	0.5	0.1%
Land Information	4,758.0	4,897.4	300.0	5,197.4	439.4	9.2%		5,197.4	439.4	9.2%	1.9	0.0%	0.0	0.0%
<b>Total Revenues</b>	<b>5,561.0</b>	<b>5,764.3</b>	<b>300.0</b>	<b>6,064.3</b>	<b>503.3</b>	<b>9.0%</b>		<b>6,064.3</b>	<b>503.3</b>	<b>9.0%</b>	<b>3.0</b>	<b>0.0%</b>	<b>0.5</b>	<b>0.0%</b>
<b>NET EXP.</b>														
Bridge Condition Assessment	66.0	96.8		96.8	30.8	46.6%		96.8	30.8	46.6%	(25.5)	-26.3%	(1.7)	(2.4%)
Land Information	3,263.6	3,413.6	(300.0)	3,113.6	(150.0)	(4.6%)		3,113.6	(150.0)	(4.6%)	3.9	0.1%	68.0	2.2%
<b>Total Net Exp.</b>	<b>3,329.7</b>	<b>3,510.4</b>	<b>(300.0)</b>	<b>3,210.4</b>	<b>(119.3)</b>	<b>(3.6%)</b>		<b>3,210.4</b>	<b>(119.3)</b>	<b>(3.6%)</b>	<b>(21.6)</b>	<b>-0.7%</b>	<b>66.3</b>	<b>2.0%</b>
<b>Approved Positions</b>	<b>85.4</b>	<b>85.4</b>		<b>85.4</b>				<b>85.4</b>				0.0%		

The **Engineering Information Service** establishes and maintains effective technical and data support to the various business units across the Program and Cluster involved in managing and building the City's infrastructure.

The Engineering Information's 2016 Operating Budget of \$9.275 million gross and \$3.210 million net is \$0.119 million or 3.6% under the 2015 Net Budget.

- Base budget pressures for Engineering Information are those that are common across all services within Engineering & Construction Services and are partially offset by additional recoveries from the capital program (\$0.178 million).
- Remaining pressures are more than offset by additional revenue budgeted in 2016 (\$0.300 million) for ongoing work performed for Legal Services (i.e. surveying for land expropriation, etc. primarily for Metrolinx). This work has been ongoing for a number of years and will now be formalized in the budget.



## **Part III:**

### Issues for Discussion



## Issues for Discussion

### Issues Impacting Future Years

#### *Increase in Capital Project Delivery*

- Engineering & Construction Services (ECS) is projecting delivery of \$474 million in capital work by 2015 year-end. However, the value of the capital program to be delivered by ECS is forecast to continue to grow significantly. The projected increase in capital delivery is primarily driven by increases in both the Toronto Water and Transportation Services' Capital Programs.
- The delivery of clients' capital programs and major third party work has increased substantially over the past decade and is characterized by frequent workload peaks. These demands are difficult to accommodate even at a full staff complement and ECS continues to experience difficulties in hiring skilled professional and technical staff due to the competitive market conditions in the Greater Toronto Area.
- Given the projected increase in the City's capital programs for municipal infrastructure projects delivered by ECS, the Program proposes to increase the use of outside professional engineering services to meet the forecasted demand. ECS will maintain a robust in-house core capacity of engineering expertise consisting of survey, design and inspection staff.

### Issues Referred to the 2016 Operating Budget Process

During the course of 2015, Council directed staff to consider, as part of the 2016 Budget process, enhancements regarding the F.G. Gardiner Strategic Rehabilitation Plan and Mitigating Traffic and Transit Disruption. The anticipated costs to implement these enhancements are reflected in the tables below:

New / Enhanced Service Description (\$000s)	2016 Impact				Net Incremental Impact			
	Gross	Revenue	Net	Positions	2017 Plan		2018 Plan	
					Net	Positions	Net	Positions
<b>Included</b>								
Referred to the Budget Process								
<i>F. G. Gardiner Strategic Rehabilitation Plan</i>	700.0	700.0	0.0	6.0				
<b>Total New/Enhanced Services (Included)</b>	<b>700.0</b>	<b>700.0</b>	<b>0.0</b>	<b>6.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>

New / Enhanced Service Description (\$000s)	2016 Impact				Net Incremental Impact			
	Gross	Revenue	Net	Positions	2017 Plan		2018 Plan	
					Net	Positions	Net	Positions
<b>Not Included</b>								
Referred to the Budget Process								
<i>Mitigating Traffic and Transit Disruption</i>	1,095.2	1,095.2	0.0	11.0				
<b>Total New/Enhanced Services (Not Included)</b>	<b>1,095.2</b>	<b>1,095.2</b>	<b>0.0</b>	<b>11.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>

As described in greater detail below, the F.G. Gardiner Strategic Rehabilitation Plan Implementation initiative was included in the 2016 Operating Budget, while the Mitigating Traffic and Transit Disruption initiative, which involves the implementation of extended construction work hours on capital projects requiring additional construction inspection resources, was not. However, the Mitigating Traffic and Transit Disruption initiative was included for Council's consideration as part of new/enhanced requests referred to the Budget process to be distributed for Budget Committee's consideration in the 2016 Budget process.

*F.G. Gardiner Rehabilitation*

- At its meeting on September 30, 2015, City Council adopted report *EX8.12 - F.G. Gardiner Expressway Strategic Rehabilitation Plan Procurement Strategy* which included the following recommendation:
  - City Council direct that the Revised Strategic Plan cash flows, and proposed sources of funding be submitted for Council's consideration as part of the 2016 Budget Process, in accordance with the procurement strategy as described in this item.
- The link to the report, *2015.EX8.12 - F.G. Gardiner Expressway Strategic Rehabilitation Plan Procurement Strategy* is provided below:

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2015.EX8.12>

- By far the largest single construction procurement that the City is undertaking is the rehabilitation of the F.G. Gardiner Expressway, which has an estimated project cost of \$3.8 billion inclusive of operations and maintenance over a 30-year concession period.
- A key feature of the rehabilitation project will be the use of accelerated bridge construction, using pre-fabricated segments for the elevated sections of the expressway. This approach is expected to reduce construction-related traffic restrictions by approximately 8 years. Furthermore, by using pre-fabricated sections, the rehabilitation will result in a higher quality structure with a longer service life, and lower annual maintenance costs.
- Rehabilitation of the Expressway will be done using an Alternative Financing and Procurement approach, whereby the city will bundle the design and construction of the rehabilitation works with a long-term operations and maintenance contract. Based on feedback received from the industry, this approach should lead to even further reductions in the construction schedule for the rehabilitation project when compared to traditional tendering practises.
- The 2016 Operating Budget for ECS includes an additional 6 positions to support the *F.G. Gardiner Rehabilitation project* at a cost of \$0.700 million in 2016 (with additional annualized costs of \$0.295 million in 2017) to be funded from the F.G. Gardiner capital project.
  - These positions will form a new section within ECS that will provide the technical and administrative oversight needed to effectively implement the F.G. Gardiner Expressway Strategic Rehabilitation Plan. A new section will be created within ECS reporting directly to the Executive Director, and will serve as a single point of coordination, project planning, procurement, design and construction services, contract administration, quality control, accountability, and information.

*Mitigating Traffic and Transit Disruption*

- At its meeting on February 10, 2015, City Council adopted report *PW1.3 – Managing Traffic Disruption on City-Led Construction Projects*, which included (in part) the following recommendation:
  - City Council direct the Executive Director, Engineering & Construction Services, to use an extended construction work hours schedule for City-led construction projects

- The link to this report is provided below:  
<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2015.PW1.3>
- While capital programs are growing in the City, there is also an increased emphasis on mitigating traffic and transit disruption resulting from City-led construction projects.
  - To reduce traffic and transit disruption, ECS has amended contract terms and conditions to extend construction working hours beyond the traditional 7:00 am start to 7:00 pm finish, where it makes sense to do so and there is agreement of the local Councillor. By working longer hours, ECS is able to reduce overall project schedules.
- To ensure appropriate inspection oversight during the extended contractor work hours, ECS created 11 temporary, seasonal inspection positions to support delivery of the capital program using extended construction work hours.
  - To permanently continue this approach, the 2016 Operating Budget would require 11 permanent seasonal inspection positions (at an annual cost of \$1.095 million to be funded from the Transportation and Toronto Water capital programs).
  - The additional positions and related funding were not included in the ECS 2016 Operating Budget, however they were included for Council's consideration as part of new/enhanced requests referred to the Budget process to be distributed for Budget Committee's consideration in the 2016 Budget process.
- Council approved the additional 11 positions as part of EX12.2 *2016 Capital and Operating Budgets* on February 17, 2016.



## Appendices:

## Appendix 1

### 2015 Service Performance

#### 2015 Key Service Accomplishments

In 2015, Engineering & Construction Services accomplishments included the following:

##### *Municipal Infrastructure Construction*

- ✓ Sustained capital delivery aimed at achieving an estimated 80% year end actual expenditure as a % of approved capital budget
- ✓ Identified the preferred procurement and financing approach for the F.G. Gardiner Strategic Rehabilitation project
- ✓ Proactively managed construction-related disruption, including traffic disruption, at the project planning stage and during construction; e.g.:
  - Completed the resurfacing of Dufferin Street from Lawrence Avenue to Highway 401 4 weeks ahead of schedule
  - Completed the resurfacing of Bayview Avenue 3 weeks ahead of schedule
  - Completed interim repairs on the west deck of the F.G. Gardiner Expressway 2 months ahead of schedule
- ✓ Increased engagement with the consulting engineering and construction contracting industries to build capacity in support of forecasted capital program growth
- ✓ Prudently managed contract awards – cancelled 22 tenders, valued at \$92.4 Million and representing 110 individual sites, where low bids were well in excess of capital budget and original cost estimate

##### *Engineering Review & Acceptance*

- ✓ Sustained at least 75% compliance with STAR timelines for review of development applications
- ✓ Increased full stream utility application fees above inflation to more fully recover the direct costs associated with the delivery of this service

##### *Engineering Information*

- ✓ Maintained 100% completion rate for the provincially-legislated 2-year bridge condition inspection cycle
- ✓ In collaboration with other City divisions, developed and implemented a new Street Naming Policy, which clarifies and will expedite the processing of street naming applications
- ✓ Successfully implemented the Council-endorsed policy for accepting potentially contaminated lands to be conveyed to the City under the Planning Act so that public health and the environment are appropriately safeguarded

## Appendix 2

### 2016 Operating Budget by Expenditure Category

#### Program Summary by Expenditure Category

Category of Expense (\$000's)	2013	2014	2015	2015	2016	2016 Change from		Plan	
	Actual	Actual	Budget	Projected	Budget	2015		2017	2018
	\$	\$	\$	\$	\$	Budget	%	\$	\$
Salaries and Benefits	51,651.5	52,876.8	58,244.2		61,536.1	3,292.0	5.7%	62,208.9	62,947.2
Materials and Supplies	172.7	161.9	392.6		481.8	89.2	22.7%	481.8	481.8
Equipment	149.0	245.9	255.3		506.6	251.3	98.4%	506.6	506.6
Services & Rents	3,800.1	5,462.3	3,342.1		3,588.8	246.7	7.4%	2,988.8	2,884.9
Contributions to Capital							-		
Contributions to Reserve/Res Funds	771.7	778.7	797.0		797.0			797.0	797.0
Other Expenditures	104.2	18.6					-	0.0	0.0
Interdivisional Charges	3,116.1	3,245.5	3,807.8		3,846.5	38.7	1.0%	3,864.3	3,891.3
<b>Total Gross Expenditures</b>	<b>59,765.3</b>	<b>62,789.7</b>	<b>66,839.0</b>	<b>63,687.7</b>	<b>70,756.9</b>	<b>3,918.0</b>	<b>5.9%</b>	<b>70,847.5</b>	<b>71,508.9</b>
Interdivisional Recoveries	352.6	606.0	175.6		475.6	300.0	170.9%	475.6	475.6
Provincial Subsidies							-		
Federal Subsidies							-		
Other Subsidies							-		
User Fees & Donations	4,818.4	3,911.4	5,292.5		6,117.1	824.6	15.6%	6,138.8	6,161.2
Transfers from Capital Fund	42,815.9	46,715.5	49,248.5		51,809.3	2,560.8	5.2%	52,180.9	52,244.4
Contribution from Reserve/Reserve Funds	412.1						-		
Sundry Revenues	3,687.4	4,074.5	4,577.4		4,885.5	308.0	6.7%	4,886.4	4,887.4
<b>Total Revenues</b>	<b>52,086.4</b>	<b>55,307.4</b>	<b>59,294.0</b>	<b>56,142.7</b>	<b>63,287.4</b>	<b>3,993.4</b>	<b>6.7%</b>	<b>63,681.7</b>	<b>63,768.5</b>
<b>Total Net Expenditures</b>	<b>7,678.9</b>	<b>7,482.3</b>	<b>7,545.0</b>	<b>7,545.0</b>	<b>7,469.5</b>	<b>(75.5)</b>	<b>(1.0%)</b>	<b>7,165.7</b>	<b>7,740.4</b>
<b>Approved Positions</b>	<b>486.1</b>	<b>494.1</b>	<b>540.1</b>	<b>521.1</b>	<b>566.1</b>	<b>26.0</b>	<b>4.8%</b>	<b>566.1</b>	<b>566.1</b>

\* Based on the 2015 9-month Operating Variance Report

For additional information regarding the 2015 Q3 operating variances and year-end projections, please refer to the attached link for the report entitled "Operating Variance Report for the Nine-Month Period Ended September 30, 2015" approved by City Council at its meeting on December 9, 2015.

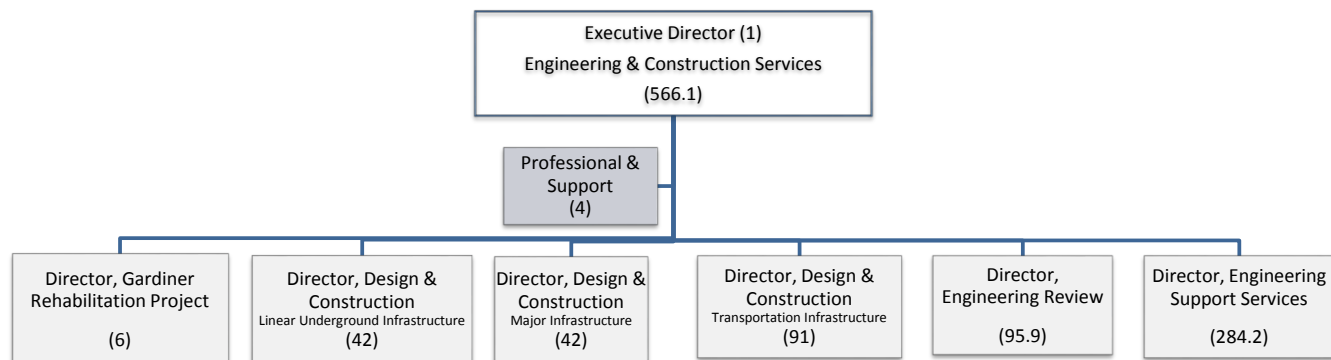
<http://www.toronto.ca/legdocs/mmis/2015/bu/bgrd/backgroundfile-85376.pdf>

#### Impact of 2015 Operating Variance on the 2016 Budget

- As a result of quarterly variance reporting, focused line-by-line reviews were conducted and additional revenue of \$0.300 million net will be budgeted in 2016 for ongoing work performed for Legal Services (i.e. surveying for land expropriation, etc. primarily for Metrolinx).
- As well, service efficiencies of \$0.450 million gross and \$0.450 million net will be realized in the 2016 budget related to the reduced reliance on external engineering review services.
- Engineering & Construction Services has been implementing a Program-wide re-structuring, aimed at improving efficiencies and increasing annual capital delivery rates to support the forecasted growth in the City's Capital Program. This also involves the utilization of a program management approach, including multi-year contracts for Engineering & Construction Services, managed by specialized program teams.
- The Program plans to continue an aggressive recruitment campaign. However, as experienced in the past, filling vacancies has been an on-going challenge for Engineering & Construction Services due to competitiveness in the market place.

## Appendix 3

### 2016 Organization Chart



### 2016 Complement

Category	Senior Management	Management	Exempt Professional & Clerical	Union	Total
Permanent	1.0	54.0	174.0	316.0	545.0
Temporary			8.0	13.1	21.1
Total	1.0	54.0	182.0	329.1	566.1



## **Appendix 4**

### **Summary of 2016 Service Changes**

## 2016 Operating Budget - Council Approved Service Changes Summary by Service (\$000's)

Form ID		Citizen Focused Services B	Adjustments				2017 Plan Net Change	2018 Plan Net Change
Category	Priority		Gross Expenditure	Revenue	Net	Approved Positions		
		Program - Engineering & Construction Services						
2016 Council Approved Base Budget Before Service Changes:			68,489.9	60,570.4	7,919.5	540.10	(303.8)	574.6

7494	Reduced reliance on external engineering review service
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51	1	<b>Description:</b>
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ECS will achieve efficiency savings of 5.9% by reducing reliance on external engineering services for development engineering and third party and utility reviews. In prior years, ECS had retained, through a competitive procurement process, external engineering support to manage workload peaks for these services and ensure service levels would be maintained. As a result of the restructuring of the division, as well as more frequent dialogue with developers and the utility industry through the Toronto Public Utilities Coordinating Committee, which is chaired by the ECS Manager of Third Party and Utility Review, the division is better positioned to manage changes in workload internally. Consequently, ECS will not renew the contract for external engineering services, saving \$0.450 million.

### Service Level Impact:

The current service level standard for the engineering review and acceptance of development applications is to complete 75% of the reviews within STAR (Streamlining the Application Review process) timelines. The current service level standard for the engineering review and acceptance of third party and utility applications is to complete 90% of the reviews within STAR (Streamlining the Application Review process) timelines. These service level standards for engineering review and acceptance of both development applications and third party and utility applications will be maintained into the future.

### Service: WT-Engineering Review & Acceptance

Preliminary:	(450.0)	0.0	(450.0)	0.00	0.0	0.0
BC Recommended Change:	0.0	0.0	0.0	0.00	0.0	0.0
EC Recommended Change:	0.0	0.0	0.0	0.00	0.0	0.0
CC Recommended Change:	0.0	0.0	0.0	0.00	0.0	0.0
Total Council Recommended	(450.0)	0.0	(450.0)	0.00	0.0	0.0
<b>Preliminary:</b>	<b>(450.0)</b>	<b>0.0</b>	<b>(450.0)</b>	<b>0.00</b>	<b>0.0</b>	<b>0.0</b>
<b>Budget Committee Recommended:</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.00</b>	<b>0.0</b>	<b>0.0</b>
<b>Executive Committee Recommended:</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.00</b>	<b>0.0</b>	<b>0.0</b>
<b>City Council Approved:</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.00</b>	<b>0.0</b>	<b>0.0</b>
<b>Total Council Approved Service Changes:</b>	<b>(450.0)</b>	<b>0.0</b>	<b>(450.0)</b>	<b>0.00</b>	<b>0.0</b>	<b>0.0</b>

## 2016 Operating Budget - Council Approved Service Changes Summary by Service (\$000's)

Form ID		Citizen Focused Services B	Adjustments				2017 Plan Net Change	2018 Plan Net Change
Category	Priority		Gross Expenditure	Revenue	Net	Approved Positions		
		Program - Engineering & Construction Services						
Summary:								
Preliminary:			(450.0)	0.0	(450.0)	0.00	0.0	0.0
Budget Committee Recommended:			0.0	0.0	0.0	0.00	0.0	0.0
Executive Committee Recommended:			0.0	0.0	0.0	0.00	0.0	0.0
City Council Approved:			0.0	0.0	0.0	0.00	0.0	0.0
Council Approved Service Changes:			(450.0)	0.0	(450.0)	0.00	0.0	0.0
Total Council Approved Base Budget:			68,039.9	60,570.4	7,469.5	540.10	(303.8)	574.6

## **Appendix 5**

### **Summary of 2016 New / Enhanced Service Priorities**

## 2016 Operating Budget - Council Approved New and Enhanced Services Summary by Service (\$000's)

Form ID		Citizen Focused Services B	Adjustments				2017 Plan Net Change	2018 Plan Net Change
Category	Priority		Gross Expenditure	Revenue	Net	Approved Positions		
7587		Review Work for Metrolinx						
72	1	<b>Description:</b>  Add 1 Senior Engineer and 1 Project Manager, fully funded via recovery from Metrolinx, to provide review and approvals for the Eglinton Crosstown and Finch West Light Rail Transit projects.Metrolinx has committed to fund City positions to facilitate delivery of Eglinton Crosstown LRT (ECLRT) and Finch West LRT (FWLRT) to secure the City's commitment to facilitating the project through support in navigating the City's approval processes, coordination between Divisions, support during construction, and negotiated turnaround times for the review of the various applications and submissions. The temporary Senior Engineer and Project Manager positions are required by Engineering and Construction Services to support the protect the City's interests and ensure that we meet the commitments in our agreement with Metrolinx.						
<b>Service Level Impact:</b>  The permanent Senior Engineer and Project Manager positions are required by Engineering and Construction Services to protect the City's interests and infrastructure, and ensure that the City meets its commitments under the agreement with Metrolinx.								
<b>Service:</b> WT-Engineering Review & Acceptance								
Preliminary:		259.4	259.4	0.0	2.00	0.0	0.0	
BC Recommended Change:		0.0	0.0	0.0	0.00	0.0	0.0	
EC Recommended Change:		0.0	0.0	0.0	0.00	0.0	0.0	
CC Recommended Change:		0.0	0.0	0.0	0.00	0.0	0.0	
Total Council Approved:		259.4	259.4	0.0	2.00	0.0	0.0	
<b>Preliminary:</b>		<b>259.4</b>	<b>259.4</b>	<b>0.0</b>	<b>2.00</b>	<b>0.0</b>	<b>0.0</b>	
<b>Budget Committee Recommended:</b>		<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.00</b>	<b>0.0</b>	<b>0.0</b>	
<b>Executive Committee Recommended:</b>		<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.00</b>	<b>0.0</b>	<b>0.0</b>	
<b>City Council Approved:</b>		<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.00</b>	<b>0.0</b>	<b>0.0</b>	
<b>Total Council Approved New/Enhanced Services:</b>		<b>259.4</b>	<b>259.4</b>	<b>0.0</b>	<b>2.00</b>	<b>0.0</b>	<b>0.0</b>	

7591	Mitigating Traffic and Transit Disruption
72	1
<b>Description:</b>	

**Category:**

71 - Operating Impact of New Capital Projects  
72 - Enhanced Services-Service Expansion

74 - New Services  
75 - New Revenues

## 2016 Operating Budget - Council Approved New and Enhanced Services Summary by Service (\$000's)

Form ID		Citizen Focused Services B	Adjustments				2017 Plan Net Change	2018 Plan Net Change
Category	Priority		Gross Expenditure	Revenue	Net	Approved Positions		
		<b>Program - Engineering &amp; Construction Services</b>						

Addition of 11 seasonal Inspectors Municipal Construction, fully funded via capital recovery from Transportation Services and Toronto Water, to enhance delivery of capital projects using extended hours in the Right of Way to alleviate traffic disruption.

### Service Level Impact:

The additional positions will enable Engineering and Construction Services to fulfil Council direction and effectively mitigate traffic and transit disruption impacts of construction within the Right of Way.

### Service: WT-Engineering Review & Acceptance

Preliminary:	0.0	0.0	0.0	0.00	0.0	0.0
BC Recommended Change:	328.6	328.6	0.0	3.30	(0.0)	0.0
EC Recommended Change:	0.0	0.0	0.0	0.00	0.0	0.0
CC Recommended Change:	0.0	0.0	0.0	0.00	0.0	0.0
<b>Total Council Approved:</b>	<b>328.6</b>	<b>328.6</b>	<b>0.0</b>	<b>3.30</b>	<b>(0.0)</b>	<b>0.0</b>

### Service: WT-Municipal Infrastructure Construction

Preliminary:	0.0	0.0	0.0	0.00	0.0	0.0
BC Recommended Change:	766.7	766.7	(0.0)	7.70	0.0	(0.0)
EC Recommended Change:	0.0	0.0	0.0	0.00	0.0	0.0
CC Recommended Change:	0.0	0.0	0.0	0.00	0.0	0.0
<b>Total Council Approved:</b>	<b>766.7</b>	<b>766.7</b>	<b>(0.0)</b>	<b>7.70</b>	<b>0.0</b>	<b>(0.0)</b>

<b>Preliminary:</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.00</b>	<b>0.0</b>	<b>0.0</b>
<b>Budget Committee Recommended:</b>	<b>1,095.2</b>	<b>1,095.2</b>	<b>0.0</b>	<b>11.00</b>	<b>0.0</b>	<b>0.0</b>
<b>Executive Committee Recommended:</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.00</b>	<b>0.0</b>	<b>0.0</b>
<b>City Council Approved:</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.00</b>	<b>0.0</b>	<b>0.0</b>

<b>Total Council Approved New/Enhanced Services:</b>	<b>1,095.2</b>	<b>1,095.2</b>	<b>0.0</b>	<b>11.00</b>	<b>0.0</b>	<b>0.0</b>
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7594	Increased Work due to the Bell Smart City Project	
74	1	<b>Description:</b>

### Category:

71 - Operating Impact of New Capital Projects      74 - New Services  
72 - Enhanced Services-Service Expansion      75 - New Revenues

## 2016 Operating Budget - Council Approved New and Enhanced Services

### Summary by Service (\$000's)

Form ID		Citizen Focused Services B	Adjustments				2017 Plan Net Change	2018 Plan Net Change
Category	Priority		Gross Expenditure	Revenue	Net	Approved Positions		
		<b>Program - Engineering &amp; Construction Services</b>						

Add 7 temporary positions, 3 Engineering Technologist Technicians (ETT1) and 4 Inspectors Municipal Construction (IMC), fully funded via recovery from Bell Canada for the Smart City project. In June, 2015, Bell Canada announced plans to deliver gigabit-per-second Internet speeds to homes and businesses across the City of Toronto with the new Gigabit Fibe service. According to Bell, the Smart City Program will require the processing and inspection of an additional 7,500 full-stream applications over a 2.5 year period. This represents a 250% increase in the average total number of full-stream applications received annually by Engineering and Construction Services from all utility companies. Bell has agreed to provide full funding for the additional resources required to handle the increased volume of permit applications and subsequent inspection related to the Smart City program on a priority basis. The temporary ETT1 positions are required to support the application review and approval and to facilitate field changes during construction. The temporary IMC positions are required to support the inspection of the work, enforce permit requirements, protect City interests and infrastructure, and facilitate field changes during construction.

#### Service Level Impact:

The additional temporary positions will enable Engineering and Construction Services to provide this new service to Bell in support of the Smart City project.

#### Service: WT-Engineering Review & Acceptance

Preliminary:	383.6	383.6	0.0	4.20	(0.0)	0.0
BC Recommended Change:	0.0	0.0	0.0	0.00	0.0	0.0
EC Recommended Change:	0.0	0.0	0.0	0.00	0.0	0.0
CC Recommended Change:	0.0	0.0	0.0	0.00	0.0	0.0
Total Council Approved:	383.6	383.6	0.0	4.20	(0.0)	0.0

#### Service: WT-Municipal Infrastructure Construction

Preliminary:	278.8	278.8	(0.0)	2.80	0.0	(0.0)
BC Recommended Change:	0.0	0.0	0.0	0.00	0.0	0.0
EC Recommended Change:	0.0	0.0	0.0	0.00	0.0	0.0
CC Recommended Change:	0.0	0.0	0.0	0.00	0.0	0.0
Total Council Approved:	278.8	278.8	(0.0)	2.80	0.0	(0.0)

<b>Preliminary:</b>	<b>662.4</b>	<b>662.4</b>	<b>0.0</b>	<b>7.00</b>	<b>0.0</b>	<b>0.0</b>
<b>Budget Committee Recommended:</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.00</b>	<b>0.0</b>	<b>0.0</b>
<b>Executive Committee Recommended:</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.00</b>	<b>0.0</b>	<b>0.0</b>

#### Category:

71 - Operating Impact of New Capital Projects      74 - New Services  
72 - Enhanced Services-Service Expansion      75 - New Revenues



## 2016 Operating Budget - Council Approved New and Enhanced Services Summary by Service (\$000's)

Form ID		Citizen Focused Services B	Adjustments				2017 Plan Net Change	2018 Plan Net Change
Category	Priority		Gross Expenditure	Revenue	Net	Approved Positions		
		Program - Engineering & Construction Services						
City Council Approved:			0.0	0.0	0.0	0.00	0.0	0.0
Total Council Approved New/Enhanced Services:			662.4	662.4	0.0	7.00	0.0	0.0

8843	F. G. Gardiner Strategic Rehabilitation Plan Implementation
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72	1	Description:
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Create a new section within Engineering and Construction Services, comprising 6 permanent positions, fully funded via capital recovery from Transportation Services, needed to enhance the delivery of services related to implementation of the Strategic Rehabilitation Plan for the F.G. Gardiner Expressway recently approved by City Council. The 6 positions are: 1 Director, 4 Senior Advisor Corporate Initiatives, 1 Administrative Assistant. Positions will start on various dates in 2016, with additional annualized costs of \$0.295 million in 2017.

### Service Level Impact:

The 6 additional permanent positions will enable Engineering and Construction Services to enhance delivery of services related to implementation of the Strategic Rehabilitation Plan for the F.G. Gardiner Expressway.

### Service: WT-Municipal Infrastructure Construction

Preliminary:	700.0	700.0	0.0	6.00	0.0	0.0
BC Recommended Change:	0.0	0.0	0.0	0.00	0.0	0.0
EC Recommended Change:	0.0	0.0	0.0	0.00	0.0	0.0
CC Recommended Change:	0.0	0.0	0.0	0.00	0.0	0.0
Total Council Approved:	700.0	700.0	0.0	6.00	0.0	0.0
<b>Preliminary:</b>	<b>700.0</b>	<b>700.0</b>	<b>0.0</b>	<b>6.00</b>	<b>0.0</b>	<b>0.0</b>
<b>Budget Committee Recommended:</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.00</b>	<b>0.0</b>	<b>0.0</b>
<b>Executive Committee Recommended:</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.00</b>	<b>0.0</b>	<b>0.0</b>
<b>City Council Approved:</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.00</b>	<b>0.0</b>	<b>0.0</b>
<b>Total Council Approved New/Enhanced Services:</b>	<b>700.0</b>	<b>700.0</b>	<b>0.0</b>	<b>6.00</b>	<b>0.0</b>	<b>0.0</b>

### Summary:

#### Category:

71 - Operating Impact of New Capital Projects  
72 - Enhanced Services-Service Expansion

74 - New Services  
75 - New Revenues

## 2016 Operating Budget - Council Approved New and Enhanced Services Summary by Service (\$000's)

Form ID		Citizen Focused Services B	Adjustments				2017 Plan Net Change	2018 Plan Net Change
Category	Priority		Gross Expenditure	Revenue	Net	Approved Positions		
		Program - Engineering & Construction Services						
Preliminary:			1,621.8	1,621.8	0.0	15.00	0.0	0.0
Budget Committee Recommended:			1,095.2	1,095.2	0.0	11.00	0.0	0.0
Executive Committee Recommended:			0.0	0.0	0.0	0.00	0.0	0.0
City Council Approved:			0.0	0.0	0.0	0.00	0.0	0.0
Council Approved New/Enhanced Services:			2,717.0	2,717.0	0.0	26.00	0.0	0.0

**Category:**

71 - Operating Impact of New Capital Projects

74 - New Services

72 - Enhanced Services-Service Expansion

75 - New Revenues

## Appendix 6

### Inflows/Outflows to/from Reserves & Reserve Funds

#### Corporate Reserve / Reserve Funds

Reserve / Reserve Fund Name (In \$000s)	Reserve / Reserve Fund Number	Projected Balance as of Dec. 31, 2015 *	Withdrawals (-) / Contributions (+)		
			2016	2017	2018
		\$	\$	\$	\$
Projected Beginning Balance			1,305.1	1,771.1	1,798.1
Vehicle Equipment Reserve	XQ1016		258.0	258.0	258.0
<b>Total Reserve / Reserve Fund Draws / Contributions</b>			<b>258.0</b>	<b>258.0</b>	<b>258.0</b>
<b>Other Program / Agency Net Withdrawals &amp; Contributions</b>			<b>208.0</b>	<b>(231.0)</b>	<b>(23.0)</b>
<b>Balance at Year-End</b>		<b>1,305.1</b>	<b>1,771.1</b>	<b>1,798.1</b>	<b>2,033.1</b>

\* Based on 9-month 2015 Reserve Fund Variance Report

Reserve / Reserve Fund Name (In \$000s)	Reserve / Reserve Fund Number	Projected Balance as of Dec. 31, 2015 *	Withdrawals (-) / Contributions (+)		
			2016	2017	2018
		\$	\$	\$	\$
Projected Beginning Balance			25,335.2	12,018.1	2,712.2
Insurance Reserve Fund	XR1010		539.0	539.0	539.0
<b>Total Reserve / Reserve Fund Draws / Contributions</b>			<b>539.0</b>	<b>539.0</b>	<b>539.0</b>
<b>Other Program / Agency Net Withdrawals &amp; Contributions</b>			<b>(13,856.1)</b>	<b>(9,845.0)</b>	<b>(5,051.5)</b>
<b>Balance at Year-End</b>		<b>25,335.2</b>	<b>12,018.1</b>	<b>2,712.2</b>	<b>(1,800.3)</b>

\* Based on 9-month 2015 Reserve Fund Variance Report

## Appendix 7a

## User Fees Adjusted for Inflation and Other

Rate Description	Service	Fee Category	Fee Basis	2015	2016			2017	2018
				Approved Rate	Inflationary Adjusted Rate	Other Adjustment	Budget Rate	Plan Rate	Plan Rate
Review of development files and environmental database to provide a response to inquiries regarding compliance with development agreements and identification of sites located on closed landfills.	Municipal Infrastructure Design & Construction	Full Cost Recovery	Per Review	\$65.15	\$1.30		\$66.45	\$66.45	\$66.45
Request for new municipal number as a result of a severance/consolidation of property	Engineering Information	Full Cost Recovery	Flat fee for assignment/re-assignment of first two numbers; then fee for each additional number assigned.	\$149.76 for first two nos; then \$36.95 for each additional no.	\$3.00		\$152.76	\$152.76	\$152.76
Changing municipal number	Engineering Information	Full Cost Recovery	Per Change	\$382.64	\$7.65		\$390.29	\$390.29	\$390.29
Land and property survey field notes of City's boundary surveys are provided to land surveyors in private practice.	Engineering Information	Full Cost Recovery	Per registered plan of subdivision	\$25.00		\$25.00	\$50.00	\$50.00	\$50.00
Land and property survey plans created by or for the City of Toronto.	Engineering Information	Full Cost Recovery	Per map	\$25.00		\$25.00	\$50.00	\$50.00	\$50.00
To perform engineering review and site inspection of utility infrastructure work within the City's Right of Way	Municipal Infrastructure Design & Construction	Full Cost Recovery	Per Application (For excavation of up to 1 kilometre)	\$1,135.00	\$22.70		\$1,157.70	\$1,157.70	\$1,157.70