

Branch — Transportation Operations

Introduction

Transportation Operations enables the effective operation of the existing transportation network. It ensures that thousands of pedestrians, motorists and cyclists can move safely and efficiently in the city. Branch activities include a wide range of services including operating the traffic signal network, snow and ice control, maintaining street lighting and performing roadway maintenance. Transportation Operations has responsibility in the following various functional areas:

Roadway Maintenance

Roadway Maintenance performs services to maintain the City of Edmonton's roadways in winter and summer. In addition to snow and ice control, this group is responsible for spring clean-up, pothole filling, patch paving, sidewalk repair, and street cleaning. Roadway Maintenance is also responsible for monitoring and evaluating pavement and bridge conditions.

Snow and Ice Control

Transportation Operations is committed to providing snow and ice control that will make it possible for commuters, transit users and those moving commercial goods to travel more safely. A priority system is applied to the various types of roadways and sidewalks to keep traffic flowing smoothly in any given snow event. This group is also responsible for managing facilities for snow storage and sand recycling.



Engineering Services

The Engineering Services Section provides engineering expertise in several specialized areas to support all City departments as well as other municipalities and outside agencies such as EPCOR. The Section's areas of expertise include geotechnical, and environmental engineering, landslide and erosion repair, and materials engineering.

This group provides construction materials research and testing, construction quality assurance, pavement structural design and analysis, and construction survey services. Environmental management programs include noise and vibration monitoring, contaminated site remediation, monitoring and reporting of meltwater from snow storage facilities and the aggregate recycling program.



Traffic Operations

Traffic Operations designs and manages Edmonton's traffic signals and street lights to optimize traffic flow for all road users with emphasis on transit and goods movement. The group manages maintenance of signals, signage, and streetlight infrastructure in coordination with EPCOR. The Traffic Management Centre operates traffic signals, traffic cameras, message signs, and other technology to move traffic safely and efficiently through the City.

Traffic Control oversees road right-of-way for traffic control and maintains traffic signing and on-street traffic control, including approvals and detours for construction projects. Traffic Control also manages on-street parking and the bylaws regarding parking, meters, traffic and speed.

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Approved 2013 Budget – Branch Summary

(\$000)

	2011 Actual	2012 Budget	2013 Budget	\$ Change '12-'13	% Change '12-'13
Revenue & Transfers					
User Fees, Fines, Permits, etc.	\$ 8,024	\$ 6,493	\$ 6,493	\$ -	-
Parking Meters	6,383	6,868	7,218	350	5.1
Provincial Grants	3,677	3,100	-	(3,100)	(100.0)
Total Revenue & Transfers	18,084	16,461	13,711	(2,750)	(16.7)
Expenditure & Transfers					
Personnel	67,101	72,541	74,527	1,986	2.7
Materials, Goods & Supplies	53,766	38,252	35,747	(2,505)	(6.5)
External Services	42,446	30,691	29,691	(1,000)	(3.3)
Fleet Services	25,588	26,728	27,740	1,012	3.8
Intra-municipal Services	5,086	1,837	2,402	565	30.8
Utilities & Other Charges	11,372	10,411	12,078	1,667	16.0
Transfer to Reserves	683	550	550	-	-
Subtotal	206,042	181,010	182,735	1,725	1.0
Intra-municipal Recoveries	(39,909)	(33,883)	(32,819)	1,064	(3.1)
Total Expenditure & Transfers	166,133	147,127	149,916	2,789	1.9
Net Operating Requirement	\$ 148,049	\$ 130,666	\$ 136,205	\$ 5,539	4.2
Full-time Equivalents	751.1	793.1	795.1	2.0	

Budget Changes for 2013

(\$000)

Revenue & Transfers - Changes

User Fees, Fines, Permits, Parking Meters etc. \$350

A \$350 volume increase in paid parking meter revenue resulting from increased driver adversity to parking meter fines increasing from \$35.00 to \$50.00 (Bylaw 15968 section 42(1) – Park at an expired meter).

Provincial Grants (\$3,100)

A change in funding for microsurfacing from Municipal Sustainable Initiative (MSI) provincial grant to neighbourhood renewal dedicated tax levy.

Expenditures & Transfers - Changes

Personnel \$1,986

Movement within the salary ranges, changes in benefits and settlement of union contracts for \$1,844. The Inventory Growth from Contributed Assets impacting Snow & Ice Control and Street Cleaning, Roadway and Sidewalk Maintenance results in an increase of \$142.

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Material, Goods & Supplies (\$2,505)

\$2,970 reduction due to elimination of funding to Snow and Ice Control program for intersection safety sanding operations. \$229 is attributed to Operating Impact of Capital Budget to Street Cleaning while another increase of \$229 is related to Impact of Capital Budget to Snow and Ice Control. An increase of \$7 is for materials from Central Stores.

External Services (\$1,000)

Microsurfacing expense is decreased by \$1,559 to reflect the expected 10 year maintenance cycle. \$250 increase is due to Operating Impact of Contributed Assets to Snow & Ice Control. Operating Impact of Contributed Assets to Traffic Signals and Street Lighting results in increases of \$132 and \$97 respectively. The remaining increase of \$80 is for contract work in traffic control signs.

Fleet Services \$1,012

An increase of \$94 in Fleet Services is attributed to the equipment growth slightly offset by fuel rate decrease. An increase of \$691 is attributed to rate increase and \$227 for five new pieces of equipment to be used in the neighbourhood overlay program.

Intra-municipal Services \$565

The increase of \$565 is primarily charges for Waste Management and Edmonton Police Services (special event policing and shared radio cost).

Utilities & Other Charges \$1,667

\$1,500 is due to streetlight electrical rate increase and \$55 for facilities electrical costs. Operating Impact of Contributed Assets to Street Lighting results in \$114 increase while Operating Impact of Contributed Assets to Traffic Signals brings an increase of \$16. The remaining balance is a decrease of \$18 due to the additional alley light maintenance funding from local improvements.

Intra-municipal Recoveries \$1,064

\$2,970 reduction is due to elimination of funding through Automated Enforcement revenue for intersection safety sanding operations in the Snow and Ice Control program offset by increase of \$712 in recoveries for snow removal on LRT stations, and increase in recoveries for capital work of \$660 from Engineering Services such as asphalt testing and \$534 for the grind and overlay work.

Full-time Equivalents - Changes

The Inventory Growth from Contributed Assets impacting Snow and Ice Control and Street Cleaning, Roadway and Sidewalk Maintenance results in an increase of 2 FTEs which will require 2 permanent positions.

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Approved 2013 Budget – Program Summary

Program Name - Roadway Maintenance

Results to be Achieved

Maintenance of our transportation system means keeping roads, sidewalks and public spaces in good repair, clean and free from litter. A transportation system that is well-maintained in all seasons promotes economic vitality and a positive city image.

Service Standards	Resources	2011	2011	2012	2013
	(\$000)	Actual	Budget	Budget	Budget
The Roadway Maintenance group strives to manage the roads, sidewalks and bridges in a way that minimizes total life cycle costs, yet sustains expected levels of service and safety. Roadways are cleaned in adherence to Roadway Cleaning Policy C550 which sets spring and summer roadway cleaning standards. The Risk Infrastructure Management System (RIMS) assesses asset deterioration and uses a risk based approach to deal with the gap between available infrastructure funding and renewal needs.	Revenue & Transfers	\$ 6,875	\$ 7,256	\$ 5,502	\$ 2,387
	Expenditure & Transfers	57,790	60,455	61,216	60,780
	Net Operating Requirement	\$ 50,915	\$ 53,199	\$ 55,714	\$ 58,393
	Management		1.0	1.0	1.0
	Exempt		14.7	14.7	14.7
	Union		253.1	260.0	258.4
	Temporary		28.3	29.3	29.3
	Full - Time Equivalents		297.1	305.0	303.4

2012 Services

- Spring clean-up and year round street cleaning.
- Roadway pothole filling and patch paving.
- Sidewalk repairs.
- Bridge condition evaluation and maintenance.
- Pavement condition evaluation and maintenance.
- Microsurfacing of roadways in Tweddle Place and Ritchie to increase the service life of neighbourhood infrastructure.

Changes in Services for 2013

- Maintain current levels of service on the growing roadway and active transportation network.
- Microsurfacing of roadways in Athlone and Rideau Park neighbourhoods to increase the service life of infrastructure.

Program Name - Snow and Ice Control

Results to be Achieved

Providing snow and ice control ensures all roadway users can travel more safely in any given snow event. Effective snow and ice control minimizes economic loss to the community while protecting the environment and facilitates handling of emergency vehicles.

Service Standards	Resources	2011	2011	2012	2013
	(\$000)	Actual	Budget	Budget	Budget
Services are delivered in accordance with the Snow and Ice Control Policy C409G. Freeways and major roadways are sanded regularly and plowed within 36 hours of a snowfall. Collectors and major transit routes are plowed within 48 hours. Other roadways are bladed to level snowpack starting within 48 hours and completed within 5 days.	Revenue & Transfers	\$ 77	\$ 13	\$ 13	\$ 13
	Expenditure & Transfers	73,637	43,566	49,696	50,699
	Net Operating Requirement	\$ 73,560	\$ 43,553	\$ 49,683	\$ 50,686
	Management¹		-	-	-
	Exempt¹		-	-	-
	Union		155.3	174.5	174.3
	Temporary		30.0	30.0	30.0
	Full - Time Equivalents		185.3	204.5	204.3

2012 Services

- Snow and ice controlled on roadways through sanding, plowing, residential blading, and removal / hauling of snow.
- Snow plowed from shared use paths and sidewalks adjacent to City owned land within 48 hours.
- Manage five facilities for snow storage.

Changes in Services for 2013

- Maintain current levels of service on the growing roadway network.
- Create a roadside snow storage strategy.

¹Management and Exempt FTEs for Snow and Ice Control are included in Roadway Maintenance

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Approved 2013 Budget – Program Summary

Program Name - Engineering Services

Results to be Achieved

Engineering Services provides materials and geotechnical engineering for the City's transportation infrastructure. This includes testing, monitoring and quality assurance of the roadways and infrastructure within the road right-of-way.

Service Standards	Resources	2011	2011	2012	2013
	(\$000)	Actual	Budget	Budget	Budget
Engineering Services supports other departments with expertise in geotechnical engineering, site remediation and material testing. The group aids maintenance and construction branches with pavement design and analysis. This group also ensures environmental management standards are achieved, and mitigates the effect of roadways on citizens with vibration control and noise control in adherence to the Urban Traffic Noise Policy C506.	Revenue & Transfers	\$ 496	\$ 852	\$ 552	\$ 567
	Expenditure & Transfers	787	2,813	2,554	2,612
	Net Operating Requirement	\$ 291	\$ 1,961	\$ 2,002	\$ 2,045
	Management		2.0	2.0	2.0
	Exempt		12.5	15.0	15.0
	Union		60.2	61.2	65.0
	Temporary		12.7	12.1	12.1
	Full - Time Equivalents		87.4	90.3	94.1

2012 Services

- Performs materials research and testing, and design and analysis of pavements. Coordinates aggregate recycling program.
- Provides construction surveying, geotechnical engineering, and noise and vibration monitoring services.
- Monitors and repairs landslides and erosion control.
- Supports other departments including expertise in geotechnical engineering, site remediation and material testing.

Changes in Services for 2013

- Continue to provide current levels of service to support projects and other branches within Transportation Services.

Program Name - Traffic Operations

Results to be Achieved

This group manages and operates traffic signals, signs and street lighting for the safe and efficient direction of vehicles and people. They oversee traffic control, management of road right-of-way, and uphold the City's traffic bylaws.

Service Standards	Resources	2011	2011	2012	2013
	(\$000)	Actual	Budget	Budget	Budget
Traffic Operations is responsible for operating approximately 1,100 traffic signals, 98,300 street lights, and 130,000 traffic control signs. Traffic Control ensures citizens follow traffic bylaws to maximize safety and efficiency of the transportation network. Adherence to The Street Lighting Renewal Policy C564 provides safe residential lighting while minimizing light pollution, power consumption and green house gas generation.	Revenue & Transfers	\$ 10,636	\$ 8,699	\$ 10,394	\$ 10,744
	Expenditure & Transfers	33,919	32,486	33,661	35,825
	Net Operating Requirement	\$ 23,283	\$ 23,787	\$ 23,267	\$ 25,081
	Management		4.0	4.0	4.0
	Exempt		35.5	40.0	40.0
	Union		135.5	140.1	140.1
	Temporary		6.3	9.2	9.2
	Full - Time Equivalents		181.3	193.3	193.3

2012 Services

- Manages traffic signals and street lights, including maintenance agreement with EPCOR.
- Operates the traffic management centre, traffic cameras, message signs, and other technology.
- Provides base mapping services.
- Negotiates access agreements, as well as permit approvals for utility installations and private use of municipal right of way.
- Manages traffic signing, detours, on-street construction permits and on-street parking.
- Coordinates traffic and speed bylaws.

Changes in Services for 2013

- Develop a Light Efficient Communities Plan.

Branch — Transportation Operations

Program - Snow and Ice Control Operating Impacts of Capital Projects and Contributed Assets

FUNDED

Description

This service package identifies the on-going funding required to maintain the snow and ice control on inventory increases to the roadway network estimated at 1% (\$300K) and includes 1 permanent FTE.

The inventory growth is a combination of capital projects and contributed assets. Expansion of the roadway network requires associated increased funding to ensure a sustainable funded Snow and Ice Control program. The new Horsehills snow storage site was completed in 2012 and will require annual maintenance funding (\$250K) which includes removal of the build up of silt deposits as a result of the melt water entering the pond.

Justification

Funding will provide current service levels as set out in the Snow and Ice Control policy C409G, approved by Council on September 27, 2011. With increasing roadway inventory, additional operating funds are required to maintain current snow and ice control services. The City of Edmonton has five snow storage sites, each with treatment ponds to allow the settlement of suspended solids from the snow melt water. The fifth site was completed in 2012. There will be approximately 5,000 tonnes of material that needs to be removed and processed annually from the five snow storage sites. Removing the solids from the ponds prior to melt water entering the storm sewer system improves the water quality of the river and minimizes the impact to the storm sewer infrastructure that is maintained by Drainage Services.

This service package will increase funding from 94% to 95% funded relative to snow and ice control service standards stated in policy. Corporately, this reduces the risk of expenditures exceeding the budget, especially in more severe winter events.

Service Level Impact

Funding will provide up to 95% of required funding to maintain current service levels on the increased roadway network and annual maintenance to the City's five snow storage sites.

Impact on Other Departments

There is no impact on other departments.

Incremental (\$000)	2013				2014				2015			
	Exp	Rev	Net	FTEs	Exp	Rev	Net	FTEs	Exp	Rev	Net	FTEs
New Budget	\$ 550	-	550	1.0	\$ 460	-	460	-	\$ 474	-	474	-
Annualization	-	-	-	-	-	-	-	-	-	-	-	-
Total	\$ 550	-	550	1.0	\$ 460	-	460	-	\$ 474	-	474	-

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Program - Roadway Maintenance Operating Impacts of Contributed Assets - Street Cleaning, Roadway, and Sidewalk Maintenance

FUNDED

Description

This service package identifies the on-going funding required to maintain inventory increases in the roadway network, estimated at 1%. This includes funding for street cleaning, sidewalk maintenance and asphalt roadway maintenance needed to maintain current service levels. This package includes 1 permanent FTE.

Justification

With residential and commercial development in the Edmonton area, additional operational funding is required to provide current levels of service on the associated additional roadway and sidewalk infrastructure. The additional funding will maintain adherence to the Roadway Cleaning Policy C550 and provide roadway maintenance on new and existing infrastructure to minimize total life cycle costs.

Service Level Impact

Additional operational funds will provide current levels of service on new infrastructure while continuing maintenance on existing infrastructure. This reduces trip hazards, improves sidewalk and roadway condition ratings, and increases Pavement Quality Index levels.

Impact on Other Departments

There is no impact on other departments.

Incremental (\$000)	2013				2014				2015			
	Exp	Rev	Net	FTEs	Exp	Rev	Net	FTEs	Exp	Rev	Net	FTEs
New Budget	\$ 300	-	300	1.0	\$ 209	-	209	-	\$ 215	-	215	-
Annualization	-	-	-	-	-	-	-	-	-	-	-	-
Total	\$ 300	-	300	1.0	\$ 209	-	209	-	\$ 215	-	215	-

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Program - Traffic Operations

FUNDED

Operating Impacts of Capital Projects and Contributed Assets

- Streetlights, Signals and Infrastructure

Description

This service package addresses growth in inventory of streetlights resulting from private development in both residential and commercial sectors, which is attributed to contributed assets. It also addresses growth in inventory of streetlights, signals, and infrastructure as a result of residential and commercial development and capital improvements.

Justification

Residential and commercial development in the Edmonton area have contributed additional streetlights to the City's inventory. An additional 1,200+ streetlights have been added to the City's maintenance programs. The contributed assets portion of this service package (\$211K) identifies the funding requirements to support these units. The City's investment in the transportation network has resulted in new traffic signals and transportation technology units being added to the City's inventory.

The impacts of capital projects portion of this service package (\$208K) identifies the funding required to operate and maintain 20 new signals, 14 Vehicle Detection Stations, 51 CCTV cameras, 33 Dynamic Message Signs, 4 Variable Speed Limit Signs, and 1 Road Weather Information System. Maintenance and repair work is primarily carried out by EPCOR Technologies under the Electrical Services Agreement.

Service Level Impact

New streetlights are required to be maintained to City standards. Funding is necessary to operate and maintain new streetlights to enhance road safety in newly developed areas. Capital investment into new traffic infrastructure is intended to enhance traffic management, relieve congestion, improve movement of goods in and around the City, and overall road safety. Funding is necessary to operate and maintain assets to maximize asset life, mitigate risks of failure, and maintain traffic and pedestrian safety.

Impact on Other Departments

There is no impact on other departments.

Incremental (\$000)	2013				2014				2015			
	Exp	Rev	Net	FTEs	Exp	Rev	Net	FTEs	Exp	Rev	Net	FTEs
New Budget	\$ 419	-	419	-	\$ 12	-	12	-	\$ 12	-	12	-
Annualization	-	-	-	-	-	-	-	-	-	-	-	-
Total	\$ 419	-	419	-	\$ 12	-	12	-	\$ 12	-	12	-