

Branch — LRT Design and Construction

Introduction

The LRT Design and Construction Branch is responsible for efficiently and effectively delivering LRT capital projects. The work of this branch is guided by Transportation Planning initiatives including LRT expansion plans as outlined in *The Way We Move*. In keeping with the LRT Network plan and various corridor concept plans, LRT Design and construction makes LRT expansion in the City of Edmonton a reality through the delivery of world class project management and technical services. Efficient administration of these projects is key to ensuring funding agreements with other levels of government can be reached and honored.



The following lines are at various stages of planning, design and construction within the City of Edmonton:

- North LRT to NAIT
- Northwest LRT extension from NAIT to Northwest city limits
- Southeast and West LRT, including the Downtown Connector



The branch provides the following services for all future extensions of the LRT system:

- Managing the preliminary and detail design process; including track, roadway, structure and station plans, electrical traction power, roadway traffic and train control systems, environmental, geotechnical, drainage, and utility coordination.
- Review of delivery method for a given project; from traditional design, bid, build to alternative procurement and delivery methods to achieve the maximum value for the City of Edmonton.
- Oversight of project management services; including, preparing detailed cost estimates, on-location resident engineering and inspection services for construction project controls and performance tracking.
- System commissioning and coordination of testing procedures that are performed prior to revenue service.
- Leading public consultation for the expansion of the LRT system and ongoing project communications with stakeholders on behalf of Transportation Services.



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Opportunities and Challenges

LRT Design and Construction manages the design and construction of the LRT system. The LRT Network Plan describes expansion of the current system to all sectors of the city, which combined is the largest construction program in the history of the city. Consistently managing projects that are on-time, on-budget and on-scope is crucial to enable funding readiness and leverage the significant investment made by other levels of government.

Project Management

In projects that contribute to the renewal and expansion of the city's LRT system, the branch sets a standard of excellence that is recognized internationally. On the project management side, a project control system has been implemented that monitors performance of each contract month by month and has resulted in large project cost savings. The team proactively assesses which elements are not on schedule or budget and adjusts the project accordingly.

Construction Coordination

The LRT Design and Construction team does extensive coordination of other projects to achieve the best value for tax dollars. *The Way We Move* describes the desired future Edmonton as a walkable, cycle-friendly city that supports healthy, active lifestyles, in a barrier free, age-friendly environment. LRT Design and Construction coordinates and implements active modes facilities with LRT projects. In addition, extensive consultation has been done with utilities early in the project to minimize overlap while on site and with Edmonton Transit to ensure any LRT upgrades are done at the same time. Significant construction cost savings were realized by tunneling under the EPCOR Tower prior to the construction of the office tower.

Implementation of Environmentally Sustainable Features

Implementation of features such as bioswales will reduce the impacts of construction. Bioswales are landscape elements that are designed to remove silt and pollution from surface runoff water and have the ability to reduce the impact on the environment.

Service and Budget Review

To meet the 2012 budget target, the Branch examined and evaluated the proposed changes to the 2012 budget. With limited impact to citizens or delivery of service, the budgets for LRT Expansion consulting and discretionary items were eliminated. This was achieved through the organizational realignment that combined the LRT Expansion and Design and Construction Branches. A Branch Manager and an Administrative Assistant position were also eliminated, reducing 2 FTEs in the consolidated Branch. In addition, an existing FTE position in LRT Design and Construction will be charged to the Capital Budget Program for LRT expansion projects.

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Approved 2012 Budget – Branch Summary (\$000)

	2010 Actual	2011 Budget	\$ Change '11-'12	2012 Budget	% Change '11-'12
Revenue & Transfers					
User Fees, Fines, Permits, etc.	\$ 240	\$ 221	\$ (191)	\$ 30	(86.4)
Grants	-	-	-	-	-
Transfer from Reserves	-	-	-	-	-
Total Revenue & Transfers	<u>240</u>	<u>221</u>	<u>(191)</u>	<u>30</u>	<u>(86.4)</u>
Expenditure & Transfers					
Personnel	1,869	2,108	(210)	1,898	(10.0)
Materials, Goods & Supplies	53	113	2	115	1.8
External Services	55	200	(96)	104	(48.0)
Fleet Services	-	-	-	-	-
Intra-municipal Services	1,010	764	72	836	9.4
Utilities & Other Charges	74	155	(50)	105	(32.3)
Transfer to Reserves	151	-	-	-	-
Subtotal	3,212	3,340	(282)	3,058	(8.4)
Intra-municipal Recoveries	(2,080)	(2,056)	(313)	(2,369)	15.2
Total Expenditure & Transfers	<u>1,132</u>	<u>1,284</u>	<u>(595)</u>	<u>689</u>	<u>(46.3)</u>
Net Operating Requirement	\$ 892	\$ 1,063	\$ (404)	\$ 659	(38.0)
Full-time Equivalents	19.0	18.0	(2.0)	16.0	

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Budget Changes for 2012 (\$000)

Revenue & Transfers - Changes

User Fees, Fines, Permits, etc. (\$191)

Revenue is expected to decrease significantly in 2012. As the NLRT expands, \$191 in revenues will no longer be collected from temporary rental properties.

Expenditures & Transfers - Changes

Personnel (\$210)

Movement within the salary ranges, changes in benefits and the last year of a 3-year 1% LAPP contribution increase account for \$17. Due to the reorganization, there is a reduction in personnel of \$227.

Material, Goods & Supplies \$2

The increase is attributed to inflation.

External Services (\$96)

The amalgamation of the LRT Design and Construction and LRT Expansion branches has resulted in the opportunity to leverage collective resources and reduce consulting for LRT Expansion from the Service & Budget Review \$100. The \$5 increase is attributed to inflation. An additional \$1 was removed from Printing.

Intra-municipal Services \$72

Charges for space rent, Project Management Office, building maintenance, custodial, Corporate Services and Finance increased by \$72 to align the budget with the service provider.

Utilities & Other Charges (\$50)

Corporate strategy reductions have led to a \$17 decrease in telephones and cellular phones. As well, the elimination of LRT Expansion discretionary items from the Service & Budget review further reduced the budget by \$37. There is a \$4 increase due to inflation.

Intra-municipal recoveries (\$313)

Intra-municipal recoveries to capital have correspondingly increased by \$163 due to reduced reliance on temporary revenue, slightly offset by the decrease in other operating costs. The Service & Budget Review also capitalized one LRT Expansion position due to the approval of preliminary SE/West LRT construction engineering, thereby increasing recoveries by \$122. The remaining \$28 increase is attributed to inflation.

Full-time Equivalents - Changes

2.0 FTEs for permanent full-time positions were reduced due to the reorganization.