

TAB A-1(D)

Transportation



Transportation

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LINES OF SERVICE

Business & Technical Support
CTrain & Bus Service
Fleet & Infrastructure Management
Major Transportation Capital Projects
Optimizing & Improving Transportation Choice
Roadway & Bridge Infrastructure
Service Planning & Customer Service
Sidewalks & Bikeways
Snow & Ice Control & Street Sweeping
Specialized Transit for Persons with Disabilities
Traffic Control & Lighting
Transportation Monitoring, Forecasting & Reporting
Transportation Planning Policy

Transportation - Overview

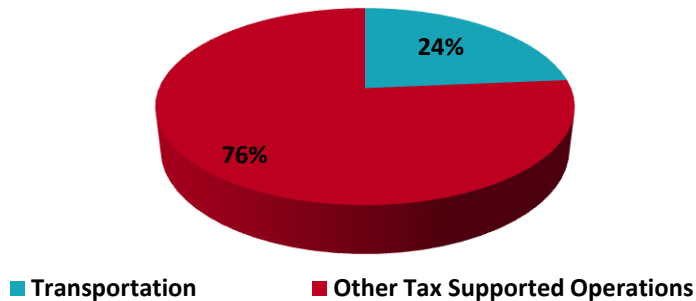
Transportation provides a safe, customer-focused and efficient system that provides a variety of transportation choices to move people and goods in an economically and environmentally sustainable manner. Together the department plans, designs, builds, operates and maintains local transportation networks and services that support all modes of travel. This includes pedestrian, cycling and transit facilities, major roads, expressways and interchanges with the future in mind. Transportation monitors and forecasts travel demand, promotes sustainable urban development and promotes transit, carpooling, working from home, walking and cycling to ease traffic volume growth.

Transportation capital projects are prioritized through the collection and analysis of travel information, citizen engagement and collaboration with partners (including the Calgary Parking Authority and the Government of Alberta). Project management excellence is demonstrated by delivering projects on time, on budget and with high quality standards.

Calgary Transit delivers and maintains a safe, reliable public transit network providing 2.8 million hours of service per year using community shuttles, bus, Bus Rapid Transit (BRT) and CTrain. This includes providing specialized transportation services for people with disabilities in partnership with service providers.

Roads optimizes traffic operations and designs roadway upgrades to enhance traffic flow. They build, maintain and repair roadways (approximately 16,000 lane km), streetlights, sidewalks, bikeways, medians, curbs and gutters. This includes snow and ice control, spring clean-up/street cleaning and pavement markings. They also manage detours, monitor traffic, and adjust traffic signal timing balancing traffic flow with construction needs and safety.

Transportation
Share of Tax Supported Net Operating Budget
City Wide Total Tax Support: \$1,657 Million



(City wide tax support amount is the average common revenues less corporate costs & debt servicing)

Transportation - Overview

Trends

Calgary continues to experience a sustained period of prosperity. Investment in transportation infrastructure continues although at a slower pace than the previous budget cycle. Growth in the economy and population has increased the use of our networks. The increase in demand for transportation services creates a challenge of balancing funding for increased service and new capacity with the priority of maintaining the quality and reliability of existing infrastructure. This business plan has the highest level of commitment to maintaining the health of our existing systems.

Calgarians ask for more than just a system, they wish to see their city as a good steward for their natural environment as well as an innovator seeking out application of the latest technology to improve customer convenience. A customer's experience is influenced by what and how the service is delivered and how the customer interfaces with the service. Access to data via wireless devices has shaped customers' expectations of getting real-time information in a convenient, easy-to-use way. Transportation continues to look for ways to improve service through customer feedback (e.g. Calgary Transit's Customer Advisory Committee) and provision of information via technology.

Calgary's senior and immigrant population is growing and have unique needs. A portion of these older adults live alone and/or have a disability. This will have implications to how Transportation plans, designs, builds, operates and maintains transportation facilities and services. Transportation-related accessibility will be an important consideration for The City's Age Friendly Strategy. Calgary continues to be a top immigration destination in Canada which challenges communications with customers. Adapting to the diverse language and cultural needs of customers will be critical. There are similar demographic shifts among our workforce and strategic workforce plans will help address these changing needs.

Long-Term Plans

Together with imagineCALGARY, the Municipal Development Plan (MDP) and the Calgary Transportation Plan (CTP) provide a 60-year strategy for the kind of city Calgarians have said they want. Transportation stewards the CTP which aims to make it easier and more inclusive to travel around Calgary as population grows. Key areas of focus (safe, customer-focused, efficient and sustainable) and actions identified support all CTP goals. Transportation is a member of the Directors' Integrated Growth Committee (DIGC) who identified five key 2015-2018 projects that align with MDP, CTP and growth management. A major focus of this business plan period will be the implementation of the Green Line Transitway. This will include leading and supporting the transit facilities as well as the evolution of urban corridors.

Work continues toward 2020 Sustainability Direction (2020 SD) goals by enabling greenhouse gas emission reductions through increased transportation choice, supporting complete communities and strategic redevelopment in priority areas, and providing a safe, reliable and affordable public transit, focusing on developing the Primary Transit Network (frequent, reliable and convenient service). By facilitating goods movement and emergency service response times, optimizing the existing transportation system and working to secure sustainable sources of funding, Transportation continues to support 2020 SD.

RouteAhead provides strategic direction for public transit in Calgary for the next 30 years and is aligned with MDP, CTP and 2020 SD. Key actions and performance measures identified in Action Plan 2015-2018 aim to deliver on RouteAhead's core principles: customer experience, network planning and financing public transit.

Transportation - Overview

Keeping Calgarians on the move, whether by foot, bicycle, public transit or vehicles, requires long-term planning and investments in a variety of infrastructure, from new construction to maintenance of existing systems. Investing in Mobility defines the strategic priority and timing of transportation-related capital projects over the next 10 years. This plan has informed the 2015-2018 capital project list.

Citizen Engagement

An efficient and reliable public transit network was identified as the top priority consistently across the Action Plan engagement results. Citizens are looking for more affordable ways to commute to work and realize the important role public transit plays for increasing accessibility to services and amenities across the city's growing footprint. Projects that will address this priority include the Green Line Transitway and investments in refurbishing and buying new Light Rail Vehicles (LRVs) to enable four-car train service. Calgarians have told us that transit fares need to recognize their varied means and the importance of the mobility which transit provides them. Other transportation-related priorities identified by citizens included a well-managed road network, improved pedestrian networks to access local amenities, and expanded cycling infrastructure. There was distinct preference for pedestrian and bike routes the closer one lived to the core as such the Cycle Track Pilot project and Pedestrian Strategy are key actions for 2015-2018. A new approach to traffic flow improvement projects is included as part of the Investing in Mobility plan.

Maintaining service levels and demonstrating value was a common theme along with making information easy to understand and accessible. Transportation has adopted more citizen-facing performance measures and identified actions to provide more real-time data to customers. Citizens indicated a desire for an integrated approach to planning, land development and transportation. Actions outlined

demonstrate better collaboration in accommodating growth as well as jointly communicating and explaining strategic goals.

Council Priorities

CTP/MTP plans outline an integrated transportation system that supports land use, provides increased mobility choices for citizens, promotes vibrant, connects communities, protects the natural environment, and supports a prosperous and competitive economy. This aligns well with all Council Priorities, most prominently contained in a city that moves.

Transportation leads four Council Strategic Actions under a city that moves and supports twenty-four across all five of the Council Priorities. Three of four of these Council Strategic Actions acknowledge funding availability as a critical ingredient for success. Significant contributions to both a city of inspiring neighbourhoods (closely aligned with MDP/CTP goals) and a well-run city are evident. A focus on safe, customer-focused, efficient and sustainable internal practices will translate to better transportation service for citizens.

A prosperous city
Calgary continues to grow as a magnet for talent, a place where
there is opportunity for all, and the best place in Canada
to start and grow a business.

Transportation Commitment:
Transportation facilitates the efficient movement of people and goods which contributes to creating a great place to live and work.

Strategy Related to Council Outcome	Accountable BU
P1 Strengthen Calgary’s position as a global energy centre and location of choice for international talent, investment and innovation through enhanced business development, marketing and place-making initiatives.	CT, RDS, TI, TP
P3 Support civic, business and community partners, as well as business revitalization zones, to collaborate and attract local and global investment.	RDS, TP
P8 Respond to the needs of an aging population.	CT, TI
P10 Enhance access to technology and information.	CT, RDS, TP

Performance Measures Related to Council Outcome	2012 Actual	2013 Actual	2014 Estimated	2015 Target	2016 Target	2017 Target	2018 Target
P.PM1 Travel time reliability on major transportation corridors and primary goods movement routes.	NA	NA	NA	TBD	TBD	TBD	TBD
P.PM2 Per cent of new and existing development within 400m of transit service.	NA	NA	NA	88%	89%	90%	91%



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Alignment of Strategies and Performance Measures to Long-Term Plans

Identified strategies support community well-being and a prosperous community reflected in the 2020 Sustainability Direction. Transportation accessibility needs of the aging population and the importance mobility contributes to their quality of life. imagineCALGARY's vision of a great place to live and work includes providing an efficient, accessible and affordable transportation system for people and goods which allows businesses and citizens to thrive.

Both performance measures align with the Municipal Development Plan (MDP) and Calgary Transportation Plan (CTP). Travel time reliability (P.PM1) is a MDP/CTP supplementary indicator which can help businesses predict movement of goods and thus expected delivery times critical to their operations. The Calgary Economic Development (CED) 10-year strategy specifically cites intensification and Transit Oriented Development (P.PM2) as City goals.

These are both new performance measures without historical data. Targets have been established where appropriate, others will be determined once a baseline is established in 2015.



Transportation - Strategies and Performance Measures for Council Approval

For Council Approval

A city of inspiring neighbourhoods
Every Calgarian lives in a safe, mixed and just neighbourhood,
and has the opportunity to participate in civic life.

Transportation Commitment:
Transportation ensures customers feel safe while using the transportation system. This includes supporting the development of complete communities by providing accessible and affordable transportation networks and services.

Strategy Related to Council Outcome	Accountable BU
N1 Keep communities safe by meeting and maintaining standards for crime prevention, fire response, and enforcement.	CT, RDS, TI, TP
N2 Build resiliency to flooding.	RDS, TI
N3 Enhance The City's capacity and resiliency to prepare for and respond to pandemics, natural disasters and emergency situations.	CT, RDS, TI, TP
N5 Systematically invest in established neighbourhoods as they evolve to accommodate changing community needs.	CT, RDS, TP
N6 Manage and promote growth to achieve the best possible social, environmental and economic outcomes within financial capacities.	CT, RDS, TI, TP
N7 Develop a new funding framework to provide for infrastructure in new and redeveloping neighbourhoods.	TP
N8 Make it easier to build developments that meet our Municipal Development Plan and Calgary Transportation Plan objectives.	CT, RDS, TI
N9 Provide great public spaces and public realm improvements across the city to foster opportunity for well used public spaces and places for citizen connections and urban vitality.	CT, RDS, TI, TP

Performance Measures Related to Council Outcome	2012 Actual	2013 Actual	2014 Estimated	2015 Target	2016 Target	2017 Target	2018 Target
N.PM1 Average safety ratings of Calgary Transit services.	7.8	8.0	8.1	8.2	8.3	8.3	8.3
N.PM2 Per cent of population that live within 400m of the Primary Transit Network (PTN).	12%	14%	14%	14%	14%	15%	15%



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Performance Measures Related to Council Outcome	2012 Actual	2013 Actual	2014 Estimated	2015 Target	2016 Target	2017 Target	2018 Target
N.PM3 Per cent of jobs that are located within 400m of the Primary Transit Network (PTN).	40%	40%	41%	41%	41%	42%	42%
N.PM4 Per cent of the roads swept during Spring Clean-Up program that achieve quality standards.	NA	99%	95%	95%	95%	95%	95%
N.PM5 Number of days to repair residential streetlights.	40	30	28	30	30	30	30
N.PM6 Kilometres of streets that meet Complete Streets Standards for arterial streets, urban and neighbourhood boulevards and parkways.	NA	NA	14	TBD	TBD	TBD	TBD
N.PM7 Per cent of development permit applications that are aligned with the Calgary Transportation Plan.	NA	NA	NA	TBD	TBD	TBD	TBD
N.PM8 Per cent of development permit applications reviewed by Transportation within the corporate time frame.	83%	82%	82%	85%	85%	87%	87%
N.PM9 Per cent of development permit applications located within activity centers and corridors.	NA	NA	NA	TBD	TBD	TBD	TBD



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Alignment of Strategies and Performance Measures to Long-Term Plans

Transportation supports eight strategies which focus on safety (N1), resiliency (N2 and N3), growth, changing community needs (N5 supports the Redevelopment Implementation Plan and Centre City Implementation) and urban vitality. N8 specifically references MDP/CTP and supports the Corridor Program, Centre City Implementation and Watershed Protection and Land Use Planning corporate growth priority projects.

Most of these performance measures are aligned with CTP. Per cent of population (N.PM2) and jobs (N.PM3) located within 400m of the Primary Transit Network (PTN), are MDP/CTP core indicators and 2015-2018 targets are more aggressive than those outlined identified in 2020 Sustainability Direction. The implementation of Complete Streets (N.PM6) is an MDP/CTP supplementary indicator. All performance measures related to development permit applications (N.PM7, N.PM8 and N.PM9) will help monitor processes that support CTP and growth management goals.

Transit service safety ratings (N.PM1) supports safety as a key area of focus for Transportation. Customer service measures such as quality of spring clean-up (N.PM4) and days to repair streetlights (N.PM5) help monitor services important to citizens.

Some new performance measures do not have historical data. Targets will be determined once a baseline is established in 2015.



Transportation - Strategies and Performance Measures for Council Approval

For Council Approval

Transportation Commitment:
 Transportation provides safe, customer-focused, efficient, sustainable transportation infrastructure, choices and services in an accessible and affordable manner.

A city that moves
 People and goods can move well and safely throughout the city,
 using a variety of convenient, affordable, accessible and
 efficient transportation choices.

Strategy Related to Council Outcome	Accountable BU
M1. Implement and accelerate RouteAhead as transit funding becomes available.	CT, RDS, TI, TP
M2 Maximize the flow of traffic on the existing transportation network through the application of technology.	CT, RDS, TI, TP
M3 Invest in strategic road improvements in priority growth areas as funding becomes available.	CT, RDS, TI, TP
M4 Invest in active transportation infrastructure, including cycling and pedestrian networks as funding becomes available.	CT, RDS, TI, TP

Performance Measures Related to Council Outcome	2012 Actual	2013 Actual	2014 Estimated	2015 Target	2016 Target	2017 Target	2018 Target
M.PM1 Number of CTrain delays greater than five minutes per 1,000 hours of service.	5.1	6.9	6.0	6.0	6.0	6.0	6.0
M.PM2 Average distance (km) between bus breakdowns.	7,180	6,361	6,500	7,000	7,300	7,800	8,000
M.PM3 Transit service hours per capita.	2.36	2.36	2.34	2.28	2.30	2.31	2.31
M.PM4 Passenger trips per transit service hour.	38.5	39.6	39.9	40.6	40.5	40.5	40.3
M.PM5 Annual Calgary Transit Ridership (millions of riders).	102.0	107.5	111.5	113.2	116.0	118.6	120.5
M.PM6 Per cent of roadway pavement that is in good or very good condition.	78%	84%	84%	84%	84%	83%	83%
M.PM7 Per cent of concrete sidewalks that are in good or very good condition.	98%	97%	97%	97%	97%	97%	97%



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Performance Measures Related to Council Outcome	2012 Actual	2013 Actual	2014 Estimated	2015 Target	2016 Target	2017 Target	2018 Target
M.PM8 Per cent of bridges that are in good or very good condition.	NA	NA	95%	95%	95%	95%	95%
M.PM9 Per cent of time that reasonable winter driving conditions are achieved following a snow event on major routes within 48 hours.	100%	100%	90%	92%	95%	95%	95%
M.PM10 Per cent of citizens that are not limited from being able to travel due to road conditions.	85%	NA	85%	88%	90%	91%	92%
M.PM11 Per cent of gravel lanes receiving at least one surface treatment during the Summer Roads program.	100%	100%	90%	92%	95%	95%	95%
M.PM12 Overall annual casualty collision rate per 100,000 population.	224	220	216	213	209	206	203
M.PM13 Vulnerable road user annual casualty collision rate per 100,000 population.	51	NA	NA	48	47	46	45
M.PM14 Per cent of Transportation Infrastructure projects delivered on time.	65%	70%	75%	80%	84%	87%	90%
M.PM15 Per cent of all day, all purpose trips made by walking, cycling, or transit.	22%	NA	NA	22.6%	22.8%	23.0%	23.2%
M.PM16 Per cent of trips going to the Centre City made by transit in the AM peak period.	48.4%	49.5%	NA	50.2%	50.6%	50.9%	51.3%



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Alignment of Strategies and Performance Measures to Long-Term Plans

Transportation leads four of the five the strategies under a city that moves, this is the department’s core business and closely aligns to Calgary Transportation Plan (CTP) goals. The Green Line Transitway project is a key priority.

The majority of Transportation’s performance measures are captured under this Council Priority and all align with aspects of MDP, CTP, RouteAhead, 2020 Sustainability Direction (2020 SD) and growth management. Transit service hours per capita (M.PM3) and all day, all purpose active mode trips (M.PM15) are both MDP/CTP core indicators. Supplementary MDP/CTP indicators include CTrain delays (M.PM1), annual transit ridership (M.PM5), roadway pavement and sidewalk condition (M.PM6 and M.PM7), winter driving conditions (M.PM9), annual collision rate (M.PM12 also an 2020 SD 2020 indicator) and transit trips to centre city (M.PM16). The condition of bridges (M.PM8) provides an broader perspective on the state of our road network assets. Delivering projects on time (M.PM14) and measuring mobility constraints due to road conditions (M.PM10) offers a citizen and customer-focused perspective on performance.

Some new performance measures do not have historical data. Targets have been established where appropriate and may be adjusted once a baseline is established in 2015.



Transportation Commitment:
 Transportation evaluates innovative ways to affordably reduce our environmental impact when delivering transportation projects and services.

A healthy and green city
 We steward our air, land, and water while encouraging
 healthy lifestyles for all Calgarians.

Strategy Related to Council Outcome	Accountable BU
H2 Encourage a broader range of innovative and clean energy technologies.	CT, RDS, TI
H3 Manage the interrelationships between flood protection, water quality and quantity, and land use.	RDS, TI
H9 Optimize the existing parks network to ensure Calgarians have access to nature and healthy and active lifestyles.	TP

Performance Measures Related to Council Outcome	2012 Actual	2013 Actual	2014 Estimated	2015 Target	2016 Target	2017 Target	2018 Target
H.PM1 Average energy usage (Watts) per streetlight.	187	187	187	170	150	130	110
H.PM2 Per cent of construction waste from Transportation Infrastructure projects diverted from landfills.	90%	90%	95%	95%	95%	95%	95%
H.PM3 Per cent of Transportation Infrastructure projects requiring environmental plans that have approved plans in place prior to the start of construction.	NA	100%	100%	100%	100%	100%	100%
H.PM4 Fleet greenhouse gas emissions (Kg) per 1,000 kilometres.	1,333	1,340	1,345	1,345	1,345	1,345	1,345



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A healthy and green city
We steward our air, land, and water while encouraging healthy lifestyles for all Calgarians.

Alignment of Strategies and Performance Measures to Long-Term Plans

All strategies and performance measures support the Calgary Transportation Plan (CTP) and 2020 Sustainability Direction (2020 SD) by maintaining a focus on improving the efficiency of transportation initiatives and operations. Construction waste diversion (H.PM2) is an MDP/CTP supplementary indicator. The fleet greenhouse gas emissions measure (H.PM4) aligns with 2020 SD targets. Reducing energy consumption contributes to a department-wide goal of providing a more efficient, affordable and sustainable transportation system.



Transportation - Strategies and Performance Measures for Council Approval

For Council Approval

Transportation Commitment:

Transportation provides affordable transportation options while maintaining (and expanding where funding is available) service levels. This includes providing timely, accurate information to key decision makers and citizens.

A well-run city
Calgary's government is open, responsive, accountable and transparent, delivering excellent services at a fair price. We work with our government partners to ensure we have the tools we need.

Strategy Related to Council Outcome	Accountable BU
W2 Be as efficient and effective as possible, reducing costs and focusing on value-for-money.	CT, RDS, TI, TP
W3 Examine opportunities for alternative service delivery for competitiveness.	CT, RDS, TI, TP
W4 Balance demand for quality City services with affordable taxes.	RDS
W5 Regularly collaborate and engage citizens to encourage participation in City decision-making, and better communicate the reasons for the decisions.	CT, RDS, TI
W6 Effectively manage The City's inventory of public assets, optimizing limited resources to balance growth and maintenance requirements.	CT, RDS, TI, TP
W7 Continue to transform the organization to be more citizen-focused in its approach and delivery of service.	CT, RDS, TI, TP
W8 Increase collaboration across the organization, including alignment of budgets with service delivery to achieve City priorities.	CT, RDS, TI
W9 Strive to be an employer of choice with a focus on addressing The City's aging workforce.	CT, RDS, TI, TP

Performance Measures Related to Council Outcome	2012 Actual	2013 Actual	2014 Estimated	2015 Target	2016 Target	2017 Target	2018 Target
W.PM1 Transportation's 311 service requests on-time completion rate.	85%	88%	90%	90%	90%	90%	90%
W.PM2 Per cent of Transportation capital budget spent.	65%	53%	65%	70%	72%	74%	76%
W.PM3 Transportation employee satisfaction index score.	114.6	111.6	112.0	112.0	113.0	114.0	115.0

A prosperous city

A city of inspiring neighbourhoods

A city that moves

A healthy and green city

A well-run city

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Performance Measures Related to Council Outcome	2012 Actual	2013 Actual	2014 Estimated	2015 Target	2016 Target	2017 Target	2018 Target
W.PM4 Per cent of permanent new hires in Transportation retained after one year.	77%	70%	70%	71%	72%	73%	75%
W.PM5 Total Recordable Injury Frequency (TRIF) throughout Transportation.	NA	8.7	NA	9.3	8.9	8.6	8.2
W.PM6 Average number of days lost per accepted WCB claims across Transportation.	NA	NA	28	27	26	25	24
W.PM7 Number of assigned departmental workstations decreased.	NA	NA	NA	0	0	0	46
W.PM8 Per cent of employees that know what is expected of them in providing excellent customer service.	82%	82%	82%	84%	86%	88%	90%
W.PM9 Per cent of Transportation employees that feel their working conditions are safe.	65%	60%	60%	62%	64%	67%	70%
W.PM10 Per cent of Calgary Transit customers that rated services as good or excellent.	70%	75%	77%	78%	80%	80%	80%
W.PM11 Number of transit routes that perform below minimum expectations.	16	16	13	11	8	7	5
W.PM12 Per cent of Transportation Infrastructure projects delivered within budget.	95%	95%	95%	95%	95%	95%	95%
W.PM13 Cost per transit trip.	\$3.16	\$3.32	\$3.33	\$3.31	\$3.42	\$3.52	\$3.63
W.PM14 Calgary Transit operating cost per hour.	\$122	\$131	\$133	\$134	\$138	\$142	\$146
W.PM15 Roads maintenance cost per lane kilometre of road.	\$9,128	\$9,493	\$9,818	\$9,500	\$9,500	\$9,500	\$9,500



A well-run city
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Alignment of Strategies and Performance Measures to Long-Term Plans

Transportation is committed to improving how transportation projects and services are delivered to Calgarians. Strategies align with corporate direction and shared actions require collaboration with enabling services partners to develop and implement successfully.

These performance measures look to how services are delivered more effectively and efficiently to customers. Success in these areas will help achieve CTP, MDP and 2020 SD goals. Transportation's key areas of focus are well-represented. Employee safety frequency (W.PM5) and duration (W.PM6) measures will help monitor safety-related workplace performance. Timely 311 service request completion (W.PM1), employees' understanding of customer service (W.PM8) and Transit customer service ratings (W.PM10) will drive improvements to customer-focused service. Capital budget expenditure (W.PM2), project budget management (W.PM12) and other cost-related measures for transit trips (W.PM13), hourly transit operating (W.PM14) and road maintenance (W.PM15) help monitor operational efficiencies. This also includes reduced assigned workstations (W.PM7) and route performance (W.PM11). Employee satisfaction (W.PM3) and retention rates (W.PM4) help monitor Transportation's ability to deliver affordable, accessible transportation networks and services.

Targets have been established where appropriate and may be adjusted once a baseline is established in 2015.



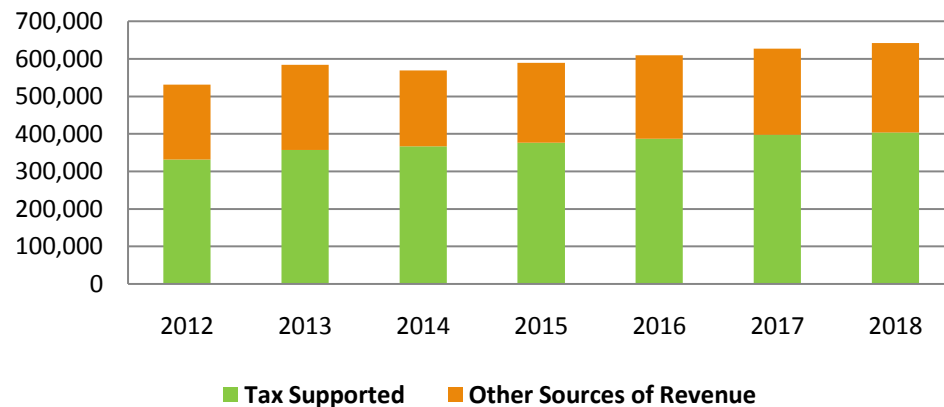
Transportation - Operating Budget Overview

Transportation							
Total Operating Budget (\$000s) (Totals may not add due to rounding)							
	2012 Actual	2013 Actual	2014 Total Budget (as of June 30)	2015 Budget Total	2016 Budget Total	2017 Budget Total	2018 Budget Total
Expenditures	598,237	652,839	626,250	645,817	666,262	684,176	698,935
Recoveries	(66,537)	(68,507)	(57,208)	(56,077)	(56,395)	(56,718)	(56,993)
Revenue	(200,409)	(227,577)	(201,888)	(213,487)	(222,466)	(229,681)	(237,765)
Net	331,291	356,756	367,154	376,252	387,400	397,776	404,176
FTEs	3,823.8	3,877.8	3,943.3	3,946.8	4,044.8	4,106.8	4,167.3

Operating Budget Highlights

A slight increase in expenditures year-over-year (averaging approximately 2.7 per cent annually) can be partly attributed to 210,000 additional transit service hours and 98,000 Access Calgary specialized service trips over 2015-2018. Approximately 224 full-time equivalents have been added in order to deliver increased front-line service. Significant cost increases for inflation (e.g. diesel, insurance, utilities and contractual services) account for 57 per cent of the expenditure increase over the next four years. Demand for services continues to exceed available funding. Additional growth (approximately 29 per cent of the expenditure increase) is partially offset by efficiency gains. The operating impact of capital accounts for 14 per cent of the expenditure increase. Modest fare increases over the four years will help Calgary Transit fund additional growth and inflationary costs.

Transportation
Funding of Operating Expenditures (Net of Recoveries)
(\$000s)

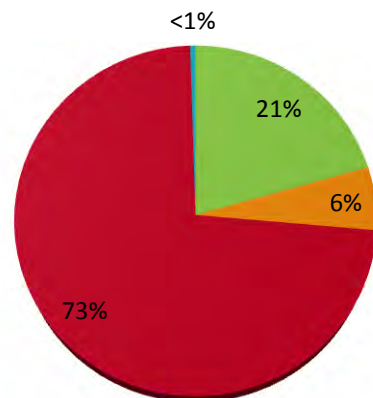


Transportation - Capital Budget Overview

Transportation							
Total Capital Budget (\$000s) (Totals may not add due to rounding)							
	2014	2015	2016	2017	2018	*2019+	Total (2015-*2019+)
Previously-Approved Budget (as at 2014 June 30)	612,855	555,687	111,945	6,810	0		674,442
Breakdown of New Budget Requests							
Maintenance/Replacement		77,315	91,925	84,368	83,992	0	337,600
Upgrades		29,300	30,375	17,925	17,925	0	95,525
Growth		169,675	241,355	261,355	183,545	343,840	1,199,770
Service Change		2,000	2,000	2,000	2,000	0	8,000
Total New Budget Requests		278,290	365,655	365,648	287,462	343,840	1,640,895
Total Capital Budget	612,855	833,977	477,600	372,458	287,462	343,840	2,315,337

*2019+ includes projects which start within the 2015 - 2018 cycle and which are completed in years beyond 2018.

Transportation
New Capital Budget Requests by Project Type
(2015-*2019+)
Total \$1,641 Million



■ Maintenance ■ Upgrades
■ Growth ■ Service Change

Maintenance/Replacement - Key Calgary Transit projects include refurbishment of bus and Light Rail Vehicles as well as system and technology maintenance. Roads is investing in increased maintenance for streetlights, traffic signals, pavement and bridges while introducing additional maintenance for activity centres and corridors. Transportation Infrastructure (TI) will be overseeing the replacement of two bridges as well as several major road reconstructions.

Upgrades - Roads will continue to invest in technology and street improvements to improve traffic flow. TI will invest in operational improvements and noise attenuation improvements to reduce impacts and delays. Calgary Transit will undertake many upgrades to the transit system, including power systems, garage facilities and fare collection equipment to improve customer service and reliability.

Growth - Transit will lead the Green Line Transitway program, implement multiple bus rapid transit routes and expand the LRT fleet to enable four-car trains. Roads will continue to implement new signals, upgrade technology and safety improvements. TI projects include three interchanges, connecting roads to new communities and the integration with the ring road.

Service Change - TI will conduct pre-engineering studies for major capital projects.

Calgary Transit

TRAN: Calgary Transit - Overview

Calgary Transit delivers safe, clean, and reliable public transit, providing more than 2.8 million hours of service each year. In 2013, Transit's fleet of buses and trains travelled more than 59 million kilometres and carried over 107 million customers, a 12 per cent increase over 2011 figures. Transit provides service on over 150 routes using community shuttles, bus, Bus Rapid Transit (BRT) and Light Rail Transit (LRT). In 2014, Transit has over 1,000 buses and shuttles, over 190 Light Rail Vehicles, 45 CTrain stations and four maintenance facilities. In partnership with several service providers, Access Calgary provides specialized transportation services for approximately 15,000 people with disabilities who cannot use regular bus and train service. Almost 3,000 employees work together to make sure customers receive friendly and high quality service each and every day.

CTrain & Bus Service (CTBS)

Provide frequent, safe, convenient and affordable access to buses and trains that Calgarians can depend on.

Fleet & Infrastructure Management (FIM)

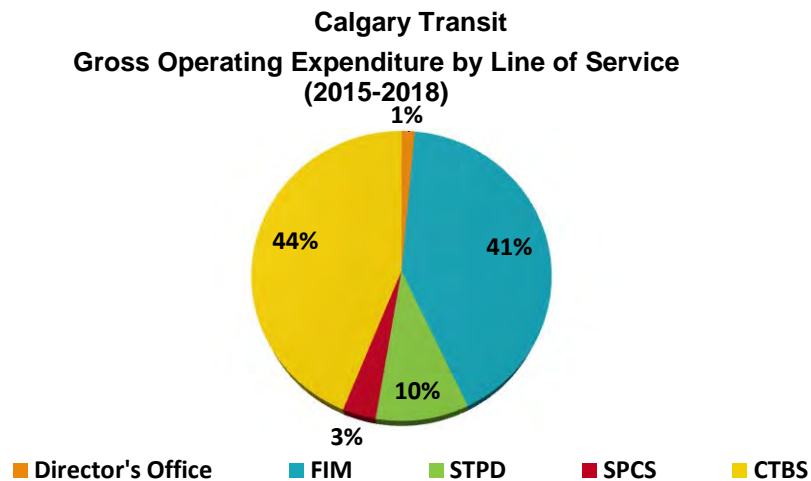
Provide a safe, clean and reliable transit fleet and infrastructure through effective lifecycle management and regular maintenance.

Specialized Transit for Persons with Disabilities (STPD)

Make sure that Calgarians with disabilities who cannot use regular buses and trains, have an affordable and convenient travel option they can depend on.

Service Planning & Customer Service (SPCS)

Develop routes, schedules and location of stops and stations in response to customer needs. Work with the community and customers to develop long-term plans for public transit.



Values may not sum to 100%, due to rounding.

TRAN: Calgary Transit - Overview

Trends

Calgary continues to grow and Calgarians are seeking better travel alternatives to access activities and employment throughout the city. Expectations are high for a great transit service (as demonstrated during discussions on RouteAhead). Customers have asked for additional capacity, better frequency, more direct routes and access to better information about the system. Demographics are also changing with an aging population making more use of Access Calgary, and younger customers are waiting to obtain drivers licenses increasing their reliance on public transit.

Events occur that are both planned and unplanned, which affect transit system operation. These events place demands on Calgary Transit to respond quickly and effectively to ensure customers reach their destination and are informed of the situation along the way.

There continues to be volatility in key elements of providing transit service. Diesel fuel prices remain high and volatile. A similar situation exists with electricity prices. Unpredictable weather can have an effect on natural gas prices as well as transit service provision (e.g. snow clearing, bus movements on hills during snow events).

While some of Transit's infrastructure has been refurbished, there remains a large portion that is reaching an age where major refurbishments or replacement is required. Appropriate investment and effective lifecycle management will help improve the reliability of these assets.

Customer service is key to Transit's success. Combining effective service provision with adequate information and a focus on security is becoming ever more important for customers. Focus on the environment is intensifying in both the public and private sectors. Services offered by Transit contribute to a healthy environment by taking thousands of

vehicles off streets every day. Compared to older fleet vehicles, buses and trains have become efficient and clean, and further improvements are anticipated due to new vehicle purchases and new technology (e.g. natural gas and electric buses). Calgary Transit has a mature workforce and many employees are able to retire within the Action Plan timeframe. This trend is even more acute than the overall workforce and will challenge the organization to retain existing staff while attracting new recruits. In addition to demand growth, the city is also growing geographically. Customers wish to travel further, have more complex trips and require flexible options especially in the suburbs. Park and Ride is seen as a viable option but as demands grow the benefits must be weighed against more productive Transit Oriented Development (TOD).

Long-Term Plans

RouteAhead is a strategic plan to guide both operations and investment in transit over the next 30 years. It establishes a clear vision for transit in Calgary, and will be used by Council and Calgary Transit to make informed decisions regarding customer-centric improvements, capital and operating budgets, fares, service hours and other major business decisions. RouteAhead is aligned with the policy direction and strategic goals of the Municipal Development Plan (MDP), Calgary Transportation Plan (CTP), 2020 Sustainability Direction (2020 SD) and Council Priorities. Increases in service hours, improving reliability, introducing new technology, and improving accessibility are all examples of how Calgary Transit is working towards RouteAhead objectives.

Calgary Transit has a number of sustainability objectives and targets under the 2020 SD goals of smart growth and mobility choice. Some targets involve proximity to the Primary Transit Network, growth management, transit system efficiency and the number of service hours provided. Transit is also updating our bus fleet and expanding its facilities to accommodate natural gas powered vehicles. By meeting

TRAN: Calgary Transit - Overview

these targets, Transit is helping the City achieve objectives of imagineCALGARY, a long-range urban sustainability plan.

The Green Line Transitway is part of the CTP's Primary Transit Network and is identified as a high priority in RouteAhead. The long-term vision for the Green Line Transitway is to have full build out of LRT service from the North Point station in North Central Calgary to the southeast in Seton. The Southeast Transitway is the first stage of the long-term development of the Green Line. The initial phases of pre-design commenced in 2014. Dedicated bus only lanes on the Southeast Transitway will provide customers with improvements in both travel time and reliability while preparing the CTrain right-of-way. The Southeast Transitway will give Transit customers the improvements they need today, and as population and employment continues to grow, will promote and attract the ridership required to make LRT a cost effective service option in the future.

Citizen Engagement

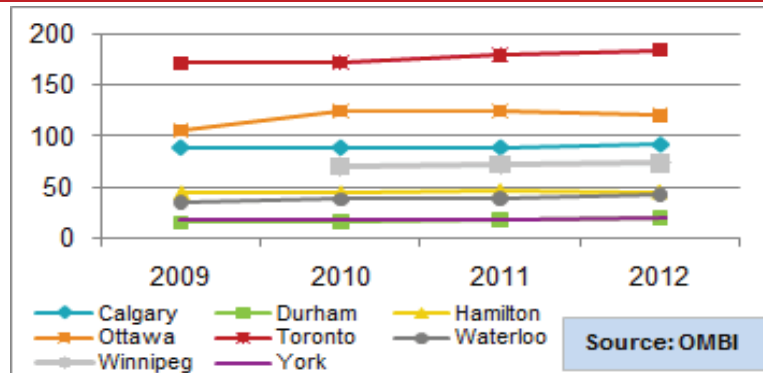
Transit was identified as the top priority in the Action Plan 2015-2018 public engagement campaign. Engagement participants identified reliability, schedules, on-time performance, system expansion, safety, funding, snow and ice control, and longer service hours as most important. The development of RouteAhead also involved significant citizen engagement, the results of which are referred to, and reviewed when planning the future of Calgary Transit. Transit has a number of actions under a city that moves, such as the Green Line Transitway, transit corridors and a new Peace Officer deployment model, that will help address citizen feedback. Finally, the Customer Advisory Group represents Transit's customers and meets regularly with Transit staff to help foster and sustain a culture of customer service and continuous innovation.

Council Priorities

Calgary Transit will lead, implement and accelerate RouteAhead where Transit funding is available. With Council directed funds, Transit will implement a variety of capital projects (e.g. four-car CTrain, new LRV and bus purchases, and Electronic Fare Payment) to achieve Council Priorities. Introduction of new service hours will be modest during Action Plan, but Transit will continue to monitor service and make adjustments to meet customer expectations. Other programs will continue to improve customer service, help deliver service on-time, keep customers and employees safe, sustain Transit assets, and improve the workforce.

TRAN: Calgary Transit - Benchmarking

Transit Trips per Capita



This benchmark helps measure public use of conventional transit service (bus & LRT) and serves as a reflection on the effectiveness of the service that Calgary Transit provides to the citizens of our city. This excludes specialized transit service such as that provided by Access Calgary.

Learning and Best Practices

In 2013, Transit reported 91 trips per capita which is a 3.5 per cent increase over 2012 figures. For the purpose of Action Plan, Transit has identified six cities in Ontario, and one in Manitoba that have transit systems similar to Calgary's for benchmarking.

Improvement Initiatives & Action Plan 2015-2018

RouteAhead contains several strategies for increasing use of the transit system including expanding the primary transit network, implementing new transit corridors, system optimization, improving reliability, and matching service with customer demand. During Action Plan, Transit will rely on a natural uptake in usage by customers which will be partially driven the forecasted growth of the city.

For Council Approval

Transportation Commitment:
 Transportation facilitates the efficient movement of people and goods which contributes to creating a great place to live and work.

A prosperous city
 Calgary continues to grow as a magnet for talent, a place where
 there is opportunity for all, and the best place in Canada
 to start and grow a business.

Strategy Related to Council Outcome	Business Unit Action Related to Strategy	Accountable Service
P1 Strengthen Calgary's position as a global energy centre and location of choice for international talent, investment and innovation through enhanced business development, marketing and place-making initiatives.	P1.1 Implement new Rapid Transit routes identified in the RouteAhead strategic plan.	SPCS
	P1.2 Work with Calgary Regional Partnership on an accessible transportation strategy for people with disabilities across the region.	SPCS
	P1.3 Integrate Park and Ride Policies in the development of Transit Oriented Development (TOD) programs.	CTBS, SPCS
P8 Respond to the needs of an aging population.	P8.1 Deliver safe, accessible, efficient and effective Access Calgary service to meet customer demand by managing service provider market share, optimizing fleet mix and schedules to maximize productivity.	STPD
	P8.2 Increase accessibility to Transit stations, hubs, stops and services.	FIM, STPD



Transportation Commitment:

Transportation facilitates the efficient movement of people and goods which contributes to creating a great place to live and work.

P10 Enhance access to technology and information.

P10.1 Provide customers with real-time data and historical statistics on the transit system and service using existing and new technologies.

CTBS, FIM, SPCS, STPD

A prosperous city
Calgary continues to grow as a magnet for talent, a place where
there is opportunity for all, and the best place in Canada
to start and grow a business.

A prosperous city

A city of inspiring neighbourhoods

A city that moves

A healthy and green city

A well-run city

For Council Approval

Transportation Commitment:
 Transportation ensures customers feel safe while using the transportation system. This includes supporting the development of complete communities by providing accessible and affordable transportation networks and services.

A city of inspiring neighbourhoods
 Every Calgarian lives in a safe, mixed and just neighbourhood,
 and has the opportunity to participate in civic life.

Strategy Related to Council Outcome	Business Unit Action Related to Strategy	Accountable Service
N1 Keep communities safe by meeting and maintaining standards for crime prevention, fire response, and enforcement.	N1.1 Implement a Peace Officer deployment strategy to meet Public Safety and Enforcement targets and increase customer/employee perceptions of safety and security.	SPCS
N3 Enhance The City's capacity and resiliency to prepare for and respond to pandemics, natural disasters and emergency situations.	N3.1 Update and implement emergency response and business continuity plans, which will allow Calgary Transit to be more effective in responding to emergency situations and severe weather challenges.	CTBS
	N3.2 Implement the new Calgary Transit Operations Control Centre, which will improve Calgary Transit's ability to monitor system safety, efficiency and to manage emergency situations.	CTBS, FIM, SPCS, STPD
N5 Systematically invest in established neighbourhoods as they evolve to accommodate changing community needs.	N5.1 Support programs that increase transit ridership, reduce traffic congestion, optimise use of the existing transportation network and improve Calgary's environment.	CTBS, SPCS



For Council Approval

A city of inspiring neighbourhoods
Every Calgarian lives in a safe, mixed and just neighbourhood,
and has the opportunity to participate in civic life.

Transportation Commitment:

Transportation ensures customers feel safe while using the transportation system. This includes supporting the development of complete communities by providing accessible and affordable transportation networks and services.

N5 Systematically invest in established neighbourhoods as they evolve to accommodate changing community needs.

N5.2 Support Transit Oriented Development (TOD) sites on Calgary Transit lands that align with park and ride policies.

SPCS

N5.3 Investigate Centre City transit solutions (e.g. Inner City Loop) to improve urban mobility.

CTBS, SPCS

N6 Manage and promote growth to achieve the best possible social, environmental and economic outcomes within financial capacities.

N6.1 Complete functional plans and support predesign/detailed design for 10-year RouteAhead rapid transit projects.

SPCS

N6.2 Implement service in new communities on a priority basis, as funding is available.

CTBS, SPCS, STPD

N8 Make it easier to build developments that meet our Municipal Development Plan and Calgary Transportation Plan objectives.

N8.1 Review development applications to enable delivery of quality transit service.

SPCS



For Council Approval

Transportation Commitment:

Transportation ensures customers feel safe while using the transportation system. This includes supporting the development of complete communities by providing accessible and affordable transportation networks and services.

N9 Provide great public spaces and public realm improvements across the city to foster opportunity for well used public spaces and places for citizen connections and urban vitality.

N9.1 Develop guidelines and standards for the design of transitway facilities, including urban design principles, and environmental best practices.

SPCS

A city of inspiring neighbourhoods
Every Calgarian lives in a safe, mixed and just neighbourhood,
and has the opportunity to participate in civic life.



For Council Approval

Transportation Commitment:

Transportation provides safe, customer-focused, efficient, sustainable transportation infrastructure, choices and services in an accessible and affordable manner.

A city that moves
People and goods can move well and safely throughout the city,
using a variety of convenient, affordable, accessible and
efficient transportation choices.

Strategy Related to Council Outcome	Business Unit Action Related to Strategy	Accountable Service
M1 Implement and accelerate RouteAhead as transit funding becomes available.	M1.1 Implement the Green Line Transitway project plan.	SPCS
	M1.2 Develop transportation policies, strategies and plans that align with RouteAhead and the Corporate Growth Management framework.	SPCS
	M1.3 Invest to expand service on the Primary Transit Network (PTN).	CTBS
	M1.4 Manage and reallocate service hours to existing routes with high demand for service.	SSPCE
	M1.5 Complete required improvements to Transit Operations, and Infrastructure to implement for four-car CTrain service.	FIM
	M1.6 Procure vehicles as outlined in the fleet acquisition plan to increase accessibility, replace older vehicles including 20 U2 Light Rail Vehicles (LRVs), and expand the fleet of community shuttles, buses and LRVs.	FIM



For Council Approval

A city that moves
 People and goods can move well and safely throughout the city,
 using a variety of convenient, affordable, accessible and
 efficient transportation choices.

Transportation Commitment:

Transportation provides safe, customer-focused, efficient, sustainable transportation infrastructure, choices and services in an accessible and affordable manner.

M1 Implement and accelerate RouteAhead as transit funding becomes available.

M1.7 Update the plan for expanding fleet maintenance and storage capacity to meet existing demand and plan for future growth.

FIM

M1.8 Review and update station cleaning programs to meet customer expectations and to properly maintain new capital infrastructure (e.g. Transitways, four-car platform extensions).

FIM

M1.9 Develop condition and maintenance standards for bus stops and stations that can be audited in accordance with industry best practices.

FIM

M1.10 Determine the benefits and costs of alternate scheduling strategies (e.g. frequency based) on the Primary Transit Network.

CTBS, SPCS

M1.11 Enhance services on mainline bus corridors to provide for increasing ridership (e.g. 18-metre articulated buses, Bus Rapid Transit (BRT) service).

CTBS, SPCS



For Council Approval

A city that moves
 People and goods can move well and safely throughout the city,
 using a variety of convenient, affordable, accessible and
 efficient transportation choices.

Transportation Commitment:

Transportation provides safe, customer-focused, efficient, sustainable transportation infrastructure, choices and services in an accessible and affordable manner.

M1 Implement and accelerate RouteAhead as transit funding becomes available.

M1.12 Market and promote transit services to increase ridership and improve community understanding of the social, economic and environmental benefits of transit.

SPCS

M1.13 Expand community partnership programs (e.g. Canadian Pacific Christmas Train) that result in the use of station areas for community-based activities.

SPCS

M1.14 Through ongoing commitment to Investing in Mobility, continue to advocate for transportation capital and operational funding from the Government of Alberta and the Government of Canada (e.g., Stoney Maintenance Facility, Building Canada Fund).

SPCS

M1.15 Implement the Calgary Transit Fare Strategy as directed by Council.

SPCS

M2 Maximize the flow of traffic on the existing transportation network through the application of technology.

M2.1 Implement Transit Priority Measures to decrease travel time and improve trip time reliability.

CTBS, SPCS



For Council Approval

A city that moves
 People and goods can move well and safely throughout the city,
 using a variety of convenient, affordable, accessible and
 efficient transportation choices.

Transportation Commitment:

Transportation provides safe, customer-focused, efficient, sustainable transportation infrastructure, choices and services in an accessible and affordable manner.

M3 Invest in strategic road improvements in priority growth areas as funding becomes available.

M3.1 Coordinate Plans with transportation network West and Southwest Ring Road design initiatives.

SPCS

M4 Invest in active transportation infrastructure, including cycling and pedestrian networks as funding becomes available.

M4.1 Improve active mode travel opportunities (e.g. bike parking at transit facilities, industrial sidewalks, etc.) and continue to install bike racks on buses and facilitate car share programs.

CTBS, FIM, SPCS



For Council Approval

Transportation Commitment:
 Transportation evaluates innovative ways to affordably reduce our environmental impact when delivering transportation projects and services.

A healthy and green city
 We steward our air, land, and water while encouraging healthy lifestyles for all Calgarians.

Strategy Related to Council Outcome	Business Unit Action Related to Strategy	Accountable Service
H2 Encourage a broader range of innovative and clean energy technologies.	H2.1 Maintain the Calgary Transit Fleet Plan to improve overall fleet fuel efficiency, reduce emissions, improve reliability, increase accessibility, and expand the number of community shuttles, buses and Light Rail Vehicles (LRVs).	FIM
	H2.2 Support the Stoney Transit Facility to be a class leader in reduced energy consumption, through emphasis on Leadership in Energy and Environmental Design (LEED) energy performance criteria, and on-site renewable energy generation.	FIM



For Council Approval

Transportation Commitment:
 Transportation provides affordable transportation options while maintaining (and expanding where funding is available) service levels. This includes providing timely, accurate information to key decision makers and citizens.

A well-run city
 Calgary's government is open, responsive, accountable and transparent, delivering excellent services at a fair price. We work with our government partners to ensure we have the tools we need.

Strategy Related to Council Outcome	Business Unit Action Related to Strategy	Accountable Service
W2 Be as efficient and effective as possible, reducing costs and focusing on value-for-money.	W2.1 Participate in a Zero-Based Review, in an effort to identify potential improvements in service efficiency and effectiveness.	SPCS
	W2.2 Plan and implement projects that improve Transit reliability.	FIM, SPCS
W3 Examine opportunities for alternative service delivery for competitiveness.	W3.1 Evaluate contracts for advertising services, and renegotiate with providers to increase revenue and take advantage of system opportunities.	SPCS
W5 Regularly collaborate and engage citizens to encourage participation in City decision-making, and better communicate the reasons for the decisions.	W5.1 Engage members of the public in meaningful discussions about changes or improvements to transit service.	SPCS
	W5.2 Communicate the value for money (e.g. cost/benefit) of public transit through promotion and community activities.	SPCS



For Council Approval

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Transportation Commitment:
 Transportation provides affordable transportation options while maintaining (and expanding where funding is available) service levels. This includes providing timely, accurate information to key decision makers and citizens.

W6 Effectively manage The City's inventory of public assets, optimizing limited resources to balance growth and maintenance requirements.

W6.1 Apply and refine Asset Management plans including Tangible Capital Asset Improvement initiatives.

FIM

W7 Continue to transform the organization to be more citizen-focused in its approach and delivery of service.

W7.1 Implement the Calgary Transit Customer Commitment and Customer Experience Strategy in alignment with the Corporate Customer Service Framework, including support of the Transit Customer Advisory Group.

SPCS, SSPCE

W7.2 Recognize staff who provide excellent customer service.

CTBS, FIM, SPCS, STPD

W8 Increase collaboration across the organization, including alignment of budgets with service delivery to achieve City priorities.

W8.1 Promote and foster business relationships throughout The Corporation that improve services and deliver value to customers.

CTBS, FIM, SPCS, STPD



For Council Approval

A well-run city
 Calgary's government is open, responsive, accountable and transparent, delivering excellent services at a fair price. We work with our government partners to ensure we have the tools we need.

Transportation Commitment:

Transportation provides affordable transportation options while maintaining (and expanding where funding is available) service levels. This includes providing timely, accurate information to key decision makers and citizens.

W9 Strive to be an employer of choice with a focus on addressing The City's aging workforce.

W9.1 Ensure compliance with safety legislation and corporate policies (e.g. Corporate Safety Strategy).

CTBS, FIM, SPCS, STPD

W9.2 Develop a strategic workforce plan to address changing demographics and retirements.

CTBS, FIM, SPCS, STPD

W9.3 Strengthen health management policies and procedures (e.g. return to work, duty to accommodate, etc.) and encourage wellness initiatives to ensure a healthy, productive workforce and reduce costs of service.

SPCS

W9.4 Lead a departmental health, safety and wellness culture by improving safety reporting and trends analysis to promote shared understanding and responsibility.

CTBS, FIM, SPCS, STPD



TRAN: Calgary Transit - Lines of Service

Breakdown of Operating Budget by Service (\$000) (Totals may not add due to rounding)															
	2014			2015			2016			2017			2018		
	\$ Exp	\$ Net	FTEs	\$ Exp	\$ Net	FTEs	\$ Exp	\$ Net	FTEs	\$ Exp	\$ Net	FTEs	\$ Exp	\$ Net	FTEs
Director's Office	4,318	(171,936)	6.0	6,322	(179,353)	6.0	6,327	(187,852)	6.0	6,333	(194,587)	6.0	6,333	(201,696)	6.0
Fleet & Infrastructure Management	162,015	154,325	702.0	171,228	163,537	704.0	177,092	169,401	720.0	181,260	173,569	722.0	187,777	180,086	725.0
Specialized Transit for Persons with Disabilities	36,464	34,420	56.5	38,391	36,348	58.0	40,957	38,914	61.0	43,300	41,257	63.0	45,137	43,094	64.0
Service Planning & Customer Service	13,521	13,521	90.3	14,936	14,936	94.3	15,054	15,054	94.3	15,074	15,074	94.3	15,074	15,074	94.3
CTrain & Bus Service	179,895	179,680	2,021.7	180,995	180,781	2,014.7	187,637	187,422	2,084.7	192,505	192,290	2,133.7	196,956	196,741	2,181.2
Total Business Unit	396,212	210,010	2,876.5	411,872	216,248	2,877.0	427,067	222,938	2,966.0	438,472	227,603	3,019.0	451,277	233,299	3,070.5

Calgary Transit is faced with a situation where the costs of operating the transit system are increasing beyond what the current tax base is able to support. Growth of service hours in 2015 will be low, and service hour increases in 2016-2018 will be modest. Transit will continue to support other Business Units within the Transportation Department, and throughout the Corporation, with their projects and initiatives, and Transit will work toward meeting the objectives of the five key corporate initiatives identified by the Administration Leadership Team. There will be moderate increases in FTE's within Calgary Transit to accommodate service level changes, and the increased demands in maintaining a growing and aging transit system.

As was the case in previous business cycles, Transit will continue to seek opportunities for improving efficiencies and effectiveness. A Zero-Based Review will be conducted at Transit in 2015 which may identify some areas for improvements in later years of Action Plan.

The cost of diesel fuel, and the price of utilities (natural gas, electricity, and water) is steadily increasing, and at times can be volatile. Consumption rates also increased across The City mostly due to the colder than average winter in 2014. Electricity and natural gas consumption increased by seven per cent and 19 per cent respectively. As the transit system grows, and more service hours are provided, Transit will experience continued pressure to cover the cost of growth.

TRAN: Calgary Transit - Lines of Service

All \$ values are in Thousands (\$000)

CTrain & Bus Service	2014			2015			2016			2017			2018		
	\$ Exp	\$ Net	FTEs	\$ Exp	\$ Net	FTEs	\$ Exp	\$ Net	FTEs	\$ Exp	\$ Net	FTEs	\$ Exp	\$ Net	FTEs
	179,895	179,680	2,021.7	180,995	180,781	2,014.7	187,637	187,422	2,084.7	192,505	192,290	2,133.7	196,956	196,741	2,181.2

Through effective management of over 2,000 employees, 2.8 million hours of bus and CTrain service is delivered to customers each year. Service optimization is a priority and is achieved by meeting service demand with supply, ensuring that the Transit fleet is being used strategically and low-performing routes are assessed. Transit service packages are designed to meet the strategic objectives outlined by City Council, and to meet the needs of a growing city. A lean operations model has been in place since the last business cycle and has proven to be effective in balancing service quality control and expenditure (e.g.

supervisor ratio of 70 operators per supervisor). Although effective, this model will need to be reviewed and updated in Action Plan to ensure an adequate balance of operators and supervisors is maintained. An increase in operating expenditures is identified in 2015 when the Electronic Fare Collection system comes into service. Transit was allotted Council-directed, one-time funds for the addition of 30,000 additional service hours in 2013 and 2014. In 2015, Transit will need to reduce 30,000 service hours on low-performing routes to make up for the gap that resulted from the one-time funding not being continued.

Fleet & Infrastructure Management	2014			2015			2016			2017			2018		
	\$ Exp	\$ Net	FTEs	\$ Exp	\$ Net	FTEs	\$ Exp	\$ Net	FTEs	\$ Exp	\$ Net	FTEs	\$ Exp	\$ Net	FTEs
	162,015	154,325	702.0	171,228	163,537	704.0	177,092	169,401	720.0	181,260	173,569	722.0	187,777	180,086	725.0

Maintaining buses, trains, stations, stops, tracks and power substations is a vital function that helps ensure the transit system is safe, reliable, clean, accessible, and that transit service meets our customers expectations. Transit is working within available funds to balance capital investment in new assets, and investing operating dollars in repair and refurbishment of existing assets. As assets age, Transit experiences higher costs for maintenance, repair and refurbishment. With the opening of Tuscany LRT station in September 2014 and the introduction of four-car train service in December 2015, there will be an increase in

the amount of maintenance required to sustain the transit system.

Costs for diesel fuel, electricity, and natural gas increased significantly in 2014, and there is no indication that the price for these resources will level off, or that price volatility will decrease. Fleet and Infrastructure Management is continually making efforts to ensure that older vehicles are used less frequently as they consume more fuel (diesel and electricity), however this strategy is less desirable than replacing older fleet altogether.

Service Planning & Customer Service	2014			2015			2016			2017			2018		
	\$ Exp	\$ Net	FTEs	\$ Exp	\$ Net	FTEs	\$ Exp	\$ Net	FTEs	\$ Exp	\$ Net	FTEs	\$ Exp	\$ Net	FTEs
	13,521	13,521	90.3	14,936	14,936	94.3	15,054	15,054	94.3	15,074	15,074	94.3	15,074	15,074	94.3

Strategic, long-range planning is an important function within Transit, as it helps to ensure that the future of Calgary Transit is properly aligned with the objectives of other city departments, our customers needs are understood and included in future plans, and that Council Priorities are properly addressed.

Operational planning helps ensure that existing transit service is easy to use, is efficient, and contributes to an effective transportation system through optimization initiatives. Developments to improve or change the transit system that are within a one to five-year time horizon, including new community plans, are managed through operational planning.

Providing excellent customer service is one of the foundational principles

at Calgary Transit, and staffing is required in order to address customer needs (e.g. Call Centre, Customer Service Centres, etc.).

A Customer Charter will be developed, which aligns with the Corporate Customer Service Framework, and will elevate the already high quality of customer service provided by Calgary Transit.

Transit will continue to develop new innovative long-term plans and make adjustments to service (frequency, routing and schedule) to meet the needs of Calgarians. However, investments in transit priority measures (signal priority, bus lanes), passenger amenities (stops and shelters) and security infrastructure (officers, cameras) will be limited in Action Plan.

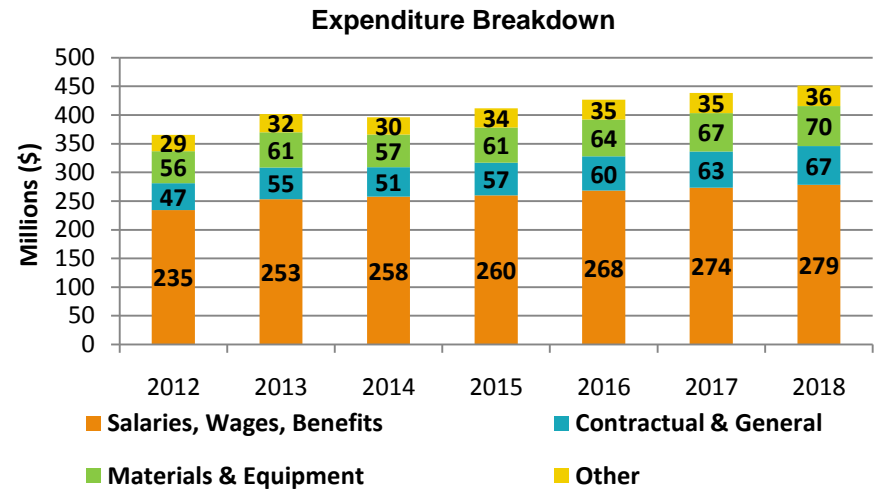
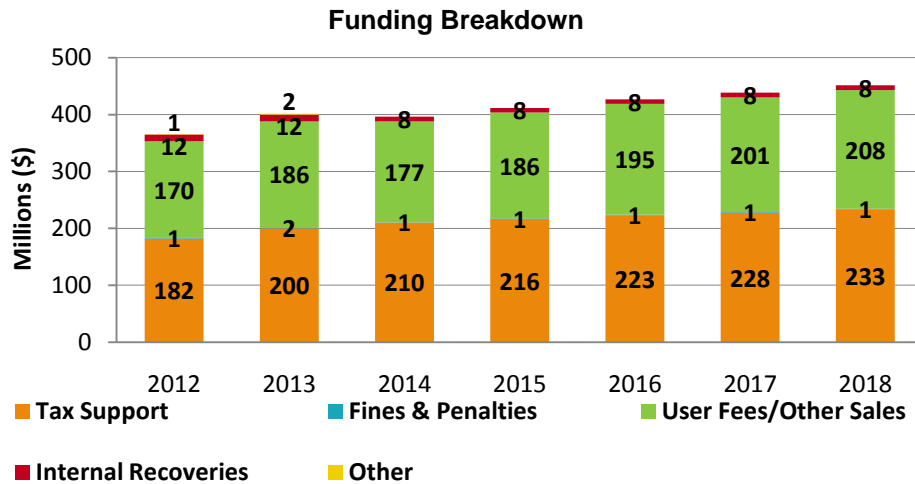
Specialized Transit for Persons with Disabilities	2014			2015			2016			2017			2018		
	\$ Exp	\$ Net	FTEs	\$ Exp	\$ Net	FTEs	\$ Exp	\$ Net	FTEs	\$ Exp	\$ Net	FTEs	\$ Exp	\$ Net	FTEs
	36,464	34,420	56.5	38,391	36,348	58.0	40,957	38,914	61.0	43,300	41,257	63.0	45,137	43,094	64.0

Access Calgary has experienced year-over-year growth, and this trend will continue throughout Action Plan. These services are an important part of the transit system, and help ensure that all customers can move throughout the city, specifically for customers with disabilities for whom regular bus and CTrain service is not an option. Access Calgary has contracts with five transportation companies to deliver shared-ride transportation service to customers. Legitimate additional costs that are

experienced by contractors in the delivery of service are passed on to Access Calgary as per the contract. Furthermore, Access Calgary is subjected to taxi meter rate increases or changes approved by Council. As the population increases and ages and the city boundary grows, the demand for Access Calgary service will also continue to rise. It will be challenging to meet all the demand and manage high customer expectations.

TRAN: Calgary Transit - Breakdown of the Operating Budget

Totals may not match due to rounding



Funding Breakdown - Council direction was received through RouteAhead for Calgary Transit to maintain a 50/50 to 55/45 cost recovery ratio during Action Plan 2015-2018. This means that at least 50 per cent of transit funding must come from revenue (e.g. fares, parking fees, and advertising), and no more than 50 per cent of funding can come from taxes.

Expenditures - Approximately two-thirds of Calgary Transit's operating budget will go toward paying the salaries, wages, and benefits of approximately 3,000 employees. 15 per cent of Calgary Transit's operating budget is used for maintaining and operating fleet and

infrastructure, including parts, fuel and materials. Contractual and General expenditures include those related to Access Calgary service providers, Enmax, and City of Calgary Roads contract services (e.g. Snow and Ice Control and CTrain signals).

User Fees / Charges / Utility Rates - User Fees for 2015-2018 are detailed in Attachment 2 and are in accordance with the User Fees and Subsidies Policy (CFO010). To maintain the Long-term Recovery Rate Target of 30 per cent, and to help meet the cost recovery ratio target, Transit is recommending modest increases in User Fees.

TRAN: Calgary Transit - Breakdown of the Net Operating Budget*Totals may not add due to rounding*

Breakdown of Net Operating Budget Changes (\$000s)	2015	2016	2017	2018
Previous Year's Budget	210,010	216,248	222,938	227,603
Less: Previous Year One Time	(2,350)	(515)	0	0
Base	207,660	215,733	222,938	227,603
Efficiency Gains	(2,250)	0	0	0
Inflation	4,031	1,228	1,443	395
Service and Budget Increase	4,582	4,053	2,864	3,001
Operating Impact of Previously Approved Capital	1,758	1,120	0	0
Operating Impact of New Capital (Incremental)	0	805	358	2,300
Re-alignments	(48)	0	0	0
One Time	515	0	0	0
Total Budget Change	8,588	7,206	4,665	5,696
Total Budget	216,248	222,938	227,603	233,299

Calgary Transit will generate \$2.25 million in efficiency gains in 2015 by removing 30,000 service hours from previous one-time funding. Further efficiencies throughout all Lines of Service may be identified as a result of the 2015 Zero-Based Review.

Inflationary increases identified in 2015 are expected to be higher than what is forecasted for 2016-2018. Prices for diesel and utilities are rising consistently, and can be volatile at times. As a result of the 2013 flood, insurance rates went up substantially across all City of Calgary Departments, and rate increases are passed on to the business units.

Modest growth in transit service is expected during Action Plan. Through Council directed funds, Transit Fares and increased ridership Calgary

Transit will add approximately 210,000 service hours over the 2015-2018 period, which is 38 per cent of the target set out in RouteAhead. New service hours will be allocated as follows: 38 per cent for service to add capacity on existing routes, 35 per cent to new communities, 14 per cent for new Rapid Transit Corridors, and 13 per cent for schedule adherence. Access Calgary will add approximately 98,000 trips during 2015-2018, which is 54 per cent of the target for the period. Continued efforts are needed to maximize benefit to customers of all investments.

New capital assets (e.g. Tuscany LRT station, Westbrook Centre, and Stoney Maintenance Facility) will be transferred to Calgary Transit and will result in increased operating cost of capital expenditures.

TCA Depreciation (\$000s) - Calgary Transit			
2015	2016	2017	2018
104,074	113,444	119,202	123,757

TCA Depreciation content is presented for information only.

TRAN: Calgary Transit - Operating Budget for Council Approval

For Council Approval

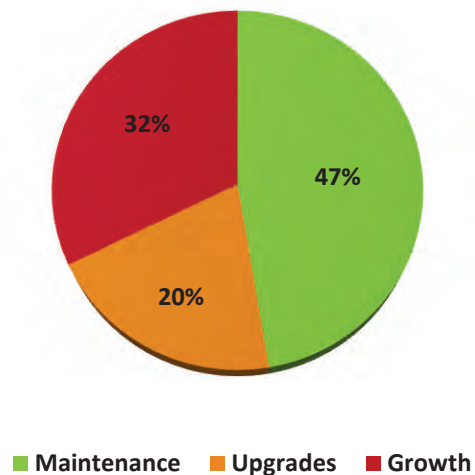
Calgary Transit															
Total Operating Budget (\$000s) for Approval (Totals may not match due to rounding)															
	2012 Actual	2013 Actual	2014 Total Budget (as of June 30)	2015 Budget			2016 Budget			2017 Budget			2018 Budget		
				Base	One- Time	Total	Base	One- Time	Total	Base	One- Time	Total	Base	One- Time	Total
Expenditures	365,414	401,535	396,212	411,872	0	411,872	427,067	0	427,067	438,472	0	438,472	451,277	0	451,277
Recoveries	(11,507)	(11,682)	(8,383)	(8,383)	0	(8,383)	(8,383)	0	(8,383)	(8,383)	0	(8,383)	(8,383)	0	(8,383)
Revenue	(172,004)	(189,648)	(177,819)	(187,756)	515	(187,241)	(195,745)	0	(195,745)	(202,485)	0	(202,485)	(209,594)	0	(209,594)
Net	181,903	200,205	210,010	215,733	515	216,248	222,938	0	222,938	227,603	0	227,603	233,299	0	233,299
FTEs	2,736.0	2,807.0	2,876.5	2,877.0	0.0	2,877.0	2,966.0	0.0	2,966.0	3,019.0	0.0	3,019.0	3,070.5	0.0	3,070.5

TRAN: Calgary Transit - Capital Budget Overview

Calgary Transit						
Capital Budget (\$000s) Overview (Totals may not match due to rounding)						
	2015	2016	2017	2018	*2019+	Total
Previously-Approved Budget (as at 2014 June 30)	160,021	56,000	2,000	0	0	218,021
Total New Capital Budget Requests	52,330	79,480	52,573	53,997	0	238,380
Total Business Unit Capital Budget	212,351	135,480	54,573	53,997	0	456,401

*2019+ represents projects which start within the 2015-2018 cycle and which are completed in years beyond 2018.

**Calgary Transit
New Capital Budget Requests by Project Type
(2015-*2019+)
Total \$238 Million**



Maintenance/Replacement - 47 per cent of Calgary Transit's capital budget will be spent on maintenance programs that will help extend the life of assets that have reached or exceeded their life expectancy (e.g. LRT Infrastructure). Regular investment in Fleet and Infrastructure Management programs will also help improve reliability and reduce the risk of unforeseen large capital replacement costs (e.g. Train car refurbishment).

Upgrades - Certain components of the transit system have reached a point in their lifecycle where upgrades are required to meet new safety regulations, handle higher passenger loads and to meet customer expectations. In some cases, not upgrading these components can result in higher maintenance costs. 20 per cent of Calgary Transit's capital budget will go towards programs like the Traction Power Upgrade and Garage Lifecycle Rehabilitation, both of which are examples of how Transit is meeting Council's objectives of efficiency, affordability and high quality of service.

Growth - There is a growing expectation for all Calgarians to have access to high frequency and high quality public transit throughout the city. Strategic plans such as RouteAhead and Investing in Mobility provide clear direction for growing the transit system over the next ten years. 32 per cent of Calgary Transit's capital budget will be directed toward purchasing new buses and Light Rail Vehicles, building new maintenance facilities, and implementing new technology. These are only some examples of how Transit will meet customer needs in the future.

TRAN: Calgary Transit - Capital Budget Overview

Funding for Capital Projects (Totals may not match due to rounding)	2015	2016	2017	2018	*2019+	Total 2015-*2019+
Federal Gas Tax Fund (GTF)	9,669	42,150	39,500	39,500	0	130,819
Fuel Tax - Revenue Sharing	23,091	21,565	7,287	8,741	0	60,684
Municipal Sustainability Initiative (MSI)	15,700	10,000	0	0	0	25,700
Capital Reserves	138	138	138	138	0	552
Community & Recreation Levy	0	2,100	2,100	2,100	0	6,300
Pay-As-You-Go	3,532	3,202	3,548	3,518	0	13,800
Lifecycle Maintenance & Upgrade Reserve	200	325	0	0	0	525
Total Funding	52,330	79,480	52,573	53,997	0	238,380
Total Operating Impacts of Capital (Cumulative)						
2015-2018 Operating Budget	0	805	1,163	1,163	N/A	
2019 and beyond up to 2024 Operating Plan	N/A	N/A	N/A	N/A	6,978	

*2019+ represents projects which start within the 2015-2018 cycle and are completed in years beyond 2018.

Capital Budget Listing (by Program - Project) (\$000s)

Program-Project	Project Description	Type	Cat	Prev. Approved Budget up to 2014	Prev. Approved Budget for future years	New Budget Request	2015	2016	2017	2018	*2019+	2015-*2019+	Growth Area
563-001	Primary Transit Network Optimization	U	C			4,000	1,000	1,000	1,000	1,000		4,000	
Total Program 563 : Primary Transit Network Optimization				-	-	4,000	1,000	1,000	1,000	1,000	-	4,000	
564-001	Access Calgary Technology	M	C			3,350	500	950	950	950		3,350	
564-002	Transit Customer Service Tech. (Lifecycle)	M	C			5,425	1,450	1,325	1,325	1,325		5,425	
Total Program 564 : CT Technology Upgrades				-	-	8,775	1,950	2,275	2,275	2,275	-	8,775	

Program- Project	Project Description	Type	Cat	Prev. Approved Budget up to 2014	Prev. Approved Budget for future years	New Budget Request	2015	2016	2017	2018	*2019+	2015- *2019+	Growth Area
655-07W	Traction Power 4-Car Upgrades	U	A	37,590	3,500	26,000	16,000	10,000	-	-	-	26,000	City-wide
655-14W	LRT Lifecycle Asset Management	M	C			36,100	6,000	10,700	8,700	10,700		36,100	
655-17W	Rail Syst Lifecycle Asset Mgmt	M	C			11,480	1,730	3,250	3,250	3,250		11,480	
Total Program 655 : Outside Plant and Support Systems				37,590	3,500	73,580	23,730	23,950	11,950	13,950	-	73,580	
Operating impact of capital of Program 655													
<i>2015-2018 Operating Budget</i>			O1				-	690	1,048	1,048	N/A	2,786	
<i>2019 and beyond Operating Plan</i>			O2				N/A	N/A	N/A	N/A	6,288	6,288	
656-04W	Buildings Lifecycle Asset Mgmt	M	C			9,100	1,600	2,500	2,500	2,500		9,100	
656-10W	Westbrook Building	G	A	10,472		25,000	12,500	12,500	-	-	-	25,000	City-wide
656-12W	Major Mtn Facilities Upgrades	U	C			10,000		6,000	2,000	2,000	-	10,000	City-wide
656-307	LRT Stations & Aux Bldgs Upgr	U	C			5,375	1,100	1,425	1,425	1,425		5,375	
Total Program 656 : Buildings and Stations				10,472	-	49,475	15,200	22,425	5,925	5,925	-	49,475	
Operating impact of capital of Program 656													
<i>2015-2018 Operating Budget</i>			O1				-	115	115	115	N/A	345	
<i>2019 and beyond Operating Plan</i>			O2				N/A	N/A	N/A	N/A	690	690	
657-01W	Bus Refurbishment	M	C			14,800	4,200	3,400	4,000	3,200		14,800	
657-02W	LRV Refurbishment	M	C			29,860	5,000	7,550	8,543	8,767		29,860	
657-03W	Fleet & Equipment	M	C			2,800	700	700	700	700	-	2,800	
Total Program 657 : Fleet and Equipment				-	-	47,460	9,900	11,650	13,243	12,667	-	47,460	

Program- Project	Project Description	Type	Cat	Prev. Approved Budget up to 2014	Prev. Approved Budget for future years	New Budget Request	2015	2016	2017	2018	*2019+	2015- *2019+	Growth Area
665-02W	Big Buses/Community Shuttle Buses	G	C			51,990	-	17,330	17,330	17,330	-	51,990	City-wide
Total Program 665 : Buses/Community Shuttle Buses				-	-	51,990	-	17,330	17,330	17,330	-	51,990	

668-01W	Fare Collection Equipment & System	U	C			3,100	550	850	850	850	-	3,100	
Total Program 668 : Fare Collection Services				-	-	3,100	550	850	850	850	-	3,100	

				48,062	3,500	238,380	52,330	79,480	52,573	53,997	-	238,380	
=====													

Note:

Type: M=Maintenance/Replacement, U=Upgrade, G=Growth, S=Service Change

Category: A=Project in Progress, C=New Project, O1=2015-2018 Operating Cost, O2=2019 and beyond Operating Cost

Budgets and/or operating impact of capital beyond 2019 are included in 2019 and are detailed in the Explanation section

Explanation of Budget Requests

Program 563 : Primary Transit Network Optimization

Project 563-001: Primary Transit Network Optimization

New Budget Request of \$4 million for transit priority measures to improve travel time delays experienced by transit buses on bus rapid transit routes and CTrains. Project will be funded by Pay-As-You-Go.

Operating Impact of Capital: None.

Program 564 : CT Technology Upgrades

Project 564-001: Access Calgary Technology

New Budget Request of \$3.35 million to provide for lifecycle and replacement of systems and hardware that Access Calgary relies on to provide customers with high-quality, reliable service. This includes systems such as accessibility technology (mobile data terminals) on Access Calgary vehicles, radios, and other supporting computer software to manage day to day operations (including trip booking). Project will be funded by Gas Tax Fund \$1.35 million and Pay-As-You-Go \$2.0 million.

Operating Impact of Capital: None.

Project 564-002: Transit Customer Service Technology (Lifecycle)

New Budget Request of \$5.425 million to provide for lifecycle and upgrade technologies to enhance customer experience and improve reliability of transit service. Project will be funded by Fuel Tax \$4.0 million, Pay-As-You-Go \$1.1 million and Lifecycle Maintenance and Upgrade Reserve \$325 thousand.

Operating Impact of Capital: None.

Program 655 : Outside Plant and Support Systems

Project 655-07W: Traction Power Upgrade- 4 Car Trains

Previously approved budget up to 2014 of \$37.59 million with funding from Infrastructure Stimulus Fund of \$10 million, MSI of \$8 million, Fuel Tax of \$14.865 million, Gas Tax Fund of \$2.413 million, Pay-As-You-Go of \$989 thousand and Tax Support Debt of \$1.323 million.

Future approved budget of \$3.5 million with funding from MSI of \$3.122 million and Pay-As-You-Go of \$378 thousand.

New Budget Request of \$26.0 million for upgrades and improvements to the Traction Power System. Includes all equipment and supporting infrastructure required to provide safe and reliable electrical service for the CTrain. As service demands increase and four-car trains are introduced, the capacity of the existing electrical power supply system must be increased. Without these system upgrades, the performance and reliability of four-car CTrain service will be reduced. Project will be funded by MSI \$25.7 million and Pay-As-You-Go \$300 thousand.

Operating Impact of Capital: This project requires \$2.286 million in operating costs including 3 FTEs for 2016 to 2018, and \$4.788 million for 2019-2024.

Project 655-14W: LRT Lifecycle Asset Management

New Budget Request of \$36.1 million to provide for upgrades and improvements to the LRT infrastructure systems to maintain LRT service reliability. This includes track, overhead cantenary system, and electrical substation equipment. Project will be funded by Gas Tax Fund \$27.0 million, Fuel Tax \$8.19 million and Pay-As-You-Go \$910 thousand.

Operating Impact of Capital: None.

Project 655-17W: Rail Systems Lifecycle Asset Management

New Budget Request of \$11.48 million to provide for the life-cycle maintenance and upgrading of aging communication systems and maintenance of LRT control and crossing signals. This is critical to ensure safe operations and allow a high frequency of service. Project will be funded by Fuel Tax \$8.72 million and Pay-As-You-Go \$2.76 million.

Operating Impact of Capital: This project requires \$500 thousand in operating costs including 1 FTE for 2017 to 2018, and \$1.5 million for 2019-2024.

Program 656 : Buildings and Stations

Project 656-04W: Transit Buildings Lifecycle Asset Management

New Budget Request of \$9.1 million for rehabilitation and lifecycle replacement (including escalator, roof replacements etc.). Project will be funded by Gas Tax Fund \$7.82 million, Fuel Tax \$480 thousand, Pay-As-You-Go \$600 thousand and Lifecycle Maintenance and Upgrade Reserve \$200 thousand.

Operating Impact of Capital: None.

Project 656-10W; Westbrook Building

Previously approved budget up to 2014 of \$10.472 million with funding from MSI of \$9.8 million and Pay-As-You-Go of \$672 thousand.

New Budget Request of \$25 million to provide a new operation centre in the Westbrook Transit Facility to allow Calgary Transit to monitor and manage the network safely, better serve customers and respond quickly to service disruptions. The existing control centre is located in a building that flooded in June 2013. Project will be funded by Fuel Tax \$25.0 million.

Operating Impact of Capital: This project requires \$345 thousand in operating costs including 1 FTE for 2016 to 2018, and \$690 thousand for 2019-2024.

Project 656-12W: Major Transit Maintenance Facilities Upgrades

New Budget Request of \$10 million to upgrade existing bus maintenance facilities. Indoor storage and maintenance facilities are critical to ensure buses are clean, safe, comfortable and reliable, and can achieve a long service life. Project will be funded by Gas Tax Fund \$10.0 million.

Operating Impact of Capital: None.

Project 656-307:LRT Stations and Auxiliary Buildings Upgrades

New Budget Request of \$5.375 million for rehabilitation and lifecycle replacement of LRT stations. Project will be funded by Fuel Tax \$3.9 million and Pay-As-You-Go \$1.475 million.

Operating Impact of Capital: None.

Program 657 : Fleet and Equipment

Project 657-01W: Bus Refurbishment

New Budget Request of \$14.8 million to provide for the mid-life refurbishment of buses to maintain transit service reliability and extend the life of the buses typically after 10 years of service. Includes major structural work, bodywork and replacement of mechanical and electrical systems. Project will be funded by Fuel Tax \$2.7 million and Gas Tax Fund \$12.1 million.

Operating Impact of Capital: None.

Project 657-02W: LRV Refurbishment

New Budget Request of \$29.86 million to provide for the mid-life refurbishment of the SD160 train cars. Refurbishment involves a painting and overhaul of the structure and major mechanical and electrical systems to achieve the 30 year service life target for these train cars. Project will be funded by Fuel Tax \$3.793 million, Gas Tax Fund \$25.66 million and Pay-As-You-Go \$407 thousand.

Operating Impact of Capital: None.

Project 657-03W: Fleet & Equipment

New Budget Request of \$2.8 million to purchase new and replacement vehicles and equipment to support Calgary Transit services in the field. This includes highly specialized vehicles to perform LRT track maintenance. Project will be funded by Pay-As-You-Go \$2.248 million and Revenue/Reserve \$552 thousand.

Operating Impact of Capital: None.

Program 665 : Buses/Community Shuttle Buses

Project 665-02W: Big Buses/Community Shuttle Buses

New Budget Request of \$51.99 million to provide the ongoing capital to replace and expand the fleet of 40-foot low floor buses, 60-foot articulated buses, and community shuttle buses. Project will be funded from Gas Tax Fund \$45.69 million and Community and Recreation levy \$6.3 million.

Operating Impact of Capital: None.

Program 668 : Fare Collection Services

Project 668-01W: Fare Collection Equipment

New Budget Request of \$3.1 million to provide for life-cycle rehabilitation of various technologies including the ticket vending machines, computer aided dispatch, automatic vehicle location, automated passenger information system. Project will be funded by Gas Tax Fund \$1.2 million and Pay-As-You-Go \$1.9 million.

Operating Impact of Capital: None.

TRAN: Calgary Transit - Capital Budget for Council Approval

For Council Approval

Calgary Transit							
Capital Budget (\$000s) for Approval (Totals may not match due to rounding)							
	2014	2015	2016	2017	2018	*2019+	Total (2015-*2019+)
Previously-Approved Budget (as at 2014 June 30)	242,679	160,021	56,000	2,000	0	0	218,021
Projects Requiring Approval							
<i>Program 563 : Primary Transit Network Optimization</i>		1,000	1,000	1,000	1,000	0	4,000
<i>Program 564 : CT Technology Upgrades</i>		1,950	2,275	2,275	2,275	0	8,775
<i>Program 655 : Outside Plant and Support Systems</i>		23,730	23,950	11,950	13,950	0	73,580
<i>Program 656 : Buildings and Stations</i>		15,200	22,425	5,925	5,925	0	49,475
<i>Program 657 : Fleet and Equipment</i>		9,900	11,650	13,243	12,667	0	47,460
<i>Program 665 : Buses/Community Shuttle Buses</i>		0	17,330	17,330	17,330	0	51,990
<i>Program 668 : Fare Collection Services</i>		550	850	850	850	0	3,100
Total Projects Requiring Approval		52,330	79,480	52,573	53,997	0	238,380
Total Capital Budget	242,679	212,351	135,480	54,573	53,997	0	456,401

*2019+ represents projects which start within the 2015-2018 cycle and are completed in years beyond 2018.

Roads

Tab8

Tab7

Tab6

Tab5

Tab4

Tab3

Roads
Tab2

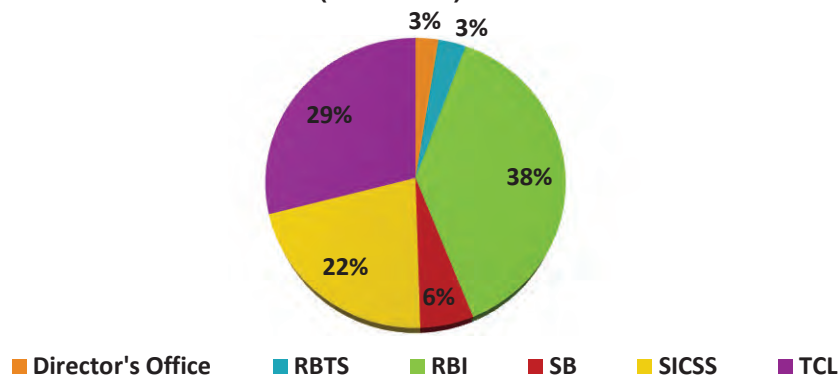
Tab1

TRAN: Roads - Overview

Roads maintains, rehabilitates, and reconstructs The City's roadways and bridges, manages traffic and parking infrastructure. Roadway maintenance and construction programs include pothole repair, street cleaning, snow and ice control, surface overlay paving and sidewalk repair. Roads provides a safe, effective and well-maintained road network for all travel modes, and has a commitment to excellence, innovation, sustainability and environmental sensitivity.

Roads maintains approximately 16,000 lane kilometres of pavement, 5,400 kilometres of sidewalks, 1,000 traffic signals, and approximately 92,000 streetlights. The business unit manages a fleet of sanders, plows, street sweepers, trucks and specialized equipment that ensure roadways are cleared for traffic including emergency vehicles. Roads also oversees a gravel mining and crushing operation to support winter maintenance, and an asphalt plant that supplies public and private needs on a year-round basis.

Roads
Gross Operating Expenditure by Line of Service
(2015-2018)



Values may not sum to 100%, due to rounding.

Roadway & Bridge Infrastructure (RBI)

Provides Calgarians with safe, well-maintained and high-quality roadways and bridges.

Sidewalks & Bikeways (SB)

Enables safe walking and cycling around Calgary in all weather conditions through safe, clean and well-maintained sidewalks, pathways and bikeways.

Snow & Ice Control & Street Sweeping (SICSS)

Keeps the streets safe and clean to move citizens around Calgary in all weather conditions.

Traffic Control & Lighting (TCL)

Efficiently operates and proactively improves how people move on roads in Calgary through effective traffic controls and safety enhancements.

Business & Technical Support (RBTS)

Enables and improves service delivery for all lines of service through customer service, innovation, training and technical support.

TRAN: Roads - Overview

Trends

Over the 2015-2018 business plan and budget cycle, Calgary's anticipated healthy economy will generate new residential development in newer outlying communities. This will result in increases to the size of the transportation network, more asset maintenance, and higher citizen service level expectations. Roads will implement efficiency and effectiveness measures where appropriate to mitigate these challenges.

Calgary has an increasing number of senior citizens and persons with mobility challenges. Addressing mobility and safety for all network users will require Roads to provide various types of services to promote accessibility. Examples include snow and ice control service for bicycle and sidewalk users, congestion reduction and safety improvement initiatives.

Roads has a large number of staff near retirement age and ongoing challenges will include succession planning and responding to evolving training needs.

Roads is committed to implementing new technologies that will help increase efficiencies and reduce initial capital investments and energy costs. Examples include energy efficient LED streetlight retrofits, assessments of vehicle efficiency and the expansion of online services.

Long-Term Plans

The Calgary Transportation Plan (CTP), along with the Municipal Development Plan (MDP) sets a 60-year strategy for the kind of city Calgarians have said they want in the future. Roads will align decision making with the modal split identified in the CTP and increase the relative support of pedestrian and cycling infrastructure projects, including planning and engineering of new bike lanes throughout the city as part of the Cycling Strategy.

The overall transportation goal contained in the CTP/MDP is to develop an integrated, multi-modal transportation system that supports land use, provides increased mobility choices for citizens, promotes vibrant, connected communities, protects the natural environment, and supports a prosperous and competitive economy. Roads' capital plans, prioritized on a 10-year basis, support developing new capacity while maintaining existing systems.

In keeping with Council's directive to become a more effective and disciplined organization, Roads will continue to survey citizens on an annual basis to ensure the business unit is focused on the right actions and that citizens are satisfied with the services Roads provides.

Citizen Engagement

Action Plan 2015-2018 engagement results indicated that transportation services are of great significance to citizens. How Calgarians get around is a top priority. Responsive snow and ice control as well as high-quality roads and sidewalks are important in shaping public perception of service quality.

Safety initiatives and travel time efficiency improve citizen perceptions of services and are closely linked to better utilization of the road network. Roads will continue to survey and engage citizens on a regular basis, through the Roads annual and snow and ice-control surveys, to ensure satisfaction with services and performance.

There is an expressed public interest for improved demonstration of spending efficiencies in municipal service delivery, particularly regarding better communications about efficiency and effectiveness. Moreover, public engagement exercises have demonstrated a strong preference to maintain and improve service levels for various services.

TRAN: Roads - Overview

Roads will develop and enhance collaborative and customer-focused strategies that make use of online tools, service request data and customer surveys to promote public accountability and shape how services are best delivered to citizens.

Council Priorities

Roads provides services that contribute to all Council Priorities. Each of these priority areas are interdependent and the organization will focus on executing the actions identified in the plan to realize the strategic vision set out by Council.

Getting around Calgary is frequently identified as a key priority; as a result, Roads has aligned its actions to ensure people and goods can move efficiently and safely throughout the city. Highlights of the strategic actions (subject to funding availability) include expansion of the snow and ice control program to serve persons with mobility challenges and high priority transit areas, upgrading the traffic management centre and developing a formalized incident management response plan to improve travel reliability, and investing in active transportation infrastructure such as sidewalks and bikeways to provide safe and sustainable transportation choices.

Roads contributes to the priority of a prosperous city by providing enhanced Roads services to communities and business revitalization zones and will develop a framework to help communities and businesses create or improve the use of public spaces. Roads also supports the development of communities by constructing missing links in sidewalks and bikeways, and will continue to work to develop a coordinated approach to deliver infrastructure repair services in neighbourhoods.

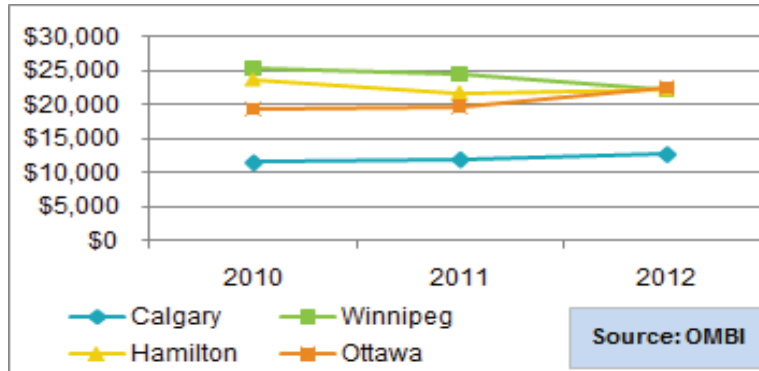
As a significant asset owner, maintenance activities impact the natural environment and the quality of life for all citizens in Calgary. Roads will support environmental initiatives by developing strategies to better divert construction waste from landfills, and implement energy reduction projects such as the Energy Efficient LED streetlight retrofit project.

Roads strives to be a more customer-focused organization by implementing initiatives such as the Customer Service Framework to integrate customer service commitments and standards into its programs and services. Implementing the Council-approved recommendations from the Zero-Based Review project will allow the business unit to be more effective and efficient, while continuing to deliver excellent services and provide value to citizens.

To continue as an employer of choice, Roads will develop a strategic workforce plan to address changing demographics and the aging workforce. Roads will also implement safety initiatives to promote a culture of health, safety and wellness.

TRAN: Roads - Benchmarking

Total Roads Cost per Lane Kilometre



This benchmark highlights the cost to operate and maintain Roads' assets taking into consideration the size of the road network.

Learning and Best Practices

Calgary has a rapidly growing road network to maintain and this measure is expected to steadily increase over the next four years. The benchmark will be used to identify trends related to the cost of operations, infrastructure, network growth and the impacts of new assets. Comparisons per lane kilometre provide a consistent unit of measure against other municipalities and present opportunities to identify best practices.

Improvement Initiatives & Action Plan 2015-2018

Specific improvement initiatives include implementing findings from the Roads' Zero-Based Review, safety improvements, new systems/technologies and customer-focused asset management plans. Highlighting the growing network size and long-term costs of maintenance will emphasize core efficiency areas for Roads to focus on.

TRAN: Roads - Actions for Council Approval

For Council Approval

Transportation Commitment:
Transportation facilitates the efficient movement of people and goods which contributes to creating a great place to live and work.

A prosperous city
Calgary continues to grow as a magnet for talent, a place where
there is opportunity for all, and the best place in Canada
to start and grow a business.

Strategy Related to Council Outcome	Business Unit Action Related to Strategy	Accountable Service
P1 Strengthen Calgary's position as a global energy centre and location of choice for international talent, investment and innovation through enhanced business development, marketing and place-making initiatives.	P1.1 Collaborate with other Transportation Business Units to implement infrastructure improvements to facilitate goods and people movement.	RBI, SB, TCL
P3 Support civic, business and community partners, as well as business revitalization zones, to collaborate and attract local and global investment.	P3.1 Develop a framework through the Streets as Places project to evaluate the use of street space requests and help communities and businesses create or improve public spaces.	TCL
	P3.2 Provide enhanced Roads services to prioritized business revitalization zones via various operations and lifecycle maintenance agreements.	RBI, RBTS, SB, SICSS, TCL
P10 Enhance access to technology and information.	P10.1 Provide citizens access to Roads information online such as travelers' information and road works locations and schedules.	RBI, RBTS, SB, SICSS, TCL



TRAN: Roads - Actions for Council Approval

For Council Approval

Transportation Commitment:
 Transportation ensures customers feel safe while using the transportation system. This includes supporting the development of complete communities by providing accessible and affordable transportation networks and services.

A city of inspiring neighbourhoods
 Every Calgarian lives in a safe, mixed and just neighbourhood,
 and has the opportunity to participate in civic life.

Strategy Related to Council Outcome	Business Unit Action Related to Strategy	Accountable Service
N1 Keep communities safe by meeting and maintaining standards for crime prevention, fire response, and enforcement.	N1.1 Implement traffic calming initiatives such as speed reduction and education programs to enhance public safety.	SB, TCL
N2 Build resiliency to flooding.	N2.1 Review the transportation network to implement (as funding is available) appropriate infrastructure improvements while moving towards a culture of long-term resilience planning.	RBI, RBTS, SB, SICSS, TCL
N3 Enhance The City's capacity and resiliency to prepare for and respond to pandemics, natural disasters and emergency situations.	N3.1 Enhance capacity to respond to emergency situations through business continuity planning, training and materials procurement.	RBI, RBTS, SB, SICSS, TCL



TRAN: Roads - Actions for Council Approval

For Council Approval

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Transportation Commitment:

Transportation ensures customers feel safe while using the transportation system. This includes supporting the development of complete communities by providing accessible and affordable transportation networks and services.

N5 Systematically invest in established neighbourhoods as they evolve to accommodate changing community needs.

N5.1 Develop a coordinated approach to deliver infrastructure repair services in neighbourhoods.

RBI, SB, TCL

N5.2 Develop a strategy for the upgrading of undeveloped roads in established areas to improve safety, accessibility and reduce environmental impacts.

RBI, TCL

N6 Manage and promote growth to achieve the best possible social, environmental and economic outcomes within financial capacities.

N6.1 Provide developers with lower energy consumption choices for new streetlight standards.

TCL

N8 Make it easier to build developments that meet our Municipal Development Plan and Calgary Transportation Plan objectives.

N8.1 Provide a single-source quality assurance of assets during and after construction to legislated standards to realize efficiencies.

RBI

N8.2 Coordinate approvals of third party roadway and subdivision designs to updated municipal standards.

RBI



TRAN: Roads - Actions for Council Approval

For Council Approval

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and has the opportunity to participate in civic life.

Transportation Commitment:
Transportation ensures customers feel safe while using the transportation system. This includes supporting the development of complete communities by providing accessible and affordable transportation networks and services.

N9 Provide great public spaces and public realm improvements across the city to foster opportunity for well used public spaces and places for citizen connections and urban vitality.

N9.1 Implement and update new street design guidelines that promote safe, universal and sustainable design for all street types.

RBI

N9.2 Provide missing links in sidewalks and bikeways and signing connectivity to encourage pedestrian and cycle commuting.

SB, TCL



For Council Approval

Transportation Commitment:
 Transportation provides safe, customer-focused, efficient, sustainable transportation infrastructure, choices and services in an accessible and affordable manner.

A city that moves
 People and goods can move well and safely throughout the city,
 using a variety of convenient, affordable, accessible and
 efficient transportation choices.

Strategy Related to Council Outcome	Business Unit Action Related to Strategy	Accountable Service
M1 Implement and accelerate RouteAhead as transit funding becomes available.	M1.1 Implement transportation system management and optimization projects including transit priority improvements.	RBI, TCL
	M1.2 Expand Snow and Ice Control for Light Rail Transit (LRT) and high-priority transit locations to the maximum extent possible with available funding.	SICSS
M2 Maximize the flow of traffic on the existing transportation network through the application of technology.	M2.1 Expand the Traffic Management Centre capabilities to improve the provision of traffic monitoring, incident management, traffic operation efficiency and traveler information.	TCL
	M2.2 Install and maintain Roads communications infrastructure to support the Traffic Management Centre in improving mobility.	RBI, SB, TCL
	M2.3 Investigate technologies that optimize existing/new systems to lower operating costs and maximize efficiency.	RBTS, TCL



For Council Approval

A city that moves
 People and goods can move well and safely throughout the city,
 using a variety of convenient, affordable, accessible and
 efficient transportation choices.

Transportation Commitment:

Transportation provides safe, customer-focused, efficient, sustainable transportation infrastructure, choices and services in an accessible and affordable manner.

M2 Maximize the flow of traffic on the existing transportation network through the application of technology.

M2.4 Develop contingency plans and strategic communication plans to support the annual operations plan for Snow and Ice Control (SNIC) and expand the SNIC program when funding is available.

RBTS, SICSS

M2.5 Develop a formalized incident management response plan to improve travel reliability.

TCL

M3 Invest in strategic road improvements in priority growth areas as funding becomes available.

M3.1 Design and construct capital projects outlined in the Investing in Mobility Plan to support growth management.

RBI, SB, SICSS, TCL

M3.2 Promote advancement of traffic safety initiatives with a focus on multi-modal safety and CPS safety cameras.

TCL

M3.3 Design and construct traffic control infrastructure which integrates the operations of the existing transportation network with the Southwest Ring Road.

RBI, SB, TCL

M3.4 Prepare and plan for the operation and maintenance transfer of the Deerfoot Trail from Alberta Transportation.

RBI, RBTS, SB, SICSS, TCL



TRAN: Roads - Actions for Council Approval

For Council Approval

A city that moves
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 using a variety of convenient, affordable, accessible and
 efficient transportation choices.

Transportation Commitment:
 Transportation provides safe, customer-focused, efficient, sustainable transportation infrastructure, choices and services in an accessible and affordable manner.

M3 Invest in strategic road improvements in priority growth areas as funding becomes available.

M3.5 Explore the enhancement and reconstruction of material storage facilities to better support snow removal and maintain compliance with The City's Salt Management Plan.

SICSS

M4 Invest in active transportation infrastructure, including cycling and pedestrian networks as funding becomes available.

M4.1 Design, construct and maintain sidewalks, bikeways and access roadways to promote use of active transportation modes.

RBI, SB, TCL

M4.2 Provide snow and ice control on sidewalks, walkways and bikeway priority routes, to the maximum extent possible with available funding, to encourage year-round use.

SB, SICSS



TRAN: Roads - Actions for Council Approval

For Council Approval

Transportation Commitment:
Transportation evaluates innovative ways to affordably reduce our environmental impact when delivering transportation projects and services.

A healthy and green city
We steward our air, land, and water while encouraging healthy lifestyles for all Calgarians.

Strategy Related to Council Outcome	Business Unit Action Related to Strategy	Accountable Service
H2 Encourage a broader range of innovative and clean energy technologies.	H2.1 Complete upgrades at Asphalt and Crusher Plants to meet environmental standards and realize cost savings.	RBI
	H2.2 Explore opportunities and business cases for energy reduction initiatives guided by the Transportation Energy Management Plan.	RBI, TCL
	H2.3 Design and build innovative, cost-effective and environmentally friendly pavement rehabilitation projects.	RBI
H3 Manage the interrelationships between flood protection, water quality and quantity, and land use.	H3.1 Achieve sustainability targets by developing waste diversion strategies to minimize construction waste.	RBTS



TRAN: Roads - Actions for Council Approval

For Council Approval

TRAN Commitment:
 Transportation provides affordable transportation options while maintaining (and expanding where funding is available) service levels. This includes providing timely, accurate information to key decision makers and citizens.

A well-run city
 Calgary's government is open, responsive, accountable and transparent, delivering excellent services at a fair price. We work with our government partners to ensure we have the tools we need.

Strategy Related to Council Outcome	Business Unit Action Related to Strategy	Accountable Service
W2 Be as efficient and effective as possible, reducing costs and focusing on value-for-money.	W2.1 Leverage mobile technologies to enhance employee training and field work activities.	RBTS
	W2.2 Participate in Tomorrow's Workplace implementation projects in order to optimize administrative spaces.	RBTS
	W2.3 Implement Council-approved recommendations from the Zero-Based Review project related to efficiency and effectiveness.	RBI, RBTS, TCL
	W2.4 Optimize equipment and materials usage by reviewing service agreements and long-term costs.	RBTS
W3 Examine opportunities for alternative service delivery for competitiveness.	W3.1 Explore opportunities for alternative service delivery where appropriate resulting from the Zero-Based Review project findings.	RBI, RBTS, TCL



TRAN: Roads - Actions for Council Approval

For Council Approval

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W4 Balance demand for quality City services with affordable taxes.

W4.1 Recover full costs related to excavation permits including surface restoration and degradation fees to protect and maintain road infrastructure.

RBI, RBTS

W4.2 Produce materials (gravel and asphalt) as required for City construction and maintenance activities to support self-funded operations and facilitate year-round quality road repairs.

RBI

W5 Regularly collaborate and engage citizens to encourage participation in City decision-making, and better communicate the reasons for the decisions.

W5.1 Engage members of the public to communicate the value for money of Roads' services.

RBI, RBTS, SB, SICSS, TCL

W6 Effectively manage The City's inventory of public assets, optimizing limited resources to balance growth and maintenance requirements.

W6.1 Operate, maintain and repair road infrastructure to align infrastructure and associated funding needs to service level expectations.

RBI, RBTS, SB, TCL



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 Transportation provides affordable transportation options while maintaining (and expanding where funding is available) service levels. This includes providing timely, accurate information to key decision makers and citizens.

W6 Effectively manage The City's inventory of public assets, optimizing limited resources to balance growth and maintenance requirements.

W6.2 Apply and refine Asset Management plans including Tangible Capital Asset improvement initiatives.

RBI, RBTS, SB, SICSS, TCL

W7 Continue to transform the organization to be more citizen-focused in its approach and delivery of service.

W7.1 Lead and implement departmental initiatives to integrate customer service commitments and standards into Transportation programs and services.

RBI, RBTS, SB, SICSS, TCL

W8 Increase collaboration across the organization, including alignment of budgets with service delivery to achieve City priorities.

W8.1 Promote and foster business relationships throughout the corporation that improve services and deliver value to customers.

RBI, RBTS, SB, SICSS, TCL

W9 Strive to be an employer of choice with a focus on addressing The City's aging workforce.

W9.1 Develop a strategic workforce plan to address changing demographics and retirements.

RBI, RBTS, SB, SICSS, TCL



TRAN: Roads - Actions for Council Approval

For Council Approval

TRAN Commitment:

Transportation provides affordable transportation options while maintaining (and expanding where funding is available) service levels. This includes providing timely, accurate information to key decision makers and citizens.

W9 Strive to be an employer of choice with a focus on addressing The City's aging workforce.

W9.2 Align safety initiatives to departmental health, safety and wellness culture practices by improving safety reporting and trends analysis to promote shared understanding and responsibility.

RBI, RBTS, SB, SICSS, TCL

A well-run city
Calgary's government is open, responsive, accountable and transparent, delivering excellent services at a fair price. We work with our government partners to ensure we have the tools we need.

A prosperous city

A city of inspiring neighbourhoods

A city that moves

A healthy and green city

A well-run city

TRAN: Roads - Lines of Service

Breakdown of Operating Budget by Service (\$000) (Totals may not add due to rounding)															
	2014			2015			2016			2017			2018		
	\$ Exp	\$ Net	FTEs	\$ Exp	\$ Net	FTEs	\$ Exp	\$ Net	FTEs	\$ Exp	\$ Net	FTEs	\$ Exp	\$ Net	FTEs
Director's Office	5,012	2,739	7.0	5,146	2,873	7.0	5,297	3,024	7.0	5,454	3,181	7.0	5,616	3,343	7.0
Business & Technical Support	6,154	5,727	40.0	6,100	5,980	40.0	6,393	6,273	40.0	6,699	6,579	40.0	6,908	6,788	40.0
Roadway & Bridge Infrastructure	76,977	44,706	295.0	77,849	43,113	297.0	80,324	45,088	299.0	82,954	47,219	301.0	84,495	47,760	303.0
Sidewalks & Bikeways	10,828	10,098	62.0	11,300	10,570	63.0	11,659	10,929	64.0	12,056	11,326	65.0	12,250	11,520	66.0
Snow & Ice Control & Street Sweeping	41,662	41,447	275.8	43,180	42,965	277.8	44,879	44,664	279.8	46,726	46,511	281.8	47,881	47,666	283.8
Traffic Control & Lighting	58,359	38,749	232.0	60,893	40,884	236.0	61,637	41,378	240.0	62,548	42,039	244.0	61,203	40,444	248.0
Total Business Unit	198,991	143,465	911.8	204,468	146,385	920.8	210,189	151,356	929.8	216,436	156,853	938.8	218,352	157,519	947.8

Growth in transportation network size, input costs and service level expectations will result in increased costs of services for Roads. Without corresponding increases to operational budgets, Roads will face challenges to effectively and consistently deliver services while absorbing the cost of growth and inflation. To mitigate these challenges, Roads will implement efficiency and effectiveness measures where appropriate to optimize services and cost savings. By 2018, the anticipated cost of growth will require the implementation of additional cost-saving initiatives such as the Energy Efficient LED Streetlight Retrofit project.

Severe weather events in 2013 and 2014 had significant impacts to operational budgets, and planning to respond to variable weather patterns will be a priority over the 2015-2018 business cycle. Roads will continue to balance capital investments in new assets and allocate operational budgets to maintain existing assets.

Roads has reclassified its lines of service to better reflect the services provided to the public. This will allow the business unit to focus on core competencies by providing efficient and cost-effective services to citizens.

Over the next four years, Roads will undertake a project to reconcile its FTE base (911.8 in 2014) across the workforce (1,136 individuals in 2014) to better reflect the number of staff required to provide services. The difference in these two numbers (of about 224 individuals) is the staff that help provide Roads' services to customers and are already funded through internal recovery and revenue, and are not growth related. As a result, no additional funding will be requested through this reconciliation, and no service impacts will be introduced. Completing the reconciliation will ensure a more accurate representation of the workforce and strengthen the workforce by enabling the recognition of staff that do not have an assigned FTE.

TRAN: Roads - Lines of Service

All \$ values are in Thousands (\$000)

Roadway & Bridge Infrastructure	2014			2015			2016			2017			2018		
	\$ Exp	\$ Net	FTEs	\$ Exp	\$ Net	FTEs	\$ Exp	\$ Net	FTEs	\$ Exp	\$ Net	FTEs	\$ Exp	\$ Net	FTEs
	76,977	44,706	295.0	77,849	43,113	297.0	80,324	45,088	299.0	82,954	47,219	301.0	84,495	47,760	303.0

The development, construction and maintenance of Roads' assets are essential to the quality and efficiency of the transportation network. Escalating costs of materials, aging infrastructure and increased development activity will pose challenges during the 2015-2018 business cycle to respond to service requests and provide high-quality services. Strong population growth and a city-wide focus on disaster resiliency will place higher demands on existing infrastructure.

Planned work is prioritized by severity to reduce safety hazards; however, continued long-term funding deficiencies will result in reductions to infrastructure quality and the compounding repair costs for

all assets. Within the current budget, repairs to potholes cannot be addressed until spring clean-up has been completed and the gravel lane program is not completed until the end of September. Delayed start times of these programs generates significant public dissatisfaction.

Growing infrastructure needs and citizen expectations will require additional resources and appropriate strategies for public engagement. Service levels can be expected to remain consistent as productivity gains are realized in areas such as the asphalt and crusher plants, and sufficient operating budget is allocated for roadway and bridge infrastructure repair services.

Sidewalks & Bikeways	2014			2015			2016			2017			2018		
	\$ Exp	\$ Net	FTEs	\$ Exp	\$ Net	FTEs	\$ Exp	\$ Net	FTEs	\$ Exp	\$ Net	FTEs	\$ Exp	\$ Net	FTEs
	10,828	10,098	62.0	11,300	10,570	63.0	11,659	10,929	64.0	12,056	11,326	65.0	12,250	11,520	66.0

Providing safe sidewalks and bikeways is closely aligned with Council's objective of expanding the accessibility of the transportation network. Roads will support this goal by designing, constructing and maintaining sidewalks and bikeway infrastructure. Improvements to services will be provided based on available funding and prioritized by location.

Enabling this infrastructure will encourage pedestrian and cycle commuting which aligns to several Council Priorities. Converting existing infrastructure to accommodate both vehicular and active modes of

transportation demands will impact congestion, travel times and mode split of travel. The expansion of the cycling network and operational requirements of the Cycling and Pedestrian Strategy will require additional resources for maintenance and design, but are not currently budgeted.

Current funding levels do not support service enhancements but service quality will remain consistent over the course of the business cycle. Additional staff and funding will be dedicated to snow and ice control and concrete repairs as needed.

All \$ values are in Thousands (\$000)

Traffic Control & Lighting	2014			2015			2016			2017			2018		
	\$ Exp	\$ Net	FTEs	\$ Exp	\$ Net	FTEs	\$ Exp	\$ Net	FTEs	\$ Exp	\$ Net	FTEs	\$ Exp	\$ Net	FTEs
	58,359	38,749	232.0	60,893	40,884	236.0	61,637	41,378	240.0	62,548	42,039	244.0	61,203	40,444	248.0

Traffic services will meet the needs of traveler in Calgary through effective traffic control and streetlighting services and safety initiatives.

With the commissioning of the Airport Tunnel in May 2014, and enhancements to the Traffic Management Centre, Roads will experience an increase in the costs to operate this infrastructure due to additional technical staff required to monitor the associated systems.

Due to rapid development and the associated increase in traffic assets without comparable operating fund growth, the ability to effectively maintain these assets is limited. Given that proposed budgets do not include increases for road markings, service levels will remain unchanged and likely decrease over time.

To improve the flow of traffic, Roads will continue to undertake initiatives to improve travel time reliability and implement projects under the Smarter Mobility Plan, leveraging technologies to provide enhanced travel-related communications to the public, including the expansion of the Traffic Management Centre.

The implementation of the Energy Efficient LED Streetlight Retrofit project (subject to available capital funding) will contribute to significant cost savings and energy efficiency over the next 10 years, directly supporting the Council priority of building a healthy and green city. The ability to reallocate these savings to address growth in future years will be important to ensure current service levels are maintained.

Snow & Ice Control & Street Sweeping	2014			2015			2016			2017			2018		
	\$ Exp	\$ Net	FTEs	\$ Exp	\$ Net	FTEs	\$ Exp	\$ Net	FTEs	\$ Exp	\$ Net	FTEs	\$ Exp	\$ Net	FTEs
	41,662	41,447	275.8	43,180	42,965	277.8	44,879	44,664	279.8	46,726	46,511	281.8	47,881	47,666	283.8

Roads is committed to providing a well-maintained network for all travel modes and is responsible for Snow and Ice Control (SNIC) and Street Sweeping services. Ensuring that citizens can move safely and reliably throughout the city, especially throughout winter, are important outcomes for the organization. Citizen engagement and feedback have indicated that high-quality SNIC services are integral to public satisfaction.

Proposed policy changes to the SNIC program are dependent on Council approval. Future areas of focus are services for persons with mobility challenges, pedestrian crossings, and engineered walkways. The

operating budget will directly impact Roads' ability to augment City forces during extreme weather conditions. If approved, additional funding and staff resources will be deployed to enhance service levels for SNIC such as establishing contingency reserves for responding to severe weather events and upgrading material storage facilities for SNIC operations.

Achieving the annual street sweeping operations plan depends on available budgets. Current funding levels may delay some services that are dependent on clear roadways, such as pothole repairs.

All \$ values are in Thousands (\$000)

Business & Technical Support	2014			2015			2016			2017			2018		
	\$ Exp	\$ Net	FTEs	\$ Exp	\$ Net	FTEs	\$ Exp	\$ Net	FTEs	\$ Exp	\$ Net	FTEs	\$ Exp	\$ Net	FTEs
	6,154	5,727	40.0	6,100	5,980	40.0	6,393	6,273	40.0	6,699	6,579	40.0	6,908	6,788	40.0

Customer service is a fundamental priority and Roads will address this objective through effectively coordinating service requests, providing online tools and streamlining permitting processes where possible. The business unit's ability to respond to increased customer demand for all types of online services is likely to be impeded by budget constraints, creating impacts on development and information technology work. Expanding the use of Roads ePermits, the online permitting system, to handle these requests will mitigate these challenges and continue to decrease the administrative costs of processing permits.

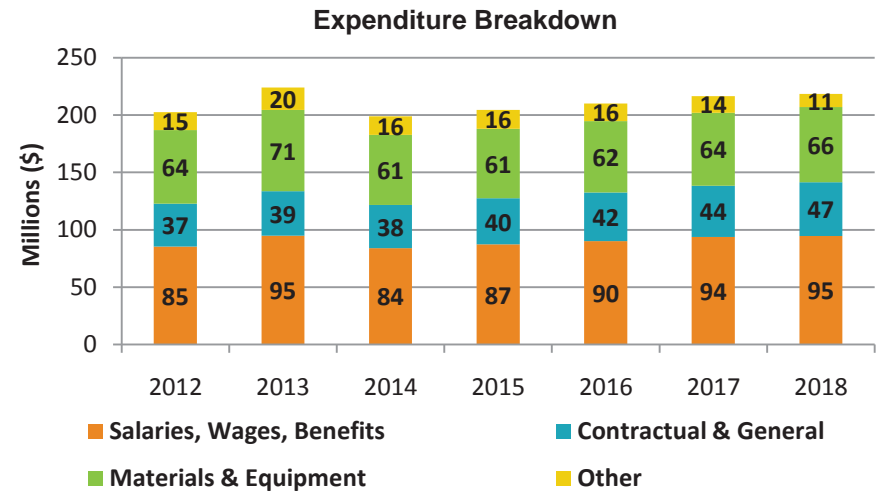
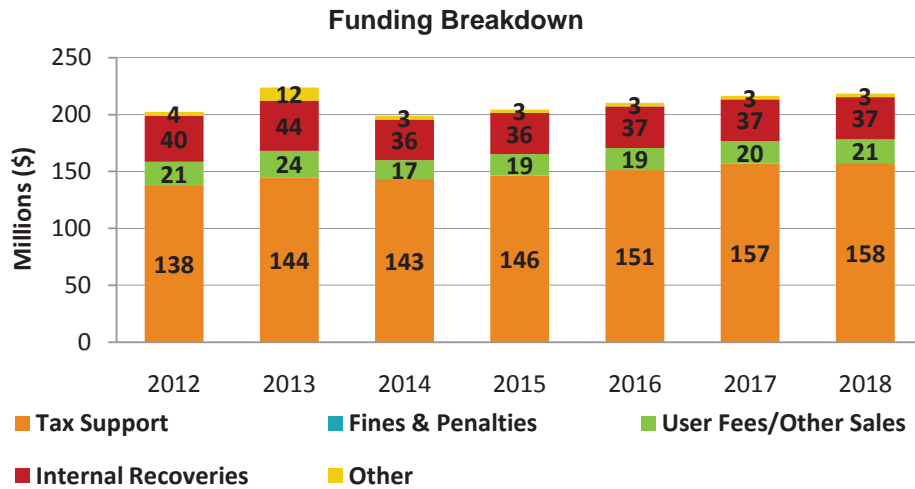
Limited increases to operating budgets will impact Roads' ability to maintain worker competence and ensure operator training requirements

are met. With a changing workforce and associated loss of experience, an increasing demand for training is expected. This will be addressed by ensuring succession planning, career development and appropriate training tools are provided to employees.

Leveraging technology for training, mobile work stations, and communications will reduce real estate costs and help Roads reach the target of a 10 per cent decrease in assigned workstations, as part of the Tomorrow's Workplace program. Initiation of plans to optimize equipment and material usage across the organization will drive efficiencies and enhance capacity to sustain service levels.

TRAN: Roads - Breakdown of the Operating Budget

Totals may not match due to rounding



Funding Breakdown - Approximately two-thirds of the Roads' operating budget is tax-supported. Sales of construction materials, such as asphalt and aggregate, and Roads services provided to internal/external customers provide the remainder of the funding.

Expenditures - Under half of Roads' expenditures are dedicated to staff salary, wages and benefits. Other major expenditures include materials and equipment, and contracts to support the delivery of Roads services.

User Fees / Charges / Utility Rates - There are no proposed changes to 2015-2018 user fees. A comprehensive review of the Streets Bylaw is underway to investigate authorizations and fee structures for traditional and emerging uses of the roadways. Recommended changes to current fee structures will be brought forward in 2015.

TRAN: Roads - Breakdown of the Net Operating Budget

Totals may not add due to rounding

Breakdown of Net Operating Budget Changes (\$000s)	2015	2016	2017	2018
Previous Year's Budget	143,465	146,385	151,356	156,853
Less: Previous Year One Time	0	(545)	0	0
Base	143,465	145,840	151,356	156,853
Efficiency Gains	(2,914)	(1,524)	(2,008)	(4,213)
Inflation	4,480	4,570	4,960	2,259
Service and Budget Increase	2,024	2,085	2,148	2,212
Operating Impact of Previously Approved Capital	175	0	0	0
Operating Impact of New Capital (Incremental)	375	386	397	408
Re-alignments	(1,766)	0	0	0
One Time	545	0	0	0
Total Budget Change	2,920	5,517	5,497	666
Total Budget	146,385	151,356	156,853	157,519

Demand for services is expected to grow due to population growth and the transfer of capital assets to Roads. Every year, Roads assumes new assets from developers and major transportation capital projects which contributes to the increase in annual operating costs by approximately \$2 million. Corresponding funding increases will not be provided resulting in a budgetary gap in each year from 2015 to 2018. This shortfall will be further amplified due to higher than forecasted inflationary increases.

Roads will absorb growth costs and implement several efficiency improvement initiatives to address budgetary gaps. These initiatives include implementing a plan to achieve full cost-recovery of Roads' sales

of goods and services, increasing revenue from the asphalt and crusher plants and a portion of savings from the Energy Efficient LED Streetlight Retrofit project (subject to available capital funding). Additional cost reductions will be realized by leasing street sweepers instead of owning them and executing the efficiency and effectiveness actions as recommended by the Zero-Based Review project.

A one time operating budget request of \$545 thousand to the 2015 Roads operating budget was approved by Council to convert existing school zone signs to playground zone signs in 2015.

TCA Depreciation (\$000s) - Roads			
2015	2016	2017	2018
123,748	128,938	134,971	141,808

TCA Depreciation content is presented for information only.

TRAN: Roads - Operating Budget for Council Approval

For Council Approval

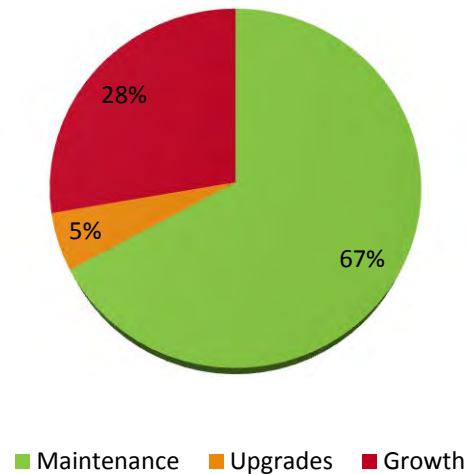
Roads															
Total Operating Budget (\$000s) for Approval (Totals may not match due to rounding)															
	2012 Actual	2013 Actual	2014 Total Budget (as of June 30)	2015 Budget			2016 Budget			2017 Budget			2018 Budget		
				Base	One- Time	Total	Base	One- Time	Total	Base	One- Time	Total	Base	One- Time	Total
Expenditures	202,503	223,921	198,991	203,923	545	204,468	210,189	0	210,189	216,436	0	216,436	218,352	0	218,352
Recoveries	(40,400)	(44,218)	(35,729)	(36,329)	0	(36,329)	(36,604)	0	(36,604)	(36,879)	0	(36,879)	(37,154)	0	(37,154)
Revenue	(24,229)	(35,226)	(19,797)	(21,754)	0	(21,754)	(22,229)	0	(22,229)	(22,704)	0	(22,704)	(23,679)	0	(23,679)
Net	137,875	144,477	143,465	145,840	545	146,385	151,356	0	151,356	156,853	0	156,853	157,519	0	157,519
FTEs	930.8	914.8	911.8	920.8	0.0	920.8	929.8	0.0	929.8	938.8	0.0	938.8	947.8	0.0	947.8

TRAN: Roads - Capital Budget Overview

Roads						
Capital Budget (\$000s) Overview (Totals may not match due to rounding)						
	2015	2016	2017	2018	*2019+	Total
Previously-Approved Budget (as at 2014 June 30)	39,480	4,000	4,000	0	0	47,480
Total New Capital Budget Requests	71,510	55,625	55,725	55,965	840	239,665
Total Business Unit Capital Budget	110,990	59,625	59,725	55,965	840	287,145

*2019+ represents projects which start within the 2015-2018 cycle and which are completed in years beyond 2018.

Roads
New Capital Budget Requests by Project Type
(2015-*2019+)
Total \$240 Million



Maintenance/Replacement - 67 per cent of the Roads' capital budget will be spent on maintenance programs that will help renew and extend the life of assets, thus deferring major costs associated with reconstruction of roadway and bridge infrastructure. The Pavement Rehabilitation Program ensures that the public is provided with safe and comfortable driving conditions by maintaining the current overall roadway condition rating. Investment in the Bridge Rehabilitation program ensures public safety through regular maintenance, inspection and rehabilitation.

Upgrades - Five per cent of the Roads' capital budget will be spent on initiatives such as designing and constructing various improvements to roadways, sidewalks, and bicycle and pedestrian paths across Calgary. Investment towards upgrades to roadways, bridges and facilities allows Roads to provide the public with improved infrastructure and decreases long-term maintenance costs. The Plants Capital program provides equipment upgrades to the asphalt and crusher plants, reducing environmental impacts and enabling more efficient plants operation which allows for year-round quality road repairs.

Growth - 28 per cent of the Roads' capital budget will be spent on new programs to improve mobility and accessibility to address the growth of the city, changing demographics and travel preferences. The Safety Improvements program focuses on safety related improvements for drivers, cyclists and pedestrians. The City Wide Active Mode program designs, builds and enhances sidewalk and bikeway infrastructure. Enhanced traffic management services will be provided through the Next Generation Traffic Management Centre project.

TRAN: Roads - Capital Budget Overview

Funding for Capital Projects (Totals may not match due to rounding)	2015	2016	2017	2018	*2019+	Total 2015-*2019+
Federal Gas Tax Fund (GTF)	3,850	3,850	2,000	2,000	0	11,700
Fuel Tax - Revenue Sharing	29,790	22,070	22,085	22,715	770	97,430
Private Contributions/Developers Loans	8,550	8,550	8,550	8,550	0	34,200
Capital Reserves	1,850	1,850	1,850	1,850	0	7,400
Contribution from Calgary Parking Authority	1,750	1,750	1,750	1,750	0	7,000
Transportation Acreage Assessment	6,750	6,750	6,750	6,750	0	27,000
Pay-As-You-Go	6,435	6,805	12,740	12,350	70	38,400
Lifecycle Maintenance & Upgrade Reserve	4,000	4,000	0	0	0	8,000
2013 Flood	8,535	0	0	0	0	8,535
Total Funding	71,510	55,625	55,725	55,965	840	239,665
<hr/>						
Total Operating Impacts of Capital (Cumulative)						
2015-2018 Operating Budget	375	761	1,158	1,566	N/A	
2019 and beyond up to 2024 Operating Plan	N/A	N/A	N/A	N/A	9,396	

*2019+ represents projects which start within the 2015-2018 cycle and are completed in years beyond 2018.

Flood Projects in yellow

Capital Budget Listing (by Program - Project) (\$000s)

Program-Project	Project Description	Type	Cat	Prev. Approved Budget up to 2014	Prev. Approved Budget for future years	New Budget Request	2015	2016	2017	2018	*2019+	2015-*2019+	Growth Area
126-103	City Wide Active Modes Program	G	C			11,700	3,850	3,850	2,000	2,000	-	11,700	
Total Program 126 : Pedestrian & Cycle Mobility				-	-	11,700	3,850	3,850	2,000	2,000	-	11,700	
<hr/>													
127-130	New Traffic Signals and Pedestrian Corridors	G	C			8,300	1,950	1,950	1,950	2,450	-	8,300	
127-140	Various Street Improvements	U	C			11,500	2,500	3,000	3,000	3,000	-	11,500	
127-141	Safety Improvements	G	C			4,000	1,000	1,000	1,000	1,000	-	4,000	

Program- Project	Project Description	Type	Cat	Prev. Approved Budget up to 2014	Prev. Approved Budget for future years	New Budget Request	2015	2016	2017	2018	*2019+	2015- *2019+	Growth Area
127-186	Intelligent Transportation System	G	C			3,000	500	500	1,000	1,000	-	3,000	
127-190	Next Generation Traffic Management Centre	G	C			8,400	7,100	100	800	400		8,400	
Total Program 127 : Goods Movement & Strategic Mobility				-	-	35,200	13,050	6,550	7,750	7,850	-	35,200	
Operating impact of capital of Program 127													
	2015-2018 Operating Budget		O1				50	101	154	208	N/A	513	
	2019 and beyond Operating Plan		O2				N/A	N/A	N/A	N/A	1,248	1,248	
128-100	Streetlight - Upgrade & Maintenance	M	C			52,200	12,800	12,800	13,300	13,300	-	52,200	
128-130	Traffic Signals/Ped Corridors Lifecycle	M	C			13,350	3,000	3,350	3,500	3,500	-	13,350	City-wide
128-131	Traffic Signals-LED Relamp	M	C			2,400	600	600	600	600	-	2,400	
128-132	Pavement Rehabilitation	M	C			40,000	10,000	10,000	10,000	10,000	-	40,000	
128-135	Roads Equipments & Systems	G	C			3,300	825	825	825	825	-	3,300	City-wide
128-136	Plants Capital	U	C			1,000	250	250	250	250	-	1,000	
128-166	Roads District Yards & Depot	G	C			3,500	2,000	500	500	500	-	3,500	
128-170	Activity Centre & Corridor Maintenance	M	C			2,200	500	500	600	600	-	2,200	
128-885	Bridge Rehabilitation and Protection	M	C			40,000	10,000	10,000	10,000	10,000	-	40,000	
Total Program 128 : Lifecycle & Asset Management				-	-	157,950	39,975	38,825	39,575	39,575	-	157,950	
Operating impact of capital of Program 128													
	2015-2018 Operating Budget		O1				325	660	1,004	1,358	N/A	3,347	
	2019 and beyond Operating Plan		O2				N/A	N/A	N/A	N/A	8,148	8,148	

Program- Project	Project Description	Type	Cat	Prev. Approved Budget up to 2014	Prev. Approved Budget for future years	New Budget Request	2015	2016	2017	2018	*2019+	2015- *2019+	Growth Area
129-143	Subdivision Construction	G	C			5,200	1,300	1,300	1,300	1,300	-	5,200	City-wide
129-145	Slope Stabilization	M	C			2,000	500	500	500	500	-	2,000	
129-204	Development of Access Roads	G	C			16,000	4,000	4,000	4,000	4,000	-	16,000	City-wide
Total Program 129 : Development & Environmental Supportive				-	-	23,200	5,800	5,800	5,800	5,800	-	23,200	

133-001	Railway Crossing Upgrades	G	C			3,080	300	600	600	740	840	3,080	City-wide
Total Program 133 : Railway Crossing Upgrades				-	-	3,080	300	600	600	740	840	3,080	

948-001	Pavement and Sidewalk Reconstruction	M	A	1,000	6,000	8,535	8,535	-	-	-	-	8,535	
Total Program 948 : 2013 Flood Related Projects				1,000	6,000	8,535	8,535	-	-	-	-	8,535	

				1,000	6,000	239,665	71,510	55,625	55,725	55,965	840	239,665	

Note:

Type: M=Maintenance/Replacement, U=Upgrade, G=Growth, S=Service Change

Category: A=Project in Progress, C=New Project, O1=2015-2018 Operating Cost, O2=2019 and beyond Operating Cost

Budgets and/or operating impact of capital beyond 2019 are included in 2019 and are detailed in the Explanation section

Explanation of Budget Requests

Program 126 : Pedestrian & Cycle Mobility

Project 126-103: City Wide Active Modes Program

New Budget Request of \$11.7 million to provide for the city wide active modes program. This program focuses on developing infrastructure that improves connectivity around areas that provide the potential for comprehensive, higher-intensity development that can be integrated with the Primary Transit Network. Examples include the implementation of complete street standards such as wide curve lanes and greenways that improves cycle and pedestrian pathway connectivity around existing activity centres and corridors. Project will be funded \$11.7 million by federal Gas Tax Fund (GTF).

Operating Impact of Capital: None.

Program 127 : Goods Movement & Strategic Mobility

Project 127-130: New Traffic Signals and Pedestrian Corridors

New Budget Request of \$8.3 million to provide for construction of new traffic signals and pedestrian corridors. New traffic signals and pedestrian corridors that meet the warrant based on traffic volumes and physical characteristics are installed to address capacity and safety concerns at critical intersections. Funding for new Pan-Tilt-Zoom (PTZ) cameras that provide real time information for traffic management is also included in this budget. Project will be funded \$2.5 million by Fuel Tax and \$5.8 million Transportation Acreage Assessment.

Operating Impact of Capital: This project requires \$0.513 million in operating costs for 2015 to 2018.

Project 127-140: Various Street Improvements

New Budget Request of \$11.5 million to provide for the design and construction of various smaller-scale improvements on roadways, sidewalks, bicycle and pedestrian paths, and transit infrastructure across Calgary. These same requirements may also come from other Business Units that do not have the implementation resources to accommodate their construction needs. Project will be funded \$8.0 million by Fuel Tax and \$3.5 million Pay-As-You-Go.

Operating Impact of Capital: None.

Project 127-141: Safety Improvements

New Budget Request of \$4 million to provide for safety improvements to eliminate or diminish road or pathway hazards and address high collision locations. The program provides for the design and construction of various small to medium safety improvements in all areas of the city. Examples of projects: median barriers, curb extensions, pedestrian barriers (along school frontages), over height detection and warning systems, road condition warning systems, ramp metering, speed awareness signs and safe route to schools. Project will be 100 per cent funded by Pay-As-You-Go.

Operating Impact of Capital: None.

Project 127-186: Intelligent Transportation system

New Budget Request of \$3 million to provide for the implementation of Intelligent Transportation System (ITS) Strategic Plan. This project will utilize elements such as Advanced Traffic Management Systems (ATMS), Advanced Traveler Information Systems (ATIS), Road Weather Information Systems (RWIS) and others (CCTV, MIST) to improve mobility and enhance safety of the City's road network. Project will be 100 per cent funded by Pay-As-You-Go.

Operating Impact of Capital: None.

Project 127-190: Next Generation Traffic Management Centre

New Budget Request of \$8.4 million for the next generation Traffic Management Centre. The current Traffic Management Centre is reaching capacity due to older technology and limited space. The Next Generation Traffic Management Centre would upgrade monitoring and detection systems, centralize operations (link Traffic with Calgary Transit and Emergency Operations Centre) and support the delivery of customer-focused services through more responsive operations. Project will be funded \$6.5 million by Fuel Tax and \$1.9 million Pay-As-You-Go.

Operating Impact of Capital: None.

Program 128 : Lifecycle & Asset Management

Project 128-100: Streetlight - Upgrade & Maintenance

New Budget Request of \$52.2 million to provide for the upgrade and preventative maintenance of the existing streetlight system including painting poles, cleaning fixtures and bases, replacing aging, unsafe, or critical system components to meet safety requirements. The program also includes group bulb replacement which replaces approximately 10,000 bulbs annually prior to burning out. This program is also used to replace street light bulbs with LED lights or other technologies but does not include development of the streetlight infrastructure in new developed areas. Project will be funded by \$23 million interal or external loan, \$5 million CPA Surplus, \$4 million LED reserve, \$3.2 million private contributions, \$8.0 million Lifecycle Maintenance and Upgrade Reserve and \$9.0 million Pay-As-You-Go.

Operating Impact of Capital: This project requires \$1.03 million in operating costs for 2015 to 2018.

Project 128-130: Traffic Signals/Ped Corridors Lifecycle

New Budget Request of \$13.35 million to provide for lifecycle improvements and upgrades to existing signalized intersections to improve operation, safety, accessibility and efficiency for motorists, pedestrians, cyclists, and Calgary Transit. Improvements may include the repair, replacement and upgrading of aging steel mast arms, deteriorated concrete bases, cabinets, controllers, signal heads, electrical devices, underground ducting and large information sign structures, and installing wireless communications. Project will be 100 per cent funded by Pay-As-You-Go along with private contributions for projects triggered by commercial developments.

Operating Impact of Capital: This project requires \$1.287 million in operating costs for 2015 to 2018.

Project 128-131: Traffic Signals-LED Relamp

New Budget Request of \$2.4 million to provide for the replacement of incandescent bulbs in all traffic signals with power saving and more durable LED bulbs. Specific benefits of the program include alignment with strategic policies, targets and goals, reductions in electricity consumption and preventative maintenance costs, and improvements in lighting quality. Project will be 100 per cent funded by LED Traffic Signal Display Re-Lamping Reserve.

Operating Impact of Capital: None.

Project 128-132 Pavement Rehabilitation

New Budget Request of \$40 million to provide for lifecycle maintenance of road infrastructure. Major rehabilitation of roadways improves safety and ride quality for all vehicles and cyclists, and prolongs the lifespan of existing roadways before major road reconstruction is required. Well maintained roads improve customer satisfaction and provide reduced overall life cycle costs by minimizing costly rehabilitation treatments. Project will be funded \$38.0 million by Fuel Tax and \$2.0 million Pay-As-You-Go.

Operating Impact of Capital: None.

Project 128-135: Roads Equipments & Systems

New Budget Request of \$3.3 million to provide for small equipment requirements, operational safety requirements and funds technology upgrades and installations for both hardware and software. Program initiatives include Roads' weather information systems stations, automatic vehicle location sensors, EpoSat GPS-controlled spreading, and the grader training simulator. Project will be 100 per cent funded by Pay-As-You-Go.

Operating Impact of Capital: This project requires \$1.03 million in operating costs for 2015 to 2018.

Project 128-136: Plants Capital

New Budget Request of \$1 million to provide for new equipment required to comply with industry standards and meet service levels for Plants operations. The Plants operation is self sustaining and creates revenue from the sale of gravel and asphalt to City departments as well as for external customers on a year-round basis. Project will be funded by the Asphalt and Crusher Plant Lifecycle Capital Reserve.

Operating Impact of Capital: None.

Project 128-166: Roads District Yards & Depot

New Budget Request of \$3.5 million to ensure that Roads Maintenance depots structures and physical infrastructure meet Environmental and Safety Management (ESM) guidelines. This program enables Roads to build, improve and maintain facilities that are crucial to its service delivery. Facilities include permanent and temporary buildings, material storage and handling buildings, fencing and yard safety. Depot sites are the base of operations for pavement repairs, site upgrades, geotechnical investigations and structural assessments. Project will be funded \$1.5 million by Fuel Tax and \$2.0 million Pay-As-You-Go.

Operating Impact of Capital: None.

Project 128-170: Activity Centre & Corridor Maintenance

New Budget Request of \$2.2 million to maintain activity centres, corridors and high-density, mixed-use locations such as the Beltline or Kensington areas. Because they are high-usage and high-profile locations, local infrastructure requires more frequent maintenance. This program re-invests some funds collected by the Calgary Parking Authority (CPA) to enhance lifecycle maintenance in Centre City and Business Revitalization Zones that have CPA-managed paid parking. Project will be funded \$2.0 million by contribution from Calgary Parking Authority (CPA) and \$0.2 million Pay-As-You-Go.

Operating Impact of Capital: None.

Project 128-885: Bridge Rehabilitation and Protection

New Budget Request of \$40 million to provide for lifecycle maintenance of road infrastructure. Major rehabilitation of roadways improves safety and ride quality for all vehicles and cyclists, and prolongs the lifespan of existing roadways before major road reconstruction is required. The areas selected for rehabilitation are prioritized based on annual condition inspections so that high-priority repairs are completed in a pre-determined order. Project will be funded \$38.0 million by Fuel Tax and \$2.0 million Pay-As-You-Go.

Operating Impact of Capital: None.

Project 129-143: Subdivision Construction

New Budget Request of \$5.2 million to fund Transportation's share of development charges in all areas of the city. This includes boundary payments and other non-recoverable payments to developers and The City's share in raising roads above the flood plain. These roadways are built by developers as part of their development obligations. The program also funds the acquisition of road right-of-way for minor widening, and fees for legal survey for some road right-of-way dedications. The Program also funds construction of roadways where developers have become insolvent/bankrupt. Project will be 100 per cent funded by Transportation Acreage Assessment.

Operating Impact of Capital: None.

Program 129 : Development & Environmental Supportive

Project 129-145: Slope Stabilization

New Budget Request of \$2 million to provide for the necessary work to complete required slope stability projects to eliminate hazardous conditions. Some of these projects will be related to areas affected by the 2013 Flood. Costs include geotechnical borehole drilling and investigation, slope stability analysis and geotechnical design and construction. Project will be 100 per cent funded by Pay-As-You-Go.

Operating Impact of Capital: None.

Project 129-204: Development of Access Roads

New Budget Request of \$16 million to provide for the development of access roads helps address key missing links in major road networks in newly developing areas. These links are a result of fractional ownerships and discontinuous subdivisions in areas with multiple landowners which are beyond the obligations of immediately adjacent development. These costs are recovered over time from private developers as they complete adjacent developments. Project will be 100 per cent funded by Transportation Acreage Assessment.

Operating Impact of Capital: None.

Program 133 : Railway Crossing Upgrades

Project 133-001: Railway Crossing Upgrades

New Budget Request of \$3.08 million (\$2.24 million for 2015-2018 and \$0.84 million for 2019) to provide for capital repairs such as replacements of planking, pavement, sidewalks and drainage at at-grade railway crossings as mandated by the Railway Safety Act, Board Orders and Grade Crossing Agreements. Upgrading railway crossings is required by law to be completed within legislated timeframes. Project will be funded \$2.93 million by Fuel Tax and \$0.15 million Pay-As-You-Go.

Operating Impact of Capital: None.

Program 948 : 2013 Flood Related Projects

Project 948-001: Pavement and Sidewalk Reconstruction

Previously approved budget up to 2014 of \$1.0 million is funded by the Disaster Recovery Program.

Previously approved budget for future years of \$6.0 million is funded by the Disaster Recovery Program.

New Budget Request of \$8.535 million to provide for flood-related reconstruction of pavement and sidewalks. The 2013 Flood resulted in multiple sinkholes and safety hazards that affected subsurface road conditions in various locations. Possible treatment alternatives will be identified and recommended such as road reconstruction or repaving. This project will be funded by the Disaster Recovery Program.

Operating Impact of Capital: None.

TRAN: Roads - Capital Budget for Council Approval

For Council Approval

Roads							
Capital Budget (\$000s) for Approval (Totals may not match due to rounding)							
	2014	2015	2016	2017	2018	*2019+	Total (2015-*2019+)
Previously-Approved Budget (as at 2014 June 30)	92,016	39,480	4,000	4,000	0	0	47,480
Projects Requiring Approval							
<i>Program 126 : Pedestrian & Cycle Mobility</i>		3,850	3,850	2,000	2,000	0	11,700
<i>Program 127 : Goods Movement & Strategic Mobility</i>		13,050	6,550	7,750	7,850	0	35,200
<i>Program 128 : Lifecycle & Asset Management</i>		39,975	38,825	39,575	39,575	0	157,950
<i>Program 129 : Development & Environmental Supportive</i>		5,800	5,800	5,800	5,800	0	23,200
<i>Program 133 : Railway Crossing Upgrades</i>		300	600	600	740	840	3,080
<i>Program 948 : 2013 Flood Related Projects</i>		8,535	0	0	0	0	8,535
Total Projects Requiring Approval		71,510	55,625	55,725	55,965	840	239,665
Total Capital Budget	92,016	110,990	59,625	59,725	55,965	840	287,145

*2019+ represents projects which start within the 2015-2018 cycle and are completed in years beyond 2018.

Transportation Infrastructure

Tab8

Tab7

Tab6

Tab5

Tab4

**Transportation
Infrastructure**

Tab2

Tab1

TRAN: Transportation Infrastructure - Overview

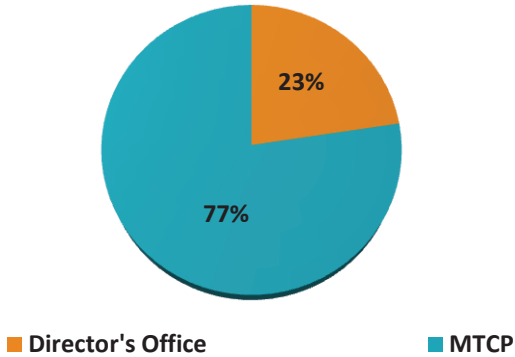
Transportation Infrastructure designs and builds safe, efficient and sustainable transportation infrastructure choices for Calgarians. This includes construction of the largest and most complex transportation projects in Calgary's history such as the West LRT, Airport Trail tunnel in addition to key pedestrian, cycle and roadway projects. Since 2007, Transportation Infrastructure has delivered 125 lane kilometres of roadway, increased the length of the LRT system by 25 per cent, lengthened existing LRT stations to accommodate four-car trains, delivered seven pedestrian bridges, five interchanges and four river crossings. Transportation Infrastructure is leading further expansion to transit system with projects such as the Green Line Transitway, Stoney

Transit Facility, and future Transitways. Transportation Infrastructure's mandate is to provide the highest level of project management excellence within the City, building projects on time, under budget and with the highest of quality standards. This includes, planning, design, land acquisition, procuring contractors, dealing with environmental regulators and communicating with the public through consultation and engagement.

Major Transportation Capital Projects (MTCP)

Design and build roads, bridges, and transit projects to provide travel choices and value for Calgarians.

**Transportation Infrastructure
Gross Operating Expenditure by Line of Service
(2015-2018)**



Values may not sum to 100%, due to rounding.

TRAN: Transportation Infrastructure - Overview

Trends

Between 2015 and 2018, Calgary's population is expected to grow significantly. Growth and mobility have a significant impact on each other. The type and location of transportation projects The City builds (roads, transit, bike and pedestrian facilities) will determine how easy it is for people to reach the places where they live, work and play. This growth will result in city-wide transportation impacts.

Transportation Infrastructure will design and build several new transitway corridors across the city that will make transit a more convenient option, not just to reach downtown, but other major destinations like post-secondary institutions, hospitals and major retail centres. Capital roads construction projects will aim to ease congestion on some Calgary's busiest roads (Glenmore Trail, Macleod Trail, the TransCanada Highway and McKnight Boulevard).

The City has undertaken a number of new initiatives to make Calgary more liveable and economically competitive, and to provide efficient and effective infrastructure and services. Transportation Infrastructure will continue to design and build new infrastructure with a focus on reinvesting in existing assets as identified in the Investing in Mobility 10-year capital plan. Transportation Infrastructure is committed to increasing service productivity and effectiveness, therefore improving the value and quality of service received by Calgarians.

Long-Term Plans

Transportation Infrastructure supports the Calgary Transportation Plan (CTP), Municipal Development Plan (MDP), and the 2020 Sustainability Direction through: design and construction of priority transportation infrastructure projects; design and construction of network upgrades that improve travel time reliability; identification of life-cycle costs and alternatives for new infrastructure delivery; and reduction of the

environmental impacts of construction activities.

Transportation Infrastructure will emphasize sustainable construction practices throughout 2015-2018 to help reduce the potential environmental impacts of large-scale capital projects. There will also be a focus on improving the safety, comfort, and accessibility of the transportation system which will help promote the economic viability of the city.

Transportation Infrastructure will help deliver capital projects identified in the Investing in Mobility 10-year capital plan, including the Green Line Transitway and will support other corporate growth priority projects (Redevelopments, Corridors, and Centre City).

Citizen Engagement

Engagement results from Action Plan 2015 -2018 indicate getting around is of great significance to Calgarians. There was an expressed desire for improved efficiency and effectiveness in municipal service delivery. The Green Line Transitway is part of the Calgary Transportation Plan's ridership required to make CTrain a cost effective service option in the future. Transportation Infrastructure will continue to apply stakeholder Primary Transit Network and is identified as a high priority in RouteAhead with the Southeast Transitway as the first stage of the long-term project. Building the Southeast Transitway will give Calgarians the improvements they need today, and will promote and attract the engagement strategies that are planned, implemented and evaluated using The City's engage! Policy.

TRAN: Transportation Infrastructure - Overview

Council Priorities

Under a city that moves, Transportation Infrastructure leads invest in road and transit projects improvements to ease traffic congestion.

Actions will focus on achieving the desired outcomes of Council Priorities by delivering high-quality transportation projects that allow Calgarians to move efficiently, and safely throughout the city while using a variety of convenient, affordable, and accessible transportation options.

TRAN: Transportation Infrastructure - Actions for Council Approval

For Council Approval

TRAN Commitment:
Transportation facilitates the efficient movement of people and goods which contributes to creating a great place to live and work.

A prosperous city
Calgary continues to grow as a magnet for talent, a place where
there is opportunity for all, and the best place in Canada
to start and grow a business.

Strategy Related to Council Outcome	Business Unit Action Related to Strategy	Accountable Service
P1 Strengthen Calgary's position as a global energy centre and location of choice for international talent, investment and innovation through enhanced business development, marketing and place-making initiatives.	P1.1 Deliver major transportation infrastructure projects in partnership with provincial, federal and rail agencies.	MTCP
P8 Respond to the needs of an aging population.	P1.2 Support the development of Transit Oriented Development (TOD) plans for all LRT and transit stations.	MTCP
P8 Respond to the needs of an aging population.	P8.1 Incorporate accessibility standards into new infrastructure construction.	MTCP



TRAN: Transportation Infrastructure - Actions for Council Approval

For Council Approval

Transportation Commitment:
 Transportation ensures customers feel safe while using the transportation system. This includes supporting the development of complete communities by providing accessible and affordable transportation networks and services.

A city of inspiring neighbourhoods
 Every Calgarian lives in a safe, mixed and just neighbourhood,
 and has the opportunity to participate in civic life.

Strategy Related to Council Outcome	Business Unit Action Related to Strategy	Accountable Service
N1 Keep communities safe by meeting and maintaining standards for crime prevention, fire response, and enforcement.	N1.1 Apply Crime Prevention Through Environmental Design (CPTED) and Road Safety Audit (RSA) review through design and construction process on all applicable projects.	MTCP
N2 Build resiliency to flooding.	N1.2 Manage construction contracts to ensure compliance with safety procedure and regulation.	MTCP
N2 Build resiliency to flooding.	N2.1 Design and implement infrastructure projects for flood resiliency.	MTCP
N3 Enhance The City's capacity and resiliency to prepare for and respond to pandemics, natural disasters and emergency situations.	N3.1 Enhance capacity to respond to emergency situations through business continuity planning, training and materials procurement.	MTCP
N3 Enhance The City's capacity and resiliency to prepare for and respond to pandemics, natural disasters and emergency situations.	N3.2 Support Calgary Emergency Management Agency by providing consultation services to Emergency Operations Centre.	MTCP



TRAN: Transportation Infrastructure - Actions for Council Approval

For Council Approval

A city of inspiring neighbourhoods
Every Calgarian lives in a safe, mixed and just neighbourhood,
and has the opportunity to participate in civic life.

Transportation Commitment:
Transportation ensures customers feel safe while using the transportation system. This includes supporting the development of complete communities by providing accessible and affordable transportation networks and services.

N6 Manage and promote growth to achieve the best possible social, environmental and economic outcomes within financial capacities.

N6.1 Support Corporate Growth Management by offering Transportation Infrastructure expertise for delivering projects.

MTCP

N8 Make it easier to build developments that meet our Municipal Development Plan and Calgary Transportation Plan objectives.

N8.1 Incorporate Low Impact Development practices into the design, construction and retrofits of transportation facilities.

MTCP

N9 Provide great public spaces and public realm improvements across the city to foster opportunity for well used public spaces and places for citizen connections and urban vitality.

N9.1 Apply the Complete Streets and Urban Design guidelines when delivering projects.

MTCP

N9.2 Support streetscape and public realm improvements on projects.

MTCP



TRAN: Transportation Infrastructure - Actions for Council Approval

For Council Approval

Transportation Commitment:
 Transportation provides safe, customer-focused, efficient, sustainable transportation infrastructure, choices and services in an accessible and affordable manner.

A city that moves
 People and goods can move well and safely throughout the city,
 using a variety of convenient, affordable, accessible and
 efficient transportation choices.

Strategy Related to Council Outcome	Business Unit Action Related to Strategy	Accountable Service
M1 Implement and accelerate RouteAhead as transit funding becomes available.	M1.1 Initiate preliminary design of 17 Avenue Southeast Transitway and Southwest Transitway.	MTCP
	M1.2 Complete the design of Green Line Southeast Transitway and evaluate staging options for Green Line Transitway to balance decision with cost impacts, design/construction efficiencies, and customer benefits.	MTCP
	M1.3 Deliver Stoney Transit Facility.	MTCP
M2 Maximize the flow of traffic on the existing transportation network through the application of technology.	M2.1 Support the implementation of Transportation projects to retrofit existing roads with Intelligent Transportation System (ITS) systems.	MTCP
	M3.1 Design and implement key projects outlined in the Investing in Mobility plan.	MTCP
M3 Invest in strategic road improvements in priority growth areas as funding becomes available.		



TRAN: Transportation Infrastructure - Actions for Council Approval

For Council Approval

A city that moves
 People and goods can move well and safely throughout the city,
 using a variety of convenient, affordable, accessible and
 efficient transportation choices.

Transportation Commitment:
 Transportation provides safe, customer-focused, efficient, sustainable transportation infrastructure, choices and services in an accessible and affordable manner.

M3 Invest in strategic road improvements in priority growth areas as funding becomes available.

M3.2 Design and build infrastructure which integrates the operations of the existing transportation network with the new Southwest and West Ring Roads.

MTCP

M4 Invest in active transportation infrastructure, including cycling and pedestrian networks as funding becomes available.

M4.1 Design and build Centre City projects that enhance pedestrian and cycling facilities.

MTCP

M4.2 Build CycleTrack pilot project including delivering a public communication and education plan.

MTCP



TRAN: Transportation Infrastructure - Actions for Council Approval

For Council Approval

Transportation Commitment:
Transportation evaluates innovative ways to affordably reduce our environmental impact when delivering transportation projects and services.

A healthy and green city
We steward our air, land, and water while encouraging healthy lifestyles for all Calgarians.

Strategy Related to Council Outcome	Business Unit Action Related to Strategy	Accountable Service
H2 Encourage a broader range of innovative and clean energy technologies.	H2.1 Prevent or minimize the adverse environmental effects of construction projects and activities.	MTCP
	H2.2 Integrate green infrastructure elements into new projects to improve the quality of the environment and lead to improved efficiency.	MTCP
	H2.3 Maintain TI's EnviroSystem to ensure that it reflects current practice and conforms to the ISO 14001 Standard during all phases of the project process.	MTCP
	H2.4 Explore opportunities and business cases for energy reduction opportunities in new projects as guided by the Transportation Energy Management Plan.	MTCP
H3 Manage the interrelationships between flood protection, water quality and quantity, and land use.	H3.1 Promote business process management (BPM) for tree protection on projects.	MTCP



For Council Approval

Transportation Commitment:
 Transportation provides affordable transportation options while maintaining (and expanding where funding is available) service levels. This includes providing timely, accurate information to key decision makers and citizens.

A well-run city
 Calgary's government is open, responsive, accountable and transparent, delivering excellent services at a fair price. We work with our government partners to ensure we have the tools we need.

Strategy Related to Council Outcome	Business Unit Action Related to Strategy	Accountable Service
W2 Be as efficient and effective as possible, reducing costs and focusing on value-for-money.	W2.1 Incorporate Value Management analysis for projects.	MTCP
	W2.2 Lead the development of department-wide performance measures framework in order to increase service productivity and effectiveness.	MTCP
	W2.3 Review findings from the Project Management Maturity Model to support improving business processes.	MTCP
	W2.4 Benchmark Major Transportation Capital Projects (MTCP) line of service to identify the best in practise to serve as a goal towards increased service productivity and effectiveness.	MTCP
W3 Examine opportunities for alternative service delivery for competitiveness.	W3.1 Evaluate service delivery options for individual projects to find the best combination of time, cost and quality objectives.	MTCP



For Council Approval

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Transportation Commitment:

Transportation provides affordable transportation options while maintaining (and expanding where funding is available) service levels. This includes providing timely, accurate information to key decision makers and citizens.

W5 Regularly collaborate and engage citizens to encourage participation in City decision-making, and better communicate the reasons for the decisions.

W5.1 Ensure that engagement strategies are planned, implemented and evaluated using The City's engage! Policy.

MTCP

W5.2 Respond to customer service requests (CSRs) relating to projects inquiries.

MTCP

W6 Effectively manage The City's inventory of public assets, optimizing limited resources to balance growth and maintenance requirements.

W6.1 Develop and report lifecycle and operating and maintenance costs as part of transportation infrastructure planning, design and decision processes for new capital investments.

MTCP

W6.2 Develop and refine Asset Management plans including Tangible Capital Asset Improvement initiatives to provide timely financial reporting in order to meet Tangible Capital Assets (TCA) compliance.

MTCP

W7 Continue to transform the organization to be more citizen-focused in its approach and delivery of service.

W7.1 Establish a plan for utilizing a variety of channels for formal and informal communications with customers and stakeholders.

MTCP

W7.2 Recognize staff for excellent project delivery and customer service.

MTCP



TRAN: Transportation Infrastructure - Actions for Council Approval

For Council Approval

Transportation Commitment:

Transportation provides affordable transportation options while maintaining (and expanding where funding is available) service levels. This includes providing timely, accurate information to key decision makers and citizens.

A well-run city
Calgary's government is open, responsive, accountable and transparent, delivering excellent services at a fair price. We work with our government partners to ensure we have the tools we need.

W8 Increase collaboration across the organization, including alignment of budgets with service delivery to achieve City priorities.

W8.1 Provide internal project delivery consultation services to other Business Units across the City.

MTCP

W9 Strive to be an employer of choice with a focus on addressing The City's aging workforce.

W9.1 Promote a respectful, healthy and productive workplace through the engagement of employees and development of strategic workforce plans.

MTCP



TRAN: Transportation Infrastructure - Lines of Service

Breakdown of Operating Budget by Service (\$000) (Totals may not add due to rounding)															
	2014			2015			2016			2017			2018		
	\$ Exp	\$ Net	FTEs	\$ Exp	\$ Net	FTEs	\$ Exp	\$ Net	FTEs	\$ Exp	\$ Net	FTEs	\$ Exp	\$ Net	FTEs
Director's Office	2,692	0	5.0	2,342	0	5.0	2,342	0	5.0	2,342	0	5.0	2,342	0	5.0
Major Transportation Capital Projects	9,119	0	47.0	7,959	0	41.0	8,002	0	41.0	8,050	0	41.0	8,050	0	41.0
Total Business Unit	11,811	0	52.0	10,300	0	46.0	10,343	0	46.0	10,391	0	46.0	10,391	0	46.0

Transportation Infrastructure will support the Calgary Transportation Plan, Council Priorities, and the 2020 Sustainability Direction by delivering quality infrastructure assets while minimizing the impacts of construction projects and the expenditure of City resources.

Transportation Infrastructure consistently applies stakeholder engagement strategies that are planned, implemented and evaluated using The City's engage! Policy, and demonstrates continual improvement in the application of environmentally friendly design and construction practices.

Improving the delivery of project management services will be a key focus area during the 2015-2018 business plan and budget cycle. These improvements will be made without increasing business unit expenditures or recoveries. A reduction in capital project workload and associated funding will result in a reduction in the number of staff positions required in Transportation Infrastructure.

The elimination of six full-time equivalent positions in 2015 (related to current staff vacancies) will result in expenditures reducing by \$743 thousand. An additional reduction of \$220 thousand will be achieved through reduced rental expenses. Since all costs are funded through capital projects, there will be no net impact on the tax supported budget. The expenditures are offset by a corresponding reduction in recoveries.

TRAN: Transportation Infrastructure - Lines of Service

All \$ values are in Thousands (\$000)

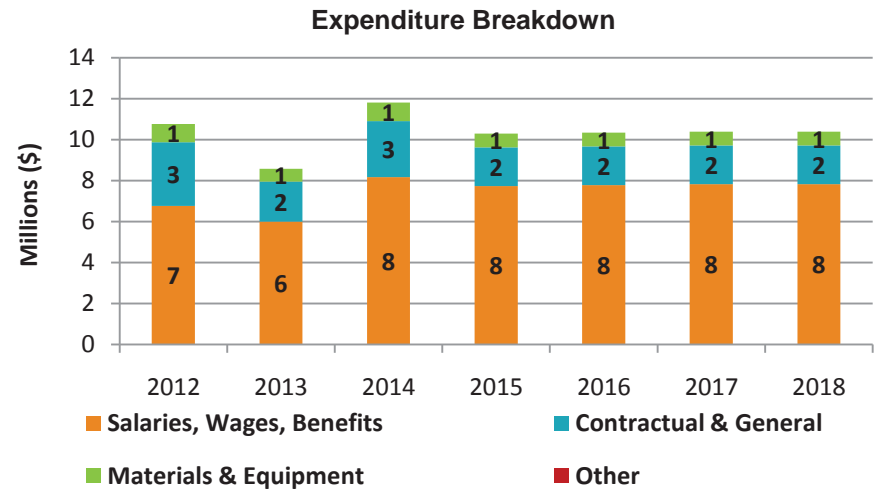
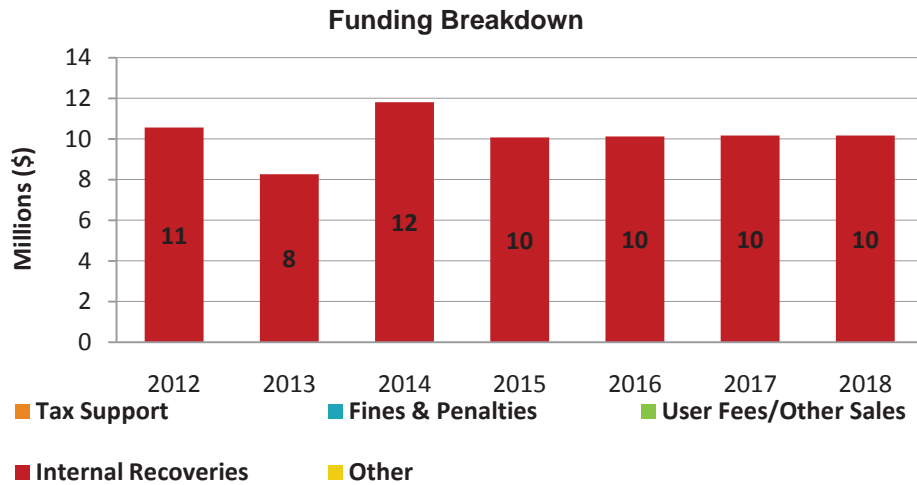
Major Transportation Capital Projects	2014			2015			2016			2017			2018		
	\$ Exp	\$ Net	FTEs	\$ Exp	\$ Net	FTEs	\$ Exp	\$ Net	FTEs	\$ Exp	\$ Net	FTEs	\$ Exp	\$ Net	FTEs
	9,119	0	47.0	7,959	0	41.0	8,002	0	41.0	8,050	0	41.0	8,050	0	41.0

Transportation Infrastructure plans, designs and builds safe, efficient and sustainable transportation infrastructure new and expanded transit facilities, new roadways and major reconstruction projects on existing roadways, pedestrian bridges and new cycling infrastructure. Transportation Infrastructure ensures City assets are well-managed through the explicit identification and implementation of life-cycle analysis and project management best practices. One of Transportation Infrastructure's key objectives is to make it easier for the public to get

the information they need and to participate in public hearings. This objective is achieved through the use of a broad range of communication tools to engage stakeholders, including a greater use of electronic and social media. Transportation Infrastructure also aims to increase transparency and accountability through a process of review and continual improvement of internal standards for project status reporting and record-keeping.

TRAN: Transportation Infrastructure - Breakdown of the Operating Budget

Totals may not match due to rounding



Funding Breakdown - Transportation Infrastructure's operating budget is funded primarily through Internal Recoveries - all costs are recovered through capital projects.

Expenditures - Approximately 75 per cent of Transportation Infrastructure's operating budget is used for salary and wages for employees. The remainder is contractual and general expenses that can include external consultants as well as general office expenses.

TRAN: Transportation Infrastructure - Breakdown of the Net Operating Budget

Totals may not add due to rounding

Breakdown of Net Operating Budget Changes (\$000s)	2015	2016	2017	2018
Previous Year's Budget	0	0	0	0
Less: Previous Year One Time	0	0	0	0
Base	0	0	0	0
Efficiency Gains	0	0	0	0
Inflation	0	0	0	0
Service and Budget Increase	0	0	0	0
Operating Impact of Previously Approved Capital	0	0	0	0
Operating Impact of New Capital (Incremental)	0	0	0	0
Re-alignments	0	0	0	0
One Time	0	0	0	0
Total Budget Change	0	0	0	0
Total Budget	0	0	0	0

During Action Plan 2015-2018, Transportation Infrastructure will implement improvements in how project management services are provided. These improvements will not increase expenditures or recoveries, and will contribute to achieving the objectives of a well-run city.

A reduction in capital project workload and associated funding will result in a reduction in the number of staff positions required in Transportation

Infrastructure. The elimination of six full time equivalent positions in 2015 (related to current staff vacancies) will result in decreased expenditures of \$743 thousand. An additional reduction of \$220 thousand will be achieved through reduced rental expenses. Since all costs are funded through capital projects, there will be no net impact on the tax supported budget. The expenditures are offset by a corresponding reduction in recoveries.

TCA Depreciation (\$000s) - Transportation Infrastructure			
2015	2016	2017	2018
55	59	64	50

TCA Depreciation content is presented for information only.

TRAN: Transportation Infrastructure - Operating Budget for Council Approval

For Council Approval

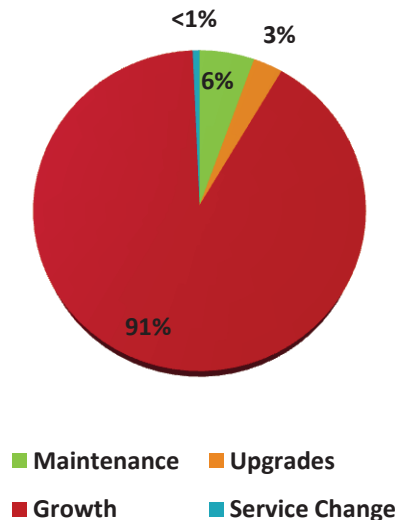
Transportation Infrastructure															
Total Operating Budget (\$000s) for Approval (Totals may not match due to rounding)															
	2012 Actual	2013 Actual	2014 Total Budget (as of June 30)	2015 Budget			2016 Budget			2017 Budget			2018 Budget		
				Base	One- Time	Total	Base	One- Time	Total	Base	One- Time	Total	Base	One- Time	Total
Expenditures	10,765	8,576	11,811	10,300	0	10,300	10,343	0	10,343	10,391	0	10,391	10,391	0	10,391
Recoveries	(10,565)	(8,269)	(11,811)	(10,080)	0	(10,080)	(10,123)	0	(10,123)	(10,171)	0	(10,171)	(10,171)	0	(10,171)
Revenue	(200)	(306)	0	(220)	0	(220)	(220)	0	(220)	(220)	0	(220)	(220)	0	(220)
Net	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FTEs	58.0	58.0	52.0	46.0	0.0	46.0	46.0	0.0	46.0	46.0	0.0	46.0	46.0	0.0	46.0

TRAN: Transportation Infrastructure - Capital Budget Overview

Transportation Infrastructure Capital Budget (\$000s) Overview (Totals may not match due to rounding)						
	2015	2016	2017	2018	*2019+	Total
Previously-Approved Budget (as at 2014 June 30)	356,186	51,945	810	0	0	408,941
Total New Capital Budget Requests	154,450	230,550	257,350	177,500	343,000	1,162,850
Total Business Unit Capital Budget	510,636	282,495	258,160	177,500	343,000	1,571,791

*2019+ represents projects which start within the 2015-2018 cycle and which are completed in years beyond 2018.

**Transportation Infrastructure
New Capital Budget Requests by Project Type
(2015-*2019+)
Total \$1,163 Million**



Maintenance/Replacement - Six per cent of Transportation Infrastructure's capital budget will be spent on major road reconstruction that improves safety and ride-quality for all vehicles. Maintenance costs will be significantly reduced and the potential of a major structural failure that would result in a significant disruption to traffic is also lessened. Improvements to adjacent pedestrian facilities may also be performed during these projects.

Upgrades - Three per cent of Transportation Infrastructure's capital budget will be spent on two programs: 1) Noise Attenuation Retrofit - to installing new noise walls in existing residential areas that experience traffic noise exceeding thresholds specified in the Surface Transportation Noise Policy, and 2) Operational Improvement Projects - to implements high benefit, medium cost projects which will improve the existing infrastructure and rights of way before larger, more costly improvements are needed. Programs like the Noise Attenuation Retrofit and Operational Improvement Projects are examples of how we are meeting Council's objectives of efficiency, effective, and affordable service delivery.

Growth - 91 per cent of Transportation Infrastructure's capital budget will be spent on projects identified the Investing in Mobility Plan. These projects are designed to meet the needs of Calgarians as they live, work, shop, and play in our city. Investing in Mobility projects include the Green Line Transitway, Rapid Transit Corridors, major roadway projects that will link new communities and the west and southwest Ring Roads to the rest of Calgary.

Service Change - Less than one percent of Transportation Infrastructure's capital budget will be spent on pre-engineering studies.

TRAN: Transportation Infrastructure - Capital Budget Overview

Funding for Capital Projects (Totals may not match due to rounding)	2015	2016	2017	2018	*2019+	Total 2015-*2019+
Fuel Tax - Revenue Sharing	68,190	82,145	88,818	67,214	13,000	319,367
Municipal Sustainability Initiative (MSI)	17,900	58,550	55,000	8,000	0	139,450
Tax-supported Debt	0	0	0	0	0	0
Community & Recreation Levy	468	659	692	726	0	2,545
Contribution from Calgary Parking Authority	500	500	500	500	0	2,000
Transportation Acreage Assessment	10,450	30,750	55,700	44,000	18,000	158,900
Pay-As-You-Go	4,942	5,946	2,140	5,060	0	18,088
Lifecycle Maintenance & Upgrade Reserve	52,000	52,000	54,500	52,000	312,000	522,500
Total Funding	154,450	230,550	257,350	177,500	343,000	1,162,850
<hr/>						
Total Operating Impacts of Capital (Cumulative)						
2015-2018 Operating Budget	0	0	0	2,300	N/A	
2019 and beyond up to 2024 Operating Plan	N/A	N/A	N/A	N/A	41,300	

*2019+ represents projects which start within the 2015-2018 cycle and are completed in years beyond 2018.

Capital Budget Listing (by Program - Project) (\$000s)

Program- Project	Project Description	Type	Cat	Prev.	Prev.	New Budget Request	2015	2016	2017	2018	*2019+	2015- *2019+	Growth Area
				Approved Budget up to 2014	Approved Budget for future years								
150-001	McKnight Widening (12-19 St NE)	G	A	750	6,250	10,000	10,000	-	-	-	-	10,000	City-wide
Total Program 150 : McKnight Widening (12-19 St NE)				750	6,250	10,000	10,000	-	-	-	-	10,000	
<hr/>													
151-001	Glenmore & Ogden Interchange	G	A	6,000	97,186	23,000	4,350	11,150	7,500	-	-	23,000	City-wide
Total Program 151 : Glenmore & Ogden Interchange				6,000	97,186	23,000	4,350	11,150	7,500	-	-	23,000	
<hr/>													
202-000	Noise Attenuation Retrofit	U	C			3,600	900	900	900	900	-	3,600	City-wide

Program- Project	Project Description	Type	Cat	Prev. Approved Budget up to 2014	Prev. Approved Budget for future years	New Budget Request	2015	2016	2017	2018	*2019+	2015- *2019+	Growth Area
Total Program 202 : Noise Attenuation Retrofit				-	-	3,600	900	900	900	900	-	3,600	
221-000	Future Land	G	C			76,350	8,000	16,350	28,500	23,500	-	76,350	
Total Program 221 : Future Land				-	-	76,350	8,000	16,350	28,500	23,500	-	76,350	
223-000	Pedestrian Bridge Replacement and Upgrading	G	C			22,000	4,000	6,000	6,000	6,000	-	22,000	
Total Program 223 : Pedestrian Overpass				-	-	22,000	4,000	6,000	6,000	6,000	-	22,000	
234-003	Operational Improvement Projects	U	C			30,950	7,000	6,950	8,500	8,500	-	30,950	
Total Program 234 : Operational Improvement Projects				-	-	30,950	7,000	6,950	8,500	8,500	-	30,950	
543-001	Connectors/Improv - Prov Ring Rd Projects	G	C			12,000	6,000	-	6,000	-	-	12,000	City-wide
Total Program 543 : Connectors/Improv - Prov Ring Rd Projects				-	-	12,000	6,000	-	6,000	-	-	12,000	
566-001	RouteAhead Rapid Transit Corridors	G	C			78,000	10,000	30,000	30,000	8,000	-	78,000	City-wide
Total Program 566 : RouteAhead Rapid Transit Corridors				-	-	78,000	10,000	30,000	30,000	8,000	-	78,000	
Operating impact of capital of Program 566													
	2015-2018 Operating Budget		O1				-	-	-	2,300	N/A	2,300	
	2019 and beyond Operating Plan		O2				N/A	N/A	N/A	N/A	13,800	13,800	

Program- Project	Project Description	Type	Cat	Prev. Approved Budget up to 2014	Prev. Approved Budget for future years	New Budget Request	2015	2016	2017	2018	*2019+	2015- *2019+	Growth Area
567-001	Chinook TOD	G	C			20,000	10,000	10,000	-	-	-	20,000	R.CS
Total Program 567 : Chinook TOD				-	-	20,000	10,000	10,000	-	-	-	20,000	

568-001	University of Calgary TOD (Banff Trail / Stadium)	G	C			31,500	3,000			10,500	18,000	31,500	R.BT
Total Program 568 : Foothills Hospital/Stadium/Banff Trail/Motel Village TOD				-	-	31,500	3,000	-	-	10,500	18,000	31,500	

569-001	Centre City Mobility Program	G	C			28,950	2,000	5,650	7,300	11,000	3,000	28,950	R.CC
Total Program 569 : Centre City Mobility				-	-	28,950	2,000	5,650	7,300	11,000	3,000	28,950	

570-001	Southwest & West Ring Road Connections	G	C			133,000	10,000	25,000	47,000	41,000	10,000	133,000	City-wide
Total Program 570 : Southwest Ring Road Connections				-	-	133,000	10,000	25,000	47,000	41,000	10,000	133,000	

Operating impact of capital of Program 570													
<i>2015-2018 Operating Budget</i>				O1			-	-	-	-	N/A	-	
<i>2019 and beyond Operating Plan</i>				O2			N/A	N/A	N/A	N/A	3,000	3,000	

573-001	194 Avenue S Slough Crossing & CPR Grade Separation	G	C			46,500	5,000	20,750	20,750			46,500	D.ES, D.SI, D.WM
Total Program 573 : 194 Avenue S Priddis Slough Crossing & CPR Grade Separation				-	-	46,500	5,000	20,750	20,750	-	-	46,500	

Program- Project	Project Description	Type	Cat	Prev. Approved Budget up to 2014	Prev. Approved Budget for future years	New Budget Request	2015	2016	2017	2018	*2019+	2015- *2019+	Growth Area
575-001	Vehicle Bridge Replacement - 9th Ave (Inglewood)	M	C			11,000			4,400	6,600		11,000	
575-002	Vehicle Bridge Replacement - 12th Street (Zoo)	M	C			19,000	7,700	11,300				19,000	
Total Program 575 : Vehicle Bridge Replacement				-	-	30,000	7,700	11,300	4,400	6,600	-	30,000	
733-001	MacLeod Trail & 162 Avenue Interchange	G	C			55,000	10,000	20,000	25,000			55,000	City-wide
Total Program 733 : Macleod Trail / 162 Ave Interchange				-	-	55,000	10,000	20,000	25,000	-	-	55,000	
832-001	Pre-Engineering Studies	S	C			8,000	2,000	2,000	2,000	2,000	-	8,000	
Total Program 832 : Pre-Engineering Studies				-	-	8,000	2,000	2,000	2,000	2,000	-	8,000	
854-000	Major Road Reconstruction	M	C			34,000	2,500	12,500	11,500	7,500	-	34,000	
Total Program 854 : Major Road Reconstruction				-	-	34,000	2,500	12,500	11,500	7,500	-	34,000	
869-000	Green Line Transitway	G	C			520,000	52,000	52,000	52,000	52,000	312,000	520,000	City-wide
Total Program 869 : Green Line Transitway				-	-	520,000	52,000	52,000	52,000	52,000	312,000	520,000	
Operating impact of capital of Program 869													
2015-2018 Operating Budget			O1				-	-	-	-	N/A	-	
2019 and beyond Operating Plan			O2				N/A	N/A	N/A	N/A	24,500	24,500	

Program- Project	Project Description	Type	Cat	Prev. Approved Budget up to 2014	Prev. Approved Budget for future years	New Budget Request	2015	2016	2017	2018	*2019+	2015- *2019+	Growth Area
				6,750	103,436	1,162,850	154,450	230,550	257,350	177,500	343,000	1,162,850	

Note:

Type: M=Maintenance/Replacement, U=Upgrade, G=Growth, S=Service Change

Category: A=Project in Progress, C=New Project, O1=2015-2018 Operating Cost, O2=2019 and beyond Operating Cost

Budgets and/or operating impact of capital beyond 2019 are included in 2019 and are detailed in the Explanation section

Explanation of Budget Requests

Program 150 : McKnight Widening (12-19 St NE)

Project 150-001: McKnight Widening (12-19 St NE)

Previously approved budget up to 2014 of \$750 thousand with funding from Transportation Acreage Assessments.

Future approved budget of \$6.25 million with funding from Transportation Acreage Assessments.

New budget request of \$10 million to widen McKnight Boulevard to six lanes from 12 Street N.E. to 19 Street N.E. This will provide a consistent six lane cross-section from 12 St N.E. to Metis Trail and address frost heave, pavement and concrete problems along the existing road. Project funding from Fuel Tax of \$9.5 million and Pay-As-You-Go of \$500 thousand.

Operating Impact of Capital: None.

Program 151 : Glenmore & Ogden Interchange

Project 151-001: Glenmore & Ogden Interchange

Previously approved budget up to 2014 of \$6 million with funding from Alberta Municipal Infrastructure Program (AMIP) of \$5 million, Fuel Tax of \$800 thousand and Transportation Acreage Assessments of \$200 thousand.

Future approved budget of \$97.186 million with funding from Municipal Sustainability Initiative (MSI) of \$87.85 million, Fuel Tax of \$8.15 million and Tax-supported Debt of \$1.186 million.

New budget request of \$23 million to construct an interchange along Glenmore Trail at Ogden Road S.E. with additional overpasses spanning over the CPR tracks, CN tracks, future Green Line LRT and the Western Irrigation District canal. This project increases capacity on one of the busiest commercial goods movement corridors, which is also the most significant bottleneck on Glenmore Trail. Funding from Fuel Tax of \$3.1 million, Transportation Acreage Assessments of \$18.95 million and Pay-As-You-Go of \$950 thousand.

Operating Impact of Capital: None.

Program 202 : Noise Attenuation Retrofit

Project 202-000: Noise Attenuation Retrofit

New budget request of \$3.6 million to install new noise walls along expressways and arterial roads in existing residential areas that experience traffic noise exceeding thresholds specified in the Surface Transportation Noise Policy. Funding from Pay-As-You-Go.

Operating Impact of Capital: None.

Program 221 : Future Land

Project 221-000: Future Land

New budget request of \$76.35 million to purchase land for future projects when key properties become available on the open market. Program funding from Transportation Acreage Assessments of \$37.75 million, Fuel Tax of \$30.25 million and Municipal Sustainability Initiative (MSI) of \$8.35 million.

Operating Impact of Capital: None.

Program 223 : Pedestrian Overpass

Project 223-000: Pedestrian Overpass

New budget request of \$22 million to address the issues of aging infrastructure and infrastructure that does not accommodate all modes of accessibility. Program funding from Fuel Tax of \$21.8 million and Pay-As-You-Go of \$200 thousand.

Operating Impact of Capital: None.

Program 234 : Operational Improvement Projects

Project 234-003: Operational Improvement Projects

New budget request of \$30.95 million. Program proactively develops, plans, designs and implements high benefit, medium cost projects to benefit the transportation network. Improvements previously built under this program include the 5th Avenue lane reversal designed to maximize the existing infrastructure and rights of way before larger, more costly improvements are needed. Program funding from Fuel Tax of \$24 million, Pay-As-You-Go of \$4.45 million and Lifecycle Maintenance and Upgrade Reserve of \$2.5 million.

Operating Impact of Capital: None.

Program 543 : Connectors/Improv - Prov Ring Rd Projects

Project 543-001: Connectors/Improve - Provincial Ring Road Projects

New budget request of \$12 million. Program will fund a number of projects in the N.W. and N.E. to complete the connections to the Provincial Ring Road. Includes the ramps on the north side of the Stoney Trail & 14 Street N.W. and the Stoney Trail & 60 Street N.E. ramps. Program funding from Transportation Acreage Assessments of \$7 million and Fuel Tax of \$5 million.

Operating Impact of Capital: None.

Program 566 : RouteAhead Rapid Transit Corridors

Project 566-001: RouteAhead Rapid Transit Corridors

New budget request of \$78 million. Program will fund a number of rapid transit corridors including the North Cross-Town BRT, South Cross-Town BRT, Southwest Transitway, and 17th Avenue S.E. Transitway. Program funding from Municipal Sustainability Initiative.

Operating impact of capital: This project requires \$2.3 million in operating costs including 28 FTEs in 2018, and \$13.8 million for 2019-2024. These operating costs will be incurred by Calgary Transit.

Program 567 : Chinook TOD

Project 567-001: Chinook TOD

New budget request of \$20 million. Program will fund a variety of infrastructure improvements to support development of the major activity centre, and the anticipated and significant increase in population and employment in the Chinook area. Projects include a new pedestrian bridge over Macleod Trail to be cost shared with Chinook Mall as well as upgrades along 61 Ave S connection to the Chinook LRT Station. Program funding from Fuel Tax of \$16.6 million and Pay-As-You-Go of \$3.4 million.

Operating Impact of Capital: None.

Program 568 : Foothills Hospital/Stadium/Banff Trail/Motel Village TOD Package

Project 568-001: University of Calgary TOD (Banff Trail/Stadium)

New budget request of \$31.5 million. Program will fund a variety of infrastructure improvements to accommodate redevelopment of this major activity centre and improve traffic flow and pedestrian connectivity. Program funding from Transportation Acreage Assessments of \$28.5 million and Fuel Tax of \$3 million.

Operating Impact of Capital: None.

Program 569 : Centre City Mobility

Project 569-001: Centre City Mobility Program

New budget request of \$28.95 million. With traffic capacity limited in the Centre City, increased mobility in the Centre City will focus on walking, cycling and transit. Upgrades funded by this program will include improved sidewalks, CPR underpass rehabilitation, bike lanes where approved, barrier-free access to transit and enhanced streetscapes including lighting and wayfinding. Program funding from Fuel Tax of \$21.557 million, Pay-As-You-Go of \$2.848 million, City Centre Levy of \$2.545 million and contribution from Calgary Parking Authority of \$2.0 million.

Operating Impact of Capital: None.

Program 570 : Southwest Ring Road Connections

Project 570-001: Southwest & West Ring Road Connections

New budget request of \$133 million. Funding will be used for construction of a number of connections to the 20 new or upgraded interchanges along this portion of Stoney Trail. The connections will require upgrades to existing streets, building new streets and upgrading provincial facilities for adequate space for pedestrians, cyclists and transit. Program funding from Fuel Tax of \$114.3 million and Transportation Acreage Assessments of \$18.7 million.

Operating impact of capital: The project requires \$3.0 million in operating costs for 2019-2024.

Program 573 : 194 Avenue S Priddis Slough Crossing & CPR Grade Separation

Project 573-001: 194 Avenue S Slough Crossing & CPR Grade Separation

New budget request of \$46.5 million with funding from Transportation Acreage Assessments. Project will allow for new suburban development to proceed west of Macleod Trail, between Stoney Trail and 210 Avenue S. 194 Ave S will be extended across the Priddis Slough, connecting to Sheriff King Street. This also requires a grade-separated crossing over the CPR tracks and future South 201 Red Line LRT tracks to ensure adequate fire response times in the area, and to prevent conflicts with CPR and future LRT activities.

Operating Impact of Capital: None.

Program 575 : Vehicle Bridge Replacement

Project 575-001: Vehicle Bridge Replacement - 9th Ave (Inglewood)

New budget request of \$11 million to replace the bridge and includes widening the structure from three to four traffic HOV lanes, and accommodating pedestrians on both sides of the bridge. Program funding from Fuel Tax.

Operating Impact of Capital: None.

Project 575-002: Vehicle Bridge Replacement - St. Georges Dr. (Zoo)

New budget request of \$19 million to replace the bridge and includes increasing the lane widths, and will provide pedestrian connectivity on both sides of the structure. Program funding from Fuel Tax.

Operating Impact of Capital: None.

Program 733 : Macleod Trail / 162 Ave Interchange

Project 733-001: Macleod Trail & 162 Ave S Interchange

New budget request of \$55 million. The project provides for the construction of an interchange supporting office and commercial development and removes the last intersection on Macleod Trail between Fish Creek Provincial Park and Highway 22x (Stoney Trail) allowing for free flow conditions along Macleod Trail from 194 Avenue S.E. to Lake Fraser Gate S.E. Program funding from Municipal Sustainability Initiative (MSI) of \$53.25 million, Transportation Acreage Assessments of \$1.5 million and Pay-As-You-Go of \$250 thousand.

Operating Impact of Capital: None.

Program 832 : Pre-Engineering Studies

Project 832-001: Pre-Engineering Studies

New budget request of \$8 million to undertake pre-engineering studies to create detailed design drawings that illustrate projects to stakeholders, identify issues and allow construction to proceed quickly once funding has been secured for a given project. Program funding from Municipal Sustainability Initiative (MSI) of \$7.96 million and Pay-As-You-Go of \$40 thousand.

Operating Impact of Capital: None.

Program 854 : Major Road Reconstruction

Project 854-000: Major Road Reconstruction

New budget request of \$34 million for major road reconstruction projects include full rehabilitation and upgrades to existing roadway pavements and intersections. Projects often include deep utility replacements funded separately. It typically improves adjacent pedestrian facilities. Program funding from Fuel Tax of \$32.15 million and Pay-As-You-Go of \$1.85 million.

Operating Impact of Capital: None.

Program 869 : Green Line Transitway

Project 869-000: Green Line Transitway

New budget request of \$520 million. The Green Line Program combines the Centre Street Transitway and Southeast Transitway projects into a single transit corridor connecting through downtown Calgary. The program will include segments of dedicated bus-only lanes and transit priority between 78 Avenue N and Douglas Glen. This is the initial phase of the line with bus-based infrastructure which will be upgraded to provide LRT service when demand warrants and sufficient capital funding becomes available. Program funding from Lifecycle Maintenance and Upgrade Reserve. Additional funding has been requested from the Federal Building Canada Fund and status will be available for Council at budget hearings.

Operating impact of capital: This project requires \$24.5 million in operating costs for 2021-2024.

TRAN: Transportation Infrastructure - Capital Budget for Council Approval

For Council Approval

Transportation Infrastructure							
Capital Budget (\$000s) for Approval (Totals may not match due to rounding)							
	2014	2015	2016	2017	2018	*2019+	Total (2015-*2019+)
Previously-Approved Budget (as at 2014 June 30)	278,160	356,186	51,945	810	0	0	408,941
Projects Requiring Approval							
<i>Program 150 : McKnight Widening (12-19 St NE)</i>		10,000	0	0	0	0	10,000
<i>Program 151 : Glenmore & Ogden Interchange</i>		4,350	11,150	7,500	0	0	23,000
<i>Program 202 : Noise Attenuation Retrofit</i>		900	900	900	900	0	3,600
<i>Program 221 : Future Land</i>		8,000	16,350	28,500	23,500	0	76,350
<i>Program 223 : Pedestrian Overpass</i>		4,000	6,000	6,000	6,000	0	22,000
<i>Program 234 : Operational Improvement Projects</i>		7,000	6,950	8,500	8,500	0	30,950
<i>Program 543 : Connectors/Improv - Prov Ring Rd Projects</i>		6,000	0	6,000	0	0	12,000
<i>Program 566 : RouteAhead Rapid Transit Corridors</i>		10,000	30,000	30,000	8,000	0	78,000
<i>Program 567 : Chinook TOD</i>		10,000	10,000	0	0	0	20,000
<i>Program 568 : Foothills Hospital/Stadium/Banff Trail/Motel Village TOD Package</i>		3,000	0	0	10,500	18,000	31,500
<i>Program 569 : Centre City Mobility</i>		2,000	5,650	7,300	11,000	3,000	28,950
<i>Program 570 : Southwest Ring Road Connections</i>		10,000	25,000	47,000	41,000	10,000	133,000
<i>Program 573 : 194 Avenue S Priddis Slough Crossing & CPR Grade Separation</i>		5,000	20,750	20,750	0	0	46,500
<i>Program 575 : Vehicle Bridge Replacement</i>		7,700	11,300	4,400	6,600	0	30,000
<i>Program 733 : Macleod Trail / 162 Ave Interchange</i>		10,000	20,000	25,000	0	0	55,000
<i>Program 832 : Pre-Engineering Studies</i>		2,000	2,000	2,000	2,000	0	8,000
<i>Program 854 : Major Road Reconstruction</i>		2,500	12,500	11,500	7,500	0	34,000
<i>Program 869 : Green Line Transitway</i>		52,000	52,000	52,000	52,000	312,000	520,000
Total Projects Requiring Approval		154,450	230,550	257,350	177,500	343,000	1,162,850
Total Capital Budget	278,160	510,636	282,495	258,160	177,500	343,000	1,571,791

*2019+ represents projects which start within the 2015-2018 cycle and are completed in years beyond 2018.

Transportation Planning

Tab8

Tab7

Tab6

Tab5

Transportation
Planning
Tab4

Tab3

Tab2

Tab1

TRAN: Transportation Planning - Overview

Transportation Planning collects information, develops plans and policies, and recommends actions to best serve the city’s current and future transportation needs through the continued implementation of the Calgary Transportation Plan (CTP) and support of the Corporate Growth Management Framework.

Achieving the goals of the CTP involves a wide range of projects. These projects include reviewing development plans and applications to facilitate alignment with long term plans, developing a Pedestrian Strategy, implementing the Cycling Strategy, and improving the operation of existing infrastructure. Other actions consist of conducting corridor and functional studies to ensure the city’s transportation needs in the future are protected, and developing policy to facilitate alignment with the CTP.

Optimizing & Improving Transportation Choice (OITC)

Provides transportation design services that improve the access, performance, and reliability of the transportation network for all modes of transportation.

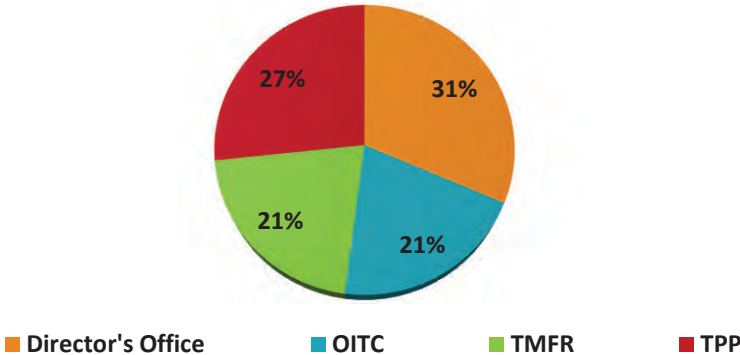
Transportation Monitoring, Forecasting & Reporting (TMFR)

Collects travel information and provides support to Transportation through the analysis of current and future trends.

Transportation Planning Policy (TPP)

Champions the implementation of the CTP and provides information, develops plans and policies, and recommends actions to best serve the city’s current and future transportation needs.

**Transportation Planning
Gross Operating Expenditure by Line of Service
(2015-2018)**



Values may not sum to 100%, due to rounding.

TRAN: Transportation Planning - Overview

Trends

The key trend affecting Transportation Planning is growth management. Calgary is experiencing a high rate of growth in 2014 where a majority of that growth is due to people moving to Calgary from other places. This growth trend is expected to continue through 2015-2018 and Transportation Planning will be challenged to deliver services to support the demands of growth.

Calgary's population is aging and seniors represent the largest growing age group in the city. Transportation Planning will consider and incorporate the needs of an aging population in designs for new infrastructure as well as plans to retrofit existing facilities so they are accessible to those with mobility, visual, hearing, and/or cognitive disabilities.

There is an increase in Calgarians' interest in active transportation modes and some investment in infrastructure to support those modes is necessary. This is being addressed through a Pedestrian Strategy that will be developed in Action Plan and the continued implementation of the Cycling Strategy.

The 2014 Civic Census shows an increasing number of people are choosing to live in the established areas of the city and/or consciously near public transit. Transportation Planning will provide input into redevelopment permit applications and optimize existing infrastructure for all modes of transportation.

Over the past 10 years, Calgary's auto mode split has increased from 77 per cent to 79 per cent of all-day all-purpose trips. This is not aligned with the goals of the CTP and Transportation Planning aims to reverse this trend by improving access to active modes of transportation, coordinating the development of Transit Oriented Development (TOD)

sites, and supporting Calgary Transit as they implement RouteAhead.

Long-Term Plans

The CTP is a key long-term plan that provides policy direction on multiple aspects of the city's transportation system. Transportation Planning will continue to champion the implementation of the CTP through key actions that support five priority areas identified by the Director's Integrated Growth Committee. These actions include supporting the implementation of the Centre City Plan through the development of an Inner City Transportation Network Plan, a Pedestrian Strategy as well as the continued implementation of the Cycling Strategy. Further actions that support these priority areas include providing input on development applications in corridors, activity centres and redevelopment areas.

Transportation Planning is responsible for the coordination of the 10-year Investing In Mobility capital infrastructure plan which will be updated in 2018. This plan will ensure that the relative support of infrastructure projects are aligned with the goals key long-term strategic plans.

RouteAhead is a 30-year strategic plan for Calgary Transit. Transportation Planning will contribute to the implementation of RouteAhead by providing support to implement the Green Line Transitway and other rapid transit corridors, design transit priority improvements, and support the implementation of the Primary Transit Network.

TRAN: Transportation Planning - Overview

Citizen Engagement

The results from Action Plan Engagement indicate that Transportation continues to be a high priority with Calgarians. Citizens indicated a high level of support for improving public transit, infrastructure, traffic, and roads. Transportation Planning will continue to engage citizens to ensure that their needs are identified, expectations are managed, and citizens have the information they require. Transportation Planning will achieve this through the implementation of the new Transportation Corridor Policy which specifically enhances engagement and the development of a citizen-focused communication program that clearly communicates the objectives of the CTP.

The demand for engagement is increasing where citizens are wanting more information and to be more involved in the decisions that affect their communities. Transportation Planning will support this need through the increased utilization of social media to encourage and enhance citizen engagement, and the provision of key transportation data through The City of Calgary's Open Data Catalogue.

Council Priorities

Transportation Planning contributes to all five Council Priorities as ensuring the health of the transportation system now, and in the future, is key to achieving objectives in Action Plan 2015-2018. Transportation Planning works to connect people, places, and communities to realize the strategic vision set out by Council.

To ensure Calgarians are able to move well and safely throughout the city, Transportation Planning will support the design and implementation of the Green Line Transitway, provide design services that maximize the flow of traffic on the existing network, and develop and implement strategies to improve infrastructure for active modes of transportation. The development and implementation of the Bikeway and Pathway

Master Plan will also ensure Calgarians have access to nature and active lifestyles.

Transportation Planning contributes to the priority of a city of inspiring neighbourhoods by providing transportation input that promotes an increase in population and employment along urban and neighbourhood corridors, facilitating the implementation of the MDP/CTP, and partnering with developers in strategic redevelopment areas to increase intensification adjacent to primary transit. A healthy and robust transportation network is necessary to achieve the Council Priority of a prosperous city. Transportation Planning will support this priority through by coordinating with the West and Southwest Ring Road projects and working with industry partners to develop a goods movement strategy that improves travel time reliability while balancing costs and physical impacts.

Transportation Planning will effectively manage public assets by updating Investing in Mobility, Transportation's 10-year capital plan and look for alternative service delivery by strengthening partnerships with key external stakeholders, and investigate alternate sources of funding. Transportation Planning will strive to be an employer of choice by developing strategic workforce plans that address changing demographics and retirements, strengthen department-wide leadership, and improving employee satisfaction.

TRAN: Transportation Planning - Actions for Council Approval

For Council Approval

Transportation Commitment:
 Transportation facilitates the efficient movement of people and goods which contributes to creating a great place to live and work.

A prosperous city
 Calgary continues to grow as a magnet for talent, a place where
 there is opportunity for all, and the best place in Canada
 to start and grow a business.

Strategy Related to Council Outcome	Business Unit Action Related to Strategy	Accountable Service
P1 Strengthen Calgary's position as a global energy centre and location of choice for international talent, investment and innovation through enhanced business development, marketing and place-making initiatives.	P1.1 Work with the Province of Alberta to facilitate the completion of the West and Southwest Ring Road Projects.	OITC, TMFR, TPP
	P1.2 Work with industry partners to develop a goods movement strategy that improves travel time reliability while balancing costs.	OITC, TMFR, TPP
	P1.3 Establish a departmental Transit Oriented Development (TOD) Coordinator to identify and align planning, infrastructure, and service provision requirements.	OITC, TPP
P3 Support civic, business and community partners, as well as business revitalization zones, to collaborate and attract local and global investment.	P3.1 Prepare a Parking Revenue Allocation Policy to reinvest parking revenue in strategic areas.	OITC, TPP



TRAN: Transportation Planning - Actions for Council Approval

For Council Approval

Transportation Commitment:

Transportation facilitates the efficient movement of people and goods which contributes to creating a great place to live and work.

P10 Enhance access to technology and information.

P10.1 Collect traffic flow and travel behaviour information to support transportation planning and projects, and report progress on Calgary Transportation Plan goals.

OITC, TMFR

P10.2 Monitor and report on Calgary Transportation Plan progress and success.

TMFR, TPP

A prosperous city
Calgary continues to grow as a magnet for talent, a place where
there is opportunity for all, and the best place in Canada
to start and grow a business.

A prosperous
city

A city of inspiring
neighbourhoods

A city that
moves

A healthy and
green city

A well-run
city

For Council Approval

A city of inspiring neighbourhoods
Every Calgarian lives in a safe, mixed and just neighbourhood,
and has the opportunity to participate in civic life.

Transportation Commitment:
Transportation ensures customers feel safe while using the transportation system. This includes supporting the development of complete communities by providing accessible and affordable transportation networks and services.

Strategy Related to Council Outcome	Business Unit Action Related to Strategy	Accountable Service
N1 Keep communities safe by meeting and maintaining standards for crime prevention, fire response, and enforcement.	N1.1 Conduct community traffic studies, including traffic calming, that investigates short-cutting and safety concerns.	OITC
	N1.2 Produce the annual traffic collision report.	TMFR
N3 Enhance The City's capacity and resiliency to prepare for and respond to pandemics, natural disasters and emergency situations.	N3.1 Update and maintain business continuity and emergency response plans.	OITC, TMFR, TPP
N5 Systematically invest in established neighbourhoods as they evolve to accommodate changing community needs.	N5.1 Develop an Inner City Transportation Network Plan.	OITC, TMFR, TPP
	N5.2 Partner with developers in redevelopment areas and activity centres to enhance approval timelines and increase intensification adjacent to Primary Transit.	TPP



For Council Approval

A city of inspiring neighbourhoods
Every Calgarian lives in a safe, mixed and just neighbourhood,
and has the opportunity to participate in civic life.

Transportation Commitment:

Transportation ensures customers feel safe while using the transportation system. This includes supporting the development of complete communities by providing accessible and affordable transportation networks and services.

N5 Systematically invest in established neighbourhoods as they evolve to accommodate changing community needs.

N5.3 Maintain Noise Barrier Retrofit Program and the surface transportation noise policy to support noise barrier installations.

TMFR, TPP

N5.4 Provide transportation input that facilitates the implementation of strategies to achieve MDP goals for redevelopment areas.

OITC, TMFR, TPP

N5.5 Provide transportation input that promotes an increase in population and employment along urban and neighbourhood corridors identified in the MDP/CTP.

OITC, TMFR, TPP

N5.6 Provide transportation input to support the implementation of the Centre City Plan.

OITC, TMFR, TPP

N6 Manage and promote growth to achieve the best possible social, environmental and economic outcomes within financial capacities.

N6.1 Develop, implement, and maintain transportation forecasting tools including the Regional Transportation Model.

TMFR

N6.2 Develop a travel behaviour forecast series to support transportation and land use studies.

OITC, TMFR, TPP



For Council Approval

A city of inspiring neighbourhoods
Every Calgarian lives in a safe, mixed and just neighbourhood,
and has the opportunity to participate in civic life.

Transportation Commitment:

Transportation ensures customers feel safe while using the transportation system. This includes supporting the development of complete communities by providing accessible and affordable transportation networks and services.

N6 Manage and promote growth to achieve the best possible social, environmental and economic outcomes within financial capacities.

N6.3 Implement the four-year Parking Policy work plan.

TPP

N7 Develop a new funding framework to provide for infrastructure in new and redeveloping neighbourhoods.

N7.1 Support work with City and industry stakeholders to update and implement a new Standard Development Agreement and a new Subdivision Agreement.

TPP

N8 Make it easier to build developments that meet our Municipal Development Plan and Calgary Transportation Plan objectives.

N8.1 Develop a citizen focused communication program that clearly communicates MDP/CTP objectives as outlined in the Transportation Corridor Policy.

OITC, TMFR, TPP

N8.2 Conduct corridor studies to establish infrastructure alignment and right of way requirements for the ongoing development of the transportation network.

TMFR, TPP



Transportation Commitment:

Transportation ensures customers feel safe while using the transportation system. This includes supporting the development of complete communities by providing accessible and affordable transportation networks and services.

N9 Provide great public spaces and public realm improvements across the city to foster opportunity for well used public spaces and places for citizen connections and urban vitality.

N9.1 Coordinate the implementation of the Complete Streets Guide.

OITC, TPP

A city of inspiring neighbourhoods
Every Calgarian lives in a safe, mixed and just neighbourhood,
and has the opportunity to participate in civic life.

A prosperous city

A city of inspiring neighbourhoods

A city that moves

A healthy and green city

A well-run city

For Council Approval

Transportation Commitment:
 Transportation provides safe, customer-focused, efficient, sustainable transportation infrastructure, choices and services in an accessible and affordable manner.

A city that moves
 People and goods can move well and safely throughout the city,
 using a variety of convenient, affordable, accessible and
 efficient transportation choices.

Strategy Related to Council Outcome	Business Unit Action Related to Strategy	Accountable Service
M1 Implement and accelerate RouteAhead as transit funding becomes available.	M1.1 Provide transportation planning and engineering support to begin the implementation of the Green Line Transitway and other rapid transit corridors.	OITC, TMFR, TPP
	M1.2 Coordinate Transportation Planning projects with Calgary Transit and RouteAhead implementation.	OITC, TPP
M2 Maximize the flow of traffic on the existing transportation network through the application of technology.	M2.1 Plan and implement transportation system management, congestion relief, and optimization projects including transit priority and emergency vehicle projects.	OITC, TMFR, TPP
M3 Invest in strategic road improvements in priority growth areas as funding becomes available.	M3.1 Provide transportation design services to develop projects that provide better connectivity and improve the operation of existing infrastructure.	OITC, TMFR, TPP
	M3.2 Develop a High Occupancy Vehicle (HOV) implementation strategy.	TMFR, TPP



For Council Approval

A city that moves
 People and goods can move well and safely throughout the city,
 using a variety of convenient, affordable, accessible and
 efficient transportation choices.

Transportation Commitment:

Transportation provides safe, customer-focused, efficient, sustainable transportation infrastructure, choices and services in an accessible and affordable manner.

M3 Invest in strategic road improvements in priority growth areas as funding becomes available.

M3.3 Conduct functional studies to establish land and infrastructure requirements for the ongoing development of the transportation network.

TMFR, TPP

M4 Invest in active transportation infrastructure, including cycling and pedestrian networks as funding becomes available.

M4.1 Provide recommendations on the implementation and evaluation of the Centre City Cycle Track Pilot Project.

OITC, TMFR

M4.2 Implement recommendations from the Cycling Strategy including developing of a Bicycle Design Guide, and the ongoing installation of bikeways across the city.

OITC

M4.3 Ensure pedestrian, cyclist, and transit needs are included in the ring road project and connecting facilities.

OITC, TPP

M4.4 Plan and implement the Pedestrian Strategy.

OITC, TMFR, TPP



TRAN: Transportation Planning - Actions for Council Approval

For Council Approval

Transportation Commitment:
 Transportation evaluates innovative ways to affordably reduce our environmental impact when delivering transportation projects and services.

A healthy and green city
 We steward our air, land, and water while encouraging healthy lifestyles for all Calgarians.

Strategy Related to Council Outcome	Business Unit Action Related to Strategy	Accountable Service
H9 Optimize the existing parks network to ensure Calgarians have access to nature and healthy and active lifestyles.	H9.1 Complete a city-wide Pathway and Bikeway Master Plan.	OITC, TPP



For Council Approval

Transportation Commitment:
 Transportation provides affordable transportation options while maintaining (and expanding where funding is available) service levels. This includes providing timely, accurate information to key decision makers and citizens.

A well-run city
 Calgary's government is open, responsive, accountable and transparent, delivering excellent services at a fair price. We work with our government partners to ensure we have the tools we need.

Strategy Related to Council Outcome	Business Unit Action Related to Strategy	Accountable Service
W2 Be as efficient and effective as possible, reducing costs and focusing on value-for-money.	W2.1 Review Transportation Planning services to assess efficiency, effectiveness, and value to customers such as evaluating the co-location of CPAG staff.	OITC, TMFR, TPP
	W2.2 Convert under utilized workstations into unassigned drop-in desks to optimize administrative spaces as per the Tomorrow's Workplace Strategy.	OITC, TMFR, TPP
W3 Examine opportunities for alternative service delivery for competitiveness.	W3.1 Continue to investigate alternate funding strategies to implement key transportation plans.	TMFR, TPP
	W3.2 Implement an advertising-based coordinated street furniture program.	TPP



For Council Approval

A well-run city
 Calgary's government is open, responsive, accountable and transparent, delivering excellent services at a fair price. We work with our government partners to ensure we have the tools we need.

Transportation Commitment:

Transportation provides affordable transportation options while maintaining (and expanding where funding is available) service levels. This includes providing timely, accurate information to key decision makers and citizens.

W6 Effectively manage The City's inventory of public assets, optimizing limited resources to balance growth and maintenance requirements.

W6.1 Update the 10-year Investing in Mobility Plan in 2018 to ensure alignment with the CTP/MDP and Growth Management Framework.

OITC, TMFR, TPP

W6.2 Develop and refine Asset Management plans including Tangible Capital Asset Improvement initiatives.

TMFR

W7 Continue to transform the organization to be more citizen-focused in its approach and delivery of service.

W7.1 Review and improve 311 completion times to ensure quality customer service is maintained.

OITC, TMFR, TPP

W7.2 Create a Frequently Asked Questions webpage to identify and address five key questions from citizens and permit applicants.

OITC, TMFR, TPP

W7.3 Utilize social media to enhance online citizen participate and input to transportation planning work.

OITC, TMFR, TPP

W7.4 Recognize staff for excellent customer service.

OITC, TMFR, TPP



For Council Approval

A well-run city
 Calgary's government is open, responsive, accountable and transparent, delivering excellent services at a fair price. We work with our government partners to ensure we have the tools we need.

Transportation Commitment:
 Transportation provides affordable transportation options while maintaining (and expanding where funding is available) service levels. This includes providing timely, accurate information to key decision makers and citizens.

W9 Strive to be an employer of choice with a focus on addressing The City's aging workforce.

W9.1 Pilot, evaluate, and implement the Employee Mobility Program.

OITC, TPP

W9.2 Develop a strategic workforce plan to address changing demographics and retirements.

OITC, TMFR, TPP

W9.3 Strengthen department-wide leadership effectiveness and improve employee satisfaction.

OITC, TMFR, TPP



TRAN: Transportation Planning - Lines of Service

Breakdown of Operating Budget by Service (\$000) (Totals may not add due to rounding)															
	2014			2015			2016			2017			2018		
	\$ Exp	\$ Net	FTEs	\$ Exp	\$ Net	FTEs	\$ Exp	\$ Net	FTEs	\$ Exp	\$ Net	FTEs	\$ Exp	\$ Net	FTEs
Director's Office	5,073	1,222	6.0	5,086	1,235	6.0	5,102	1,251	6.0	5,120	1,269	6.0	5,120	1,269	6.0
Optimizing & Improving Transportation Choice	4,085	3,813	17.0	3,862	3,590	17.0	3,160	2,888	17.0	3,165	2,893	17.0	3,156	2,884	17.0
Transportation Monitoring, Forecasting & Reporting	3,298	3,205	27.5	3,359	3,266	27.5	3,429	3,335	27.5	3,507	3,413	27.5	3,527	3,433	27.5
Transportation Planning Policy	4,214	3,427	33.5	4,261	3,473	33.5	4,312	3,524	33.5	4,368	3,580	33.5	4,390	3,603	33.5
Total Business Unit	16,670	11,666	84.0	16,568	11,564	84.0	16,003	10,999	84.0	16,160	11,156	84.0	16,193	11,189	84.0

The Transportation Planning Director's Office budget includes the Provincial Fuel Tax Grant which is used to fund designs for interchanges and road improvements, Centre City mobility projects, and city-wide active mode projects. This accounts for 76 per cent of the Director's Office budget. The remainder of the budget is used to fund staff salaries, communications services, internal services, office materials, and business expenses.

Optimize and Improve Transportation Choice will receive one time funding allocations of \$750 thousand in 2015 and \$50 thousand in each of 2016, 2017, and 2018. This funding will be used to implement recommendations from Cycling Strategy including the development of a city-wide Bikeway and Pathway Master Plan, and a Bike Design Guide.

All lines of service will be maintained and a slight increase in funding is included to reflect union salary and wage agreements. FTEs in Transportation Planning between 2015 and 2018 will remain the same.

TRAN: Transportation Planning - Lines of Service

All \$ values are in Thousands (\$000)

Optimizing & Improving Transportation Choice	2014			2015			2016			2017			2018		
	\$ Exp	\$ Net	FTEs	\$ Exp	\$ Net	FTEs	\$ Exp	\$ Net	FTEs	\$ Exp	\$ Net	FTEs	\$ Exp	\$ Net	FTEs
	4,085	3,813	17.0	3,862	3,590	17.0	3,160	2,888	17.0	3,165	2,893	17.0	3,156	2,884	17.0

Improving active modes through the development of the Pedestrian Strategy and a city-wide Bikeway and Pathway Master Plan. These plans will review the needs of pedestrian and cyclists across the city and recommend infrastructure improvement. OITC will coordinate, evaluate and provide recommendation for the Centre City Cycle Track Pilot Project.

To ensure that all modes of travel can move well and safely throughout the city, OITC will design and implement high benefit, low cost transportation system management and transit priority projects that benefit the whole transportation network.

Transportation Monitoring, Forecasting & Reporting	2014			2015			2016			2017			2018		
	\$ Exp	\$ Net	FTEs	\$ Exp	\$ Net	FTEs	\$ Exp	\$ Net	FTEs	\$ Exp	\$ Net	FTEs	\$ Exp	\$ Net	FTEs
	3,298	3,205	27.5	3,359	3,266	27.5	3,429	3,335	27.5	3,507	3,413	27.5	3,527	3,433	27.5

Provides support to the Transportation Department through the collection of travel behaviour information and the development and maintenance of travel forecasting tools such as the Regional Transportation Model (RTM). This will include conducting transportation studies that collect volumes for all modes of travel, speeds, shortcutting, mode choice,

parking, and collisions. Additional household travel information will be collected through a continuous survey program which will collect travel behaviour information throughout the year to monitor progress towards CTP objectives.

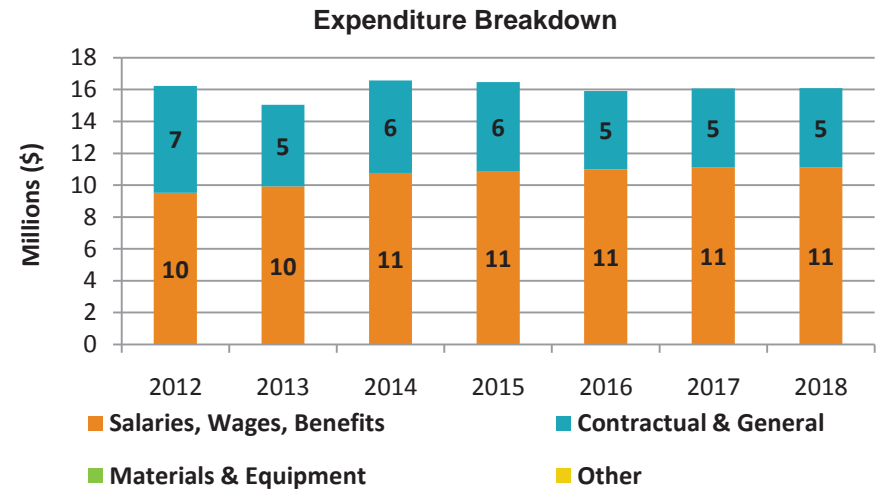
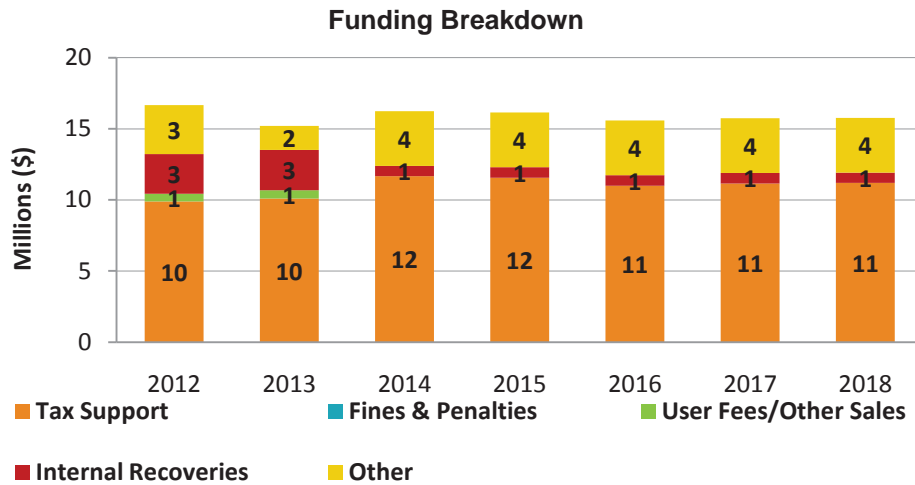
Transportation Planning Policy	2014			2015			2016			2017			2018		
	\$ Exp	\$ Net	FTEs	\$ Exp	\$ Net	FTEs	\$ Exp	\$ Net	FTEs	\$ Exp	\$ Net	FTEs	\$ Exp	\$ Net	FTEs
	4,214	3,427	33.5	4,261	3,473	33.5	4,312	3,524	33.5	4,368	3,580	33.5	4,390	3,603	33.5

TPP will facilitate the planning and design of infrastructure, and establish infrastructure needs and services for new urban and suburban developments. This service includes an update of the 10-year Investing in Mobility Plan in 2018, providing transportation engineering input to the

review of development applications, and conducting functional and corridor planning studies to ensure infrastructure needs in the future can be protected.

TRAN: Transportation Planning - Breakdown of the Operating Budget

Totals may not match due to rounding



Funding Breakdown - Approximately 70 per cent of Transportation Planning's funding is tax supported. The remainder of the funding comes from Provincial Fuel Grants and internal recoveries.

Expenditures - Employee salary and wages compose approximately 70 per cent of Transportation Planning expenditures. The remaining expenditures are contractual and general expenses which include external consultants as well as general office expenses.

TRAN: Transportation Planning - Breakdown of the Net Operating Budget

Totals may not add due to rounding

Breakdown of Net Operating Budget Changes (\$000s)	2015	2016	2017	2018
Previous Year's Budget	11,666	11,564	10,999	11,156
Less: Previous Year One Time	(964)	(750)	(50)	(50)
Base	10,702	10,814	10,949	11,106
Efficiency Gains	(49)	(45)	(41)	(31)
Inflation	162	180	198	64
Service and Budget Increase	0	0	0	0
Operating Impact of Previously Approved Capital	0	0	0	0
Operating Impact of New Capital (Incremental)	0	0	0	0
Re-alignments	(1)	0	0	0
One Time	750	50	50	50
Total Budget Change	862	185	207	83
Total Budget	11,564	10,999	11,156	11,189

The impact of growth is minimal in Transportation Planning. The cost of growth is reflected as a slight increase in demand for services related to the development permit process, and internal planning and policy work to support growth priorities. This impact is negligible and Transportation Planning will absorb the cost of growth within existing staff levels.

Transportation Planning will continue to reduce expenditures. Staff expertise in a number of priority areas such as infrastructure design and

active mode planning has resulted in less need for external consulting services.

Transportation Planning will use one-time funding allocations of \$750 thousand in 2015 and \$50 thousand in each of 2016, 2017, and 2018 to implement the city-wide Bikeway and Pathway Master Plan and Bicycle Design Guidelines.

TCA Depreciation (\$000s) - Transportation Planning			
2015	2016	2017	2018
104	104	111	66

TCA Depreciation content is presented for information only.

TRAN: Transportation Planning - Operating Budget for Council Approval

For Council Approval

Transportation Planning															
Total Operating Budget (\$000s) for Approval (Totals may not match due to rounding)															
	2012 Actual	2013 Actual	2014 Total Budget (as of June 30)	2015 Budget			2016 Budget			2017 Budget			2018 Budget		
				Base	One- Time	Total	Base	One- Time	Total	Base	One- Time	Total	Base	One- Time	Total
Expenditures	16,667	15,207	16,670	15,818	750	16,568	15,953	50	16,003	16,110	50	16,160	16,143	50	16,193
Recoveries	(2,796)	(2,826)	(731)	(731)	0	(731)	(731)	0	(731)	(731)	0	(731)	(731)	0	(731)
Revenue	(3,976)	(2,295)	(4,273)	(4,273)	0	(4,273)	(4,273)	0	(4,273)	(4,273)	0	(4,273)	(4,273)	0	(4,273)
Net	9,895	10,086	11,666	10,814	750	11,564	10,949	50	10,999	11,106	50	11,156	11,139	50	11,189
FTEs	81.0	79.0	84.0	84.0	0.0	84.0	84.0	0.0	84.0	84.0	0.0	84.0	84.0	0.0	84.0

Transportation: General Manager - Operating Budget for Council Approval

For Council Approval

Transportation: General Manager															
Total GM Operating Budget (\$000s) (Totals may not add due to rounding)															
	2012 Actual	2013 Actual	2014 Total Budget (as of June 30)	2015 Budget			2016 Budget			2017 Budget			2018 Budget		
				Base	One- Time	Total	Base	One- Time	Total	Base	One- Time	Total	Base	One- Time	Total
Expenditures	2,888	3,600	2,565	2,608	0	2,608	2,659	0	2,659	2,716	0	2,716	2,721	0	2,721
Recoveries	(1,269)	(1,511)	(553)	(553)	0	(553)	(553)	0	(553)	(553)	0	(553)	(553)	0	(553)
Revenue	0	(101)	0	0	0	0	0	0	0	0	0	0	0	0	0
Net	1,619	1,987	2,012	2,055	0	2,055	2,106	0	2,106	2,163	0	2,163	2,168	0	2,168
FTEs	18.0	19.0	19.0	19.0	0.0	19.0	19.0	0.0	19.0	19.0	0.0	19.0	19.0	0.0	19.0

TAB A-1(E)

Investing in Mobility

2015-2024 Transportation Infrastructure Investment Plan



2015-1595

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Onward! Align transportation planning and infrastructure investment with city and regional land use directions and implementation strategies.



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MESSAGE FROM THE GENERAL MANAGER



*Transportation General Manager,
Mac Logan*

Investing in Mobility is a strategic outline that defines the priority and timing of transportation-related capital projects over the next 10 years. It is intended to help inform Council's capital budget decisions for Action Plan 2015-2018 and beyond, and meet the priority needs of Calgarians.

This Investing in Mobility program aligns as much as possible with our corporate and departmental priorities, such as the Calgary Transportation Plan and the Corporate Growth Management Framework. This includes projects such as the Green Line Program and other RouteAhead rapid transit corridors, as well as major roadway projects that will link new communities and the Southwest and West Ring Roads to the rest of Calgary.

Funding constraints, both in terms of total funding and eligibility constraints of different grant programs, continue to influence which projects will receive funding. Due to these funding constraints, two key types of infrastructure will be significantly underfunded over the next 10 years:

- Supporting infrastructure for Calgary Transit, such as maintenance facilities, bus purchases and technology maintenance and upgrades.
- Upgrades to the Primary Goods Movement Network that could improve travel times and increase reliability for the movement of goods and services.

To address every project on the priority list, we'd need \$5.6 billion over the next 10 years, an increase from previous estimates based on a more detailed assessment of supporting infrastructure and growth management needs. We expect available funding to be up to \$3.7 billion over the next 10 years. This leaves a gap of \$1.9 billion in unfunded projects. Consistent with previous Council direction, Transportation's proposed capital plan emphasizes investments that will make sure existing road and transit capacity are available and reliable. The other main focus is optimizing the existing networks for all modes of transportation.

Securing new funding sources is a high priority. We are looking at options, and will identify potential solutions in coordination with Council and The City Manager's Office. Our January 2014 report to Council on alternative funding and financing mechanisms identified a wide range of potential tools. Of particular interest are true user-pay mechanisms, such as an updated form of Provincial and Federal fuel taxes, and land-based tools that capture value from new investments and land use developments.

Until new, reliable sources of funding are available, Transportation will continue to focus its resources on the highest priority projects that meet the needs of Calgarians today, while achieving Calgary's long-term goals.

TYPES OF TRANSPORTATION INFRASTRUCTURE

Keeping Calgarians on the move, whether by foot, bicycle, public transit or vehicles, requires thoughtful consideration and long-term planning. It also requires investment in a wide variety of infrastructure, from new construction to maintenance of existing systems.

Investing in Mobility is structured around four infrastructure categories that are designed to meet Calgary's transportation needs and address the needs of Calgarians as they live, work, shop, and play in our city over the next 10 years. The four infrastructure categories are described in detail in this report.

Section 2

Mobility Hubs and Transit Corridors



Section 3

Goods Movement and Traffic Growth



Section 4

Transportation Network Optimization



Section 5

Lifecycle and Asset Management



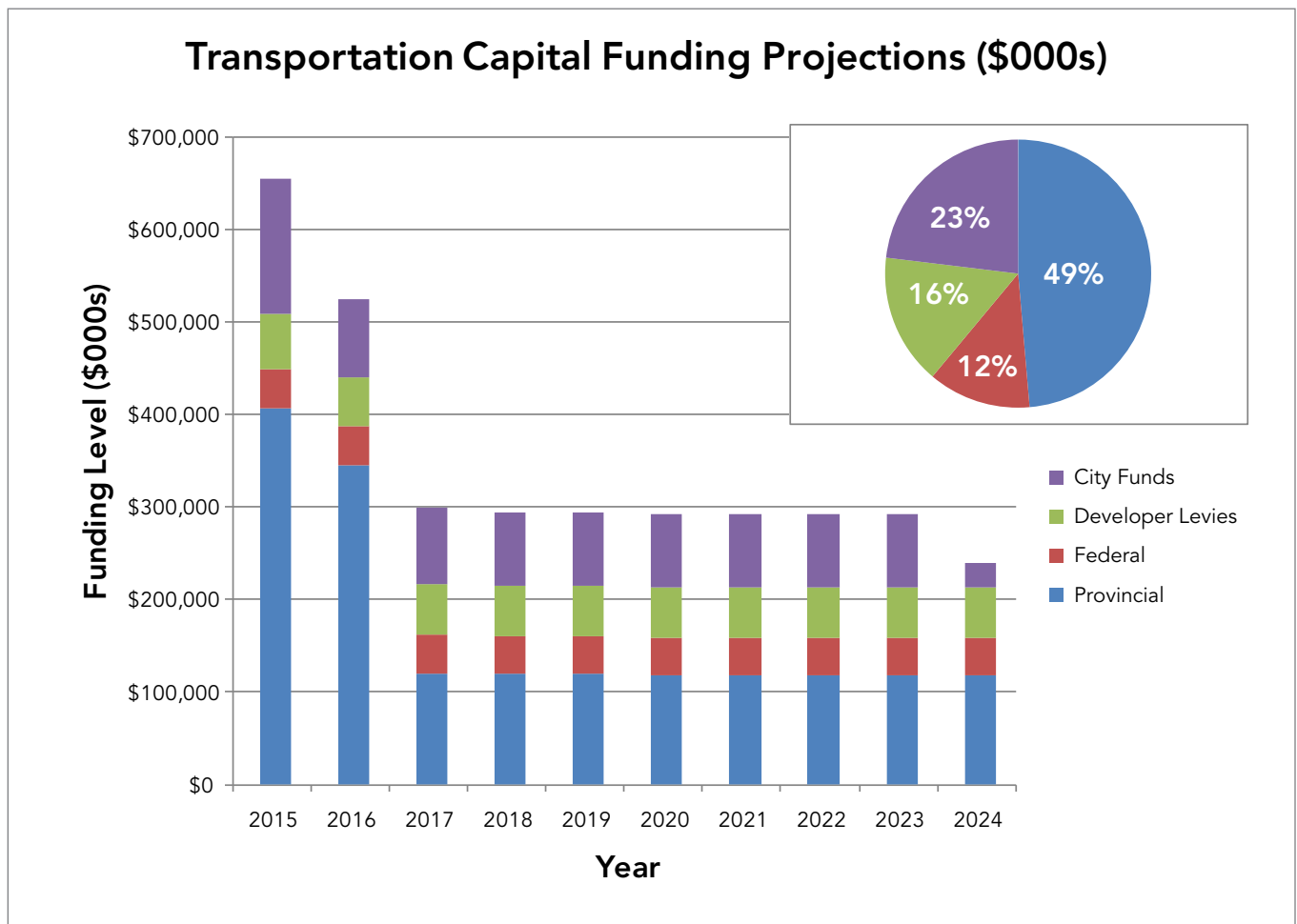
The report showcases the major projects and annual programs that make up each category. Support functions are also summarized separately in **Section 6**. The cost and number of projects in each category varies considerably.

A number of projects have also been identified by the Transportation Department in response to the flood of 2013, and are listed in **Section 7**. Transportation will continue to seek funding from the Province to address these flood-mitigation projects. However, the infrastructure needs in the four main infrastructure categories are required immediately to maintain the current system and accommodate growth, and therefore take priority for regular Transportation funding.

FUNDING NEEDS

Transportation has identified that **\$5.6 billion** in funding is required between 2015 and 2024. This is based on the policies and infrastructure data in the Calgary Transportation Plan (CTP), RouteAhead and the Corporate Growth Management Framework. However, funding for capital transportation projects is expected to continue declining as a number of provincial and federal funding programs come to an end. The Provincial Municipal Sustainability Initiative (MSI) will end in 2017, and no replacement grant program has been announced. Transportation is also projecting that fuel tax revenues from the Province will begin to decline later this decade as new fuel efficiency standards exceed growth rates.

Transportation anticipates having up to **\$3.7 billion** in funding over the next decade, resulting in a **\$1.9 billion** gap in funding. Securing new, consistent and flexible funding sources to reduce this gap continues to be a high priority.

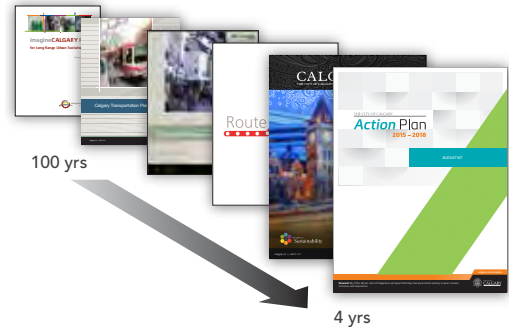


This diagram does not include the remaining \$167 million in GreenTRIP funding committed by the Province, or potential Federal Building Canada Fund grants, since the timing for both programs is currently unknown.

FOCUSING ON PRIORITIES

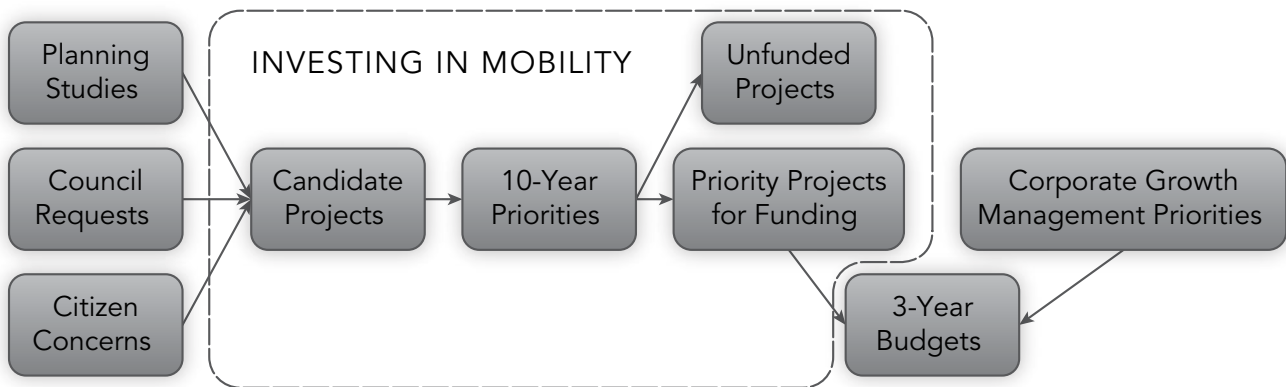
Capital transportation projects are selected and prioritized based on key directional and policy documents, along with feedback collected through multiple public engagement opportunities. Key documents include:

- imagineCalgary
- Calgary Transportation Plan (CTP)
- Municipal Development Plan (MDP)
- RouteAhead (Calgary Transit’s 30-year Strategic Plan)
- 2020 Sustainability Direction
- Corporate Growth Management Framework



Investing in Mobility uses objective evaluation criteria based on these key documents to help prioritize projects in each of the four infrastructure categories. Details on the prioritization criteria are provided on pages 8 to 11.

The following chart shows how transportation projects are prioritized and funded:



Due to the \$1.9 billion funding gap expected over the next 10 years, only the highest priority projects in each category can receive funding. Some annual programs will also experience budget constraints.

In response to the anticipated gap, Investing in Mobility focuses on maximizing the use and quality of existing infrastructure. This maximizes available funding for:

- Transportation Network Optimization (low cost, high value projects).
- Lifecycle and Asset Management.

Project priorities and funding availability will be reviewed every four years as part of The City’s four-year business planning and budgeting cycle.

PRIORITIZATION CRITERIA

Investing in Mobility prioritizes capital transportation infrastructure projects and annual programs based on objective evaluation criteria. Analysis of the criteria is based on planning, engineering and computer-based studies (described in the Support Functions section) as well as extensive data collected by the Transportation department. Prioritization criteria are an essential tool to assist in determining which infrastructure investments should be funded. **Other factors such as funding eligibility constraints, direction from the corporate growth management framework and City Council also influence the prioritization of infrastructure projects.**

Different criteria are required for different types of transportation projects and programs to reflect the unique role each type of infrastructure plays in the transportation system. These criteria are as follows:

ANNUAL PROGRAM PRIORITIZATION

All annual programs are core business requirements that must be undertaken perpetually. The Transportation department has a wide range of annual programs. Implementation of city-wide pedestrian and bicycle facilities, new or replacement bus purchases, LRT track repair, noise wall construction, and pavement rehabilitation are just a few examples. However, funding constraints mean that not all programs can be allocated enough funding to meet the demand. In order to determine the amount of funding that should be allocated to each program, all annual programs in the four Investing in Mobility infrastructure categories were prioritized using the same criteria.

Investing in Mobility uses the following criteria to determine annual program funding priority. Programs that rank high in all three criteria receive funding that will meet the demand. Programs that rank low in all three criteria receive minimum levels of funding, depending on overall cash flow constraints.

- » *Responsiveness to citizen concerns* considers whether a program is directly addressing common concerns identified through The City's 311 system. This helps to ensure that Transportation is addressing issues for Calgarians.
- » *Contribution to the 2020 Sustainability Direction* evaluates how well each program meets one or more targets set out in the 2020 plan. The targets in the 2020 plan are a key milestone in achieving The City's long-term vision.
- » *Contribution to Transportation's business plan and budget* evaluates how well each program aligns with the current Council-approved business plan and budget. This ensures that The City achieves the infrastructure and service commitments made to citizens through the budgeting process.

PRIORITIZATION CRITERIA

MOBILITY HUBS AND TRANSIT CORRIDORS PRIORITIZATION

The major infrastructure projects (such as new transitways or complete streets) in the Mobility Hubs and Transit Corridors category used more detailed criteria to determine which candidate projects should be included in the Investing in Mobility 10-year plan. Given the high cost and complexity of these major projects, the detailed criteria ensure that limited funds are allocated to projects that will provide the greatest benefit to citizens and the transportation system.

Mobility Hubs, otherwise known as transit-oriented developments (TODs), anchor the Primary Transit Network and are the first of two infrastructure types with unique criteria. Infrastructure projects identified for each mobility hub are designed to support mobility choice and strategic intensification in these locations. Additional non-transportation investments may be required in these locations but are not identified through the Investing in Mobility process.

Along with direction from the corporate growth management framework, the following factors are considered in this evaluation process:

- » **Contribution to Mobility Choice** identifies which mobility hubs play the greatest role in the transportation system, now and in the future. The evaluation examines current levels of transit activity, future Primary Transit Network connectivity, active mode accessibility and land use support for Primary Transit levels of service.
- » **Development Potential** examines market readiness and the preparedness of the Transportation department to invest in different mobility hubs based on development trends (past and future) as well as the presence of up-to-date transportation and land use plans.
- » **Additional Benefits** indicate whether investment in a mobility hub can achieve broader Transportation and City goals. The evaluation addresses the ability to meet social needs, and potential contributions to existing lifecycle and asset management issues.



Westbrook CTrain station

PRIORITIZATION CRITERIA

MOBILITY HUBS AND TRANSIT CORRIDORS PRIORITIZATION (CONT.)

Transit Corridors are the second type of infrastructure in this category with unique criteria. Transit Corridors include light rail transit (LRT), bus rapid transit (BRT) and other major infrastructure required to support the Primary Transit Network as defined in the Calgary Transportation Plan. The evaluation process for transit corridors has been developed in partnership with Calgary Transit's RouteAhead project team.

The following factors are considered in this evaluation process:

- » **Customer Experience** emphasizes the need to support and retain existing riders while improving service to attract new ridership. The evaluation addresses transit travel time, reliability and passenger capacity.
- » **Support from Land Use** acknowledges the crucial role that land use intensity and development plays in creating a well-functioning transit system. The evaluation addresses the ability to serve high-priority mobility hubs and accessibility to transit services.
- » **Cost-Benefit** determines which transit investments have the greatest impact relative to overall costs. The evaluation addresses project costs, the ability to support high-ridership (and revenue) corridors, and potential contributions to existing life-cycle and asset management issues.

Prioritization of some major projects results in the need for new maintenance facilities or vehicles, and equipment. These projects are identified as 'required' in the funded list for the Mobility Hubs and Transit Corridors category, and are designed to accommodate the needs of new transit infrastructure within funding constraints.



Centre Street bus lane

PRIORITIZATION CRITERIA

GOODS MOVEMENT AND TRAFFIC GROWTH PRIORITIZATION

Major projects such as interchanges and road widening in the Goods Movement and Traffic Growth category also require more detailed prioritization criteria. The criteria used for these projects are an evolution of the criteria that the Transportation department has used for major road projects in previous infrastructure investment plans. As with Mobility Hubs and Transit Corridors, the detailed criteria ensure that limited funds are allocated to projects that will provide the greatest benefit to citizens and the transportation system.

The following factors are considered in this evaluation process:

- » **Goods Movement / Network Benefit** determines which candidate projects will provide the greatest benefit by both resolving current bottlenecks and move The City towards the long-term goals of the Calgary Transportation Plan. The evaluation considers a wide range of factors including cost-benefit, existing bottlenecks, support for goods movement and major traffic corridors, improving reliability, and other network considerations such as missing links.
- » **Additional Benefits** include factors that focus goods movement and traffic investments where they can have the greatest overall impact. The evaluation addresses support for other modes of transportation, safety improvements, support for development (as per MDP policy 5.2.5.b) and potential contributions to existing lifecycle and asset management issues.

The lists projects and annual programs, along with a project map, on the next three pages show which projects and programs are either already funded through Transportation's 2012-2014 business plan and budget, or are recommended for funding over the next decade based on the Investing in Mobility prioritization process.

Sections 2 through 6 of this document list all projects and programs that are funded and recommended for funding in each infrastructure category, along with projects and programs that will be unfunded until new funding sources are secured.

PRIORITY LEVELS

The prioritization levels for each of the projects in Investing in Mobility are as follows:

- **Approved** - the project has received previous budget approval from Council.
- **Required** - the project must be undertaken to fulfil Council direction, or to support other projects identified in the plan.
- **High/Medium** - reflects the relative priority of all other projects within the plan (Low priority projects fall outside the 10-year Investing in Mobility horizon).

OVERVIEW OF FUNDED PROJECTS

PROJECT		PRIORITY	FUNDED* (\$MILLIONS)	UNFUNDED (\$MILLIONS)
-	Train Cars for LRT (Growth)	Required	\$66	\$80
A	Westbrook LRT Operations Control Centre (OCC)	Required	\$25	\$7
B	Chinook Station Transit Oriented Development (TOD)	Required	\$20	-
C	Transit Fleet Maintenance Facilities	High	\$108	\$133
D	Green Line Program (Centre Street & Southeast Transitways combined)	High	\$524	\$150
E	17 Avenue S.E. Transitway - 26 Street S.E. to Hubalta Road	High	\$98	-
F	Southwest Transitway - Downtown to Woodbine	High	\$40	-
G	North Cross-Town Bus Rapid Transit (BRT)	Medium	\$50	-
H	South Cross-Town Bus Rapid Transit (BRT)	Medium	\$20	-
I	Foothills Hospital / Stadium / Banff Trail Transit Oriented Development (TOD)	Medium	\$32	-
M	Trans Canada Highway and Bowfort Road Interchange	Approved	\$49**	-
N	Crowchild Trail and Flanders Avenue Interchange Upgrade	Approved	\$20	-
O	Glenmore Trail and Ogden Road Interchange	Approved	\$105**	-
P	Southwest and West Ring Road Connections	Required	\$133	-
Q	Priddis Slough Crossing (194 Avenue S.) and CPR Grade Separation (GM)	Required	\$47	-
R	Stoney Trail and 60 Street N.E. Ramps (GM)	Required	\$6	-
S	88 Street S.E. Skeletal Road Extension (GM)	Required	\$17	-
T	Stoney Trail and 11 Street N.W. Ramps (GM)	Required	\$6	-
U	Deerfoot Trail and 212 Avenue S.E. Ramps (GM)	Required	\$16	-
V	Macleod Trail and 162 Avenue S. Interchange	High	\$55	-
W	McKnight Boulevard Widening - 12 Street N.E. to 19 Street N.E.	High	\$17	-
X	Peigan Trail Twinning - Barlow Trail to Stoney Trail	High	\$35	-
Y	Stoney Trail and 14 Street N.W. Interchange (GM)	High	\$60	-
Z	Stoney Trail and Centre Street Interchange Upgrade	Medium	\$15	-
AA	Stoney Trail and Shaganappi Trail Interchange Upgrade	Medium	\$15	-
AB	61 Avenue S.E. Extension - 68 Street S.E. to Ring Road	Medium	\$3**	-
AC	Macleod Trail and 194 Avenue / 210 Avenue Improvements	Medium	\$70	-
-	Next Generation Traffic Management Centre	High	\$8	\$4
-	Train Cars for LRT (Replacement)	Required	\$278	-
AP	Vehicle Bridge Replacement - 12 Street S.E. (Zoo)	High	\$19	-
AQ	Vehicle Bridge Replacement - 9 Avenue S.E. (Inglewood)	High	\$11	-

* Pending Council approval through Action Plan budgets. Amounts reflect 2015 to 2024 budget years only.

** Value is remaining budget for 2015 - 2024

INFRASTRUCTURE TYPES

Mobility Hubs and Transit Corridors

Goods Movement and Traffic Growth

Transportation Network Optimization

Life-cycle and Asset Management

OVERVIEW OF FUNDED PROGRAMS

ANNUAL PROGRAMS		PRIORITY	FUNDED* (\$MILLIONS)	UNFUNDED (\$MILLIONS)
Traction Power Upgrade		Required	\$36	\$3
Bus and Community Shuttle Purchases (Growth)		High	\$60	\$101
*	Centre City Mobility Program	High	\$65	-
Transit Buildings & Stations		High	\$10	\$18
Auxiliary Vehicles		Medium	\$7	-
New Traffic Signals / Pedestrian Corridors		Medium	\$23	-
Roads Equipment and Systems		Medium	\$8	\$7
Noise Barriers		Medium	\$9	-
Subdivision Road Construction		Medium	\$13	-
Development of Subdivision Access Roads		Medium	\$40	\$7
Pathway Missing Links (Parks)		Required	\$30	-
Traffic Congestion Relief		High	\$6	\$14
Primary Transit Network Optimization		High	\$10	\$30
Various Street Improvements (VSI)		High	\$30	-
Safety Improvements		High	\$10	-
City-Wide Active Modes Program		High	\$32	-
Operational Improvements on Roads & Streets		Medium	\$83	-
Intelligent Transportation Systems		Medium	\$9	\$17
Transit Reliability		High	\$6	\$14
Pavement Rehabilitation		High	\$100	\$73
Asphalt Surface Overlay		High	\$25	-
Major Road Reconstruction		High	\$106	-
Bus and Community Shuttle Purchases (Replacement)		High	\$135	\$25
Bridge Rehabilitation and Protection		High	\$100	\$20
Traffic Signals / Pedestrian Corridor Lifecycle		High	\$43	\$20
Pedestrian Bridge Replacement and Upgrading		High	\$58	-
Streetlights - Maintenance & Upgrades		High	\$52	\$27
Transit Physical Security Measures		High	\$2	-
Train Car Refurbishment		Medium	\$43	-

* Pending Council approval through Action Plan budgets. Amounts reflect 2015 to 2024 budget years only.

OVERVIEW OF FUNDED PROGRAMS

ANNUAL PROGRAMS	PRIORITY	FUNDED* (\$MILLIONS)	UNFUNDED (\$MILLIONS)
Bus Refurbishment	Medium	\$37	\$2
LRT Infrastructure Rehabilitation	Medium	\$88	\$13
Transit Building Lifecycle Rehabilitation	Medium	\$24	\$11
Roads Plants Capital	Medium	\$3	-
Roads District Yards and Depots	Medium	\$7	-
Activity Centre and Corridor Maintenance	Medium	\$6	-
Transit Signals and Communication	Medium	\$31	\$25
Access Calgary Technology	Medium	\$9	\$3
Transit Technology Upgrades and Sustainment	Medium	\$14	\$22
Fare Collection Equipment	Medium	\$9	\$19
Slope Stabilization	Medium	\$5	-
Local Improvement Paving and Sidewalk	Medium	\$6	\$19
Transit Security Technologies	Medium	-	\$5
Transit Public Safety and Enforcement Technologies	Medium	-	\$4
Transit Training Simulators	Medium	-	\$4
Transit Parking Lot Asset Management	Medium	-	\$3
Functional Studies	Required	\$25	-
Detailed Design Studies	Required	\$20	-
Regional Transportation Model	Required	\$7	-
MSI Financing Costs	Required	\$45	-
Future Land	High	\$143	-

* Pending Council approval through Action Plan budgets. Amounts reflect 2015 to 2024 budget years only.

LEGEND	
Mobility Hubs and Transit Corridors	Lifecycle and Asset Management
Goods Movement and Traffic Growth	Support Functions
Transportation Network Optimization	



Sunalta

ENTRANCE

ENTRANCE

SECTION 2: MOBILITY HUBS AND TRANSIT CORRIDORS



WHAT IS IT?

Projects and annual programs in this category include major transit infrastructure, and capital investments that support intensified development along roadways and around key mobility hubs (i.e., transit-oriented development). Investments in these locations will make better use of existing infrastructure, and focus on more sustainable travel options, such as walking, cycling and transit.

TYPES OF PROJECTS INCLUDE:

- Light rail transit (LRT), bus rapid transit (BRT) and other investments in the RouteAhead rapid transit network.
- Complete streets, streetscape enhancements and other active modes infrastructure.
- Major road infrastructure to support intensification.
- Transit maintenance facilities.

WHY IS IT IMPORTANT?

Targeted investments in high priority mobility hubs and transit corridors will encourage development of higher density residential and employment areas - the Activity Centres and Corridors defined in the MDP. More compact growth has positive financial implications for citizens and The City, reducing future infrastructure costs by up to 33% (compared to historic lower density growth), and annual operating costs by 14% in the long term. Therefore, infrastructure investments that facilitate the more compact development in mobility hubs and along transit corridors will mitigate financial risks to The City and taxpayers, while still accommodating population and employment growth.

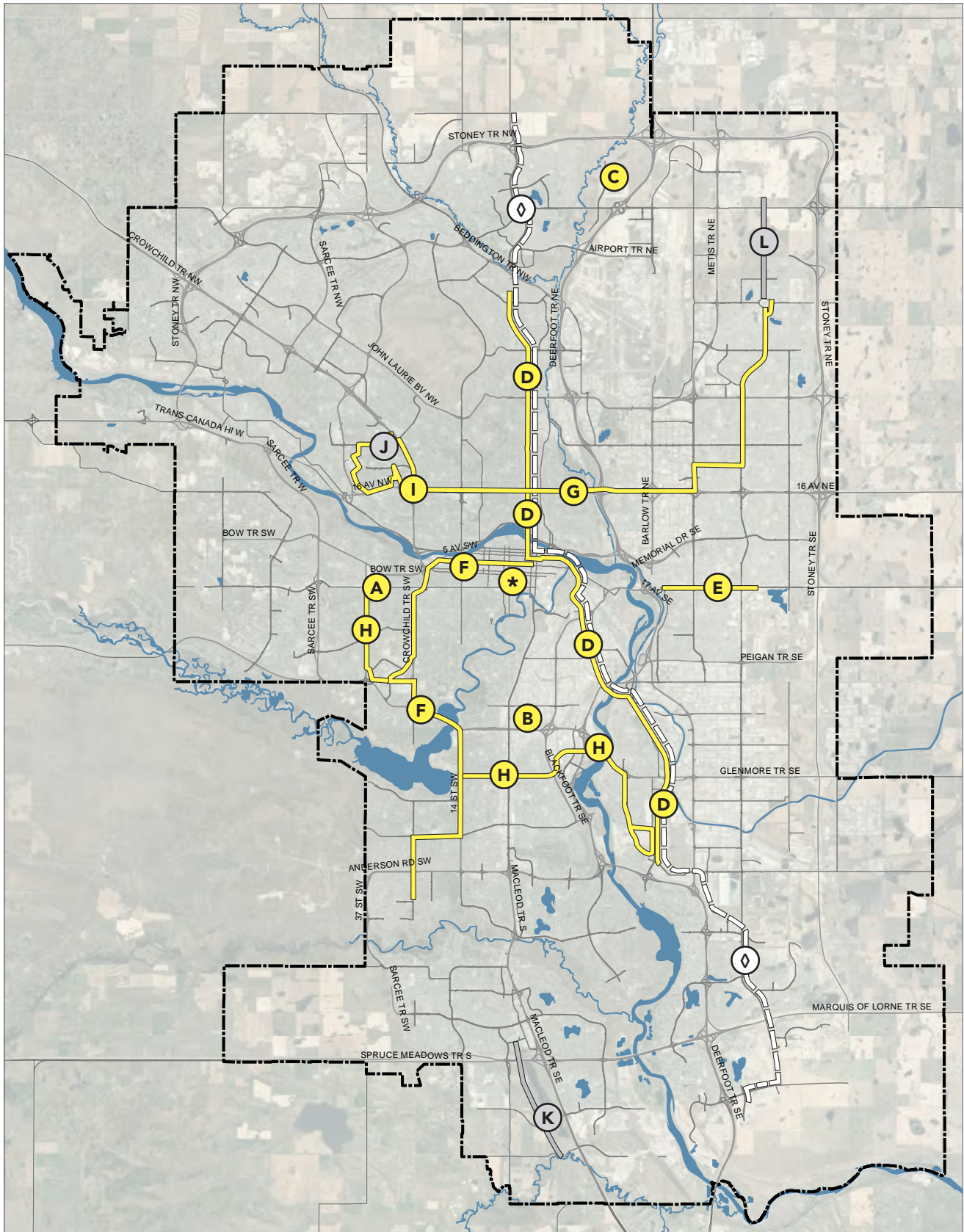
Intensification makes walking, cycling and transit more convenient by putting destinations closer together. Leveraging transportation investments to achieve this link between land use redevelopment and sustainable modes of transportation is a critical element of the Calgary Transportation Plan and Municipal Development Plan.

THE FUNDING SITUATION

Thanks to the creation of the Green Line Transit Fund, and the GreenTRIP Provincial grant program, most of the short-term rapid transit corridors identified in RouteAhead will be built over the next 10 years. There is not enough funding for the supporting infrastructure that allows Calgary Transit to provide reliable, frequent service however. Calgary Transit will be unable to purchase enough buses to keep pace with growth, upgrade maintenance facilities to properly house the transit fleet, or expand customer service features at transit stations.

INFRASTRUCTURE TYPE OVERVIEW MAP

MOBILITY HUBS AND TRANSIT CORRIDORS



FUNDING STATUS FOR PROJECTS & PROGRAMS

MOBILITY HUBS AND TRANSIT CORRIDORS

PROJECT		PRIORITY	FUNDED* (\$MILLIONS)	UNFUNDED (\$MILLIONS)
-	Train Cars for LRT (Growth)	Required	\$66	\$80
A	Westbrook Transit Operation Control Centre (OCC)	Required	\$25	\$7
B	Chinook Station Transit Oriented Development (TOD)	Required	\$20	-
C	Transit Fleet Maintenance Facilities	High	\$108	\$133
D	Green Line Program (Centre Street & Southeast Transitways combined)	High	\$524	\$150
E	17 Avenue S.E. Transitway - 26 Street S.E. to Hubalta Road	High	\$98	-
F	Southwest Transitway - Downtown to Woodbine	High	\$40	-
G	North Cross-Town Bus Rapid Transit (BRT)	Medium	\$50	-
H	South Cross-Town Bus Rapid Transit (BRT)	Medium	\$20	-
I	Foothills Hospital / Stadium / Banff Trail Transit Oriented Development (TOD)	Medium	\$32	-
J	West Campus Mobility Project	Medium	-	\$30
-	Northeast LRT Station Enhancements	Medium	-	\$22
-	South LRT Station Enhancements	Medium	-	\$16
K	South (Red Line) LRT Extension and Supporting Maintenance Facility	Medium	-	\$350
L	Northeast (Blue Line) LRT Extension	Medium	-	\$151

LONG TERM PROJECT (BEYOND 10 YEARS)

◇	Green Line LRT	Medium	-	\$4,000-5,000
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ANNUAL PROGRAMS

Traction Power Upgrade		Required	\$36	\$3
Bus and Community Shuttle Purchases (Growth)		High	\$60	\$101
*	Centre City Mobility Program	High	\$65	-
Transit Buildings & Stations		High	\$10	\$18
Auxiliary Vehicles		Medium	\$7	-

Category Total (Funded)	\$1,161 Million
Category Total (Unfunded, excluding Green Line LRT)	\$1,058 Million
Percent Total (Funded excluding potential Building Canada Funds)	35 %
* Pending Council approval through Action Plan budgets. Amounts reflect 2015 to 2024 budget years only.	

TRAIN CARS FOR LRT (GROWTH)

BUDGET: \$146 MILLION PARTIALLY FUNDED (2016-2018)

FUNDED \$66 MILLION

UNFUNDED \$80 MILLION

PROJECT SCOPE:

New train cars are required to expand the fleet to accommodate growing ridership through the implementation of four-car, and to replace older trains. Calgary Transit will purchase the next generation of train cars to provide enhanced customer amenities such as climate control, increase passenger capacity, improve reliability and lower operating costs. These train cars will begin to be received by The City in 2015, in time to begin operating four-car trains on the extended platforms.

NOTE: This project is directly linked to the Train Cars for LRT (Replacement) project in the Lifecycle and Asset Management category, which includes replacement of all of the original train cars that have been in service since the CTrain first began operating.

KEY BENEFITS:

- Improve equipment and service reliability (i.e., fewer breakdowns).
- Increase passenger capacity per LRT vehicle compared to older train cars.
- Improve customer experience with better climate control including air conditioning, real-time information and universal accessibility.
- Provide additional safety and security features.
- Reduce operating cost of train cars.



Calgary Transit will purchase the next generation of train cars to provide enhanced customer amenities.

WESTBROOK LRT OPERATIONS CONTROL CENTRE (OCC)

BUDGET: \$32 MILLION PARTIALLY FUNDED (2015-2017)

FUNDED \$25 MILLION

UNFUNDED \$7 MILLION

PROJECT SCOPE:

The new operations control centre in the Westbrook Transit Facility, connected to the Westbrook Station, will allow Calgary Transit to better serve customers, respond quickly to service disruptions and collect data for scheduling and planning purposes. The current LRT operations control centre, built in 1983, has been upgraded numerous times over the years to meet Calgary Transit’s growing requirements. New technology (e.g., real time information, electronic fare collection, signal and communications systems, etc.), service expansion and workspace needed for additional staff has out-grown current facilities. The existing facility is located within the 100 year flood plain and was evacuated in 2013.

KEY BENEFITS:

- Improve passenger safety with better technology to monitor vehicles and passengers.
- Improve data collection and information management.
- More efficient dispatching of peace officers and coordination with other agencies.
- Reliable communications and operations.
- Flood resilience.



Westbrook LRT Operations Control Centre (OCC)

CHINOOK TRANSIT ORIENTED DEVELOPMENT (TOD)

BUDGET: \$20 MILLION FUNDED (2015-2016) (PLUS ADDITIONAL PRIVATE CONTRIBUTION)

PROJECT SCOPE:

The Chinook Station area is defined as a Major Activity Centre in the Municipal Development Plan, and has been identified as a high-potential location for redevelopment through Investing in Mobility and the corporate growth management framework. In addition, 61 Avenue S. is already one of the busiest pedestrian corridors outside of the downtown. A variety of infrastructure improvements are required support current activity, and the anticipated and significant increase in population and employment in the Chinook area. These are:

- A pedestrian overpass at 61 Avenue and Macleod Trail (cost shared with Chinook Centre).
- Pedestrian and streetscape enhancements along 61 Avenue (to Urban Boulevard standard).
- Completion of a pedestrian-friendly transit plaza at Chinook LRT station.

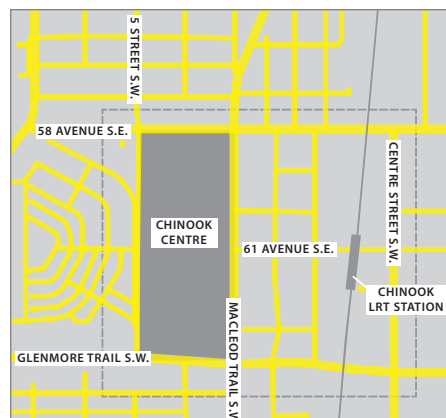
Requirements for new infrastructure were determined through the recent 61 Avenue SW: Conceptual Design for Grand Boulevard, Pedestrian Bridge and Community Transit Plaza study.

KEY BENEFITS:

- Improve pedestrian safety and comfort along 61 Avenue between Chinook Station and Chinook Centre.
- Support employment and residential redevelopment of the Chinook Major Activity Centre, as defined in the Municipal Development Plan.
- Reduce long-term infrastructure and operating costs by supporting redevelopment and slowing the outward expansion of Calgary.



A rendering of the pedestrian overpass at 61 Avenue and Macleod Trail S.W.



Chinook area identified for transit oriented development

TRANSIT FLEET MAINTENANCE FACILITIES

BUDGET: \$241 MILLION PARTIALLY FUNDED (2015-2024)

FUNDED: \$108 MILLION UNFUNDED: \$133 MILLION

PROJECT SCOPE:

Indoor storage and maintenance facilities are critical to ensure buses are clean, safe, comfortable and reliable, and can achieve a long service life. Many buses cannot be stored indoors at this time due to limited storage facilities, which increases operating costs and reduces the service life of these vehicles. This project includes construction and maintenance of the new Stoney Bus Maintenance Facility, which will involve a public-private partnership (P3) that will require repayment of partner funding over a 20 to 30 year timeframe. Remaining funds in this project will be used to upgrade existing Calgary Transit bus maintenance facilities.

KEY BENEFITS:

- Reduce operating and maintenance cost of vehicles through proper storage.
- Improve efficiency of operations by reducing overcrowding at other garages.
- Increase the lifespan and reliability of transit vehicles (i.e., fewer breakdowns).
- Accommodate new compressed natural gas (CNG) buses and fueling stations.
- Allow for expansion of Calgary Transit's bus fleet.



GREEN LINE PROGRAM

BUDGET: APPROXIMATELY \$674 MILLION (2015-2022)

FUNDED: \$524 MILLION UNFUNDED: APPROXIMATELY \$150 MILLION

PROJECT SCOPE:

The Green Line Program combines the Centre Street Transitway and Southeast Transitway projects into a single transit corridor connecting through downtown Calgary. The program will include segments of dedicated bus-only lanes and transit priority between 78 Avenue N and Douglas Glen. The bus-based infrastructure could then be upgraded to provide LRT service when sufficient capital funding becomes available. If Centre Street is not selected as the alignment for the north-central portion of the Green Line LRT, it will continue to operate as a bus-based transitway.

Dedicated bus-only lanes and transit priority measures will improve travel time reliability along the entire length of the Green Line. This is particularly important for the Centre Street Transitway, which has the highest ridership and most frequent service of all non-LRT corridors in Calgary. The improvements will also reduce travel times, particularly for the Southeast Transitway.

These projects within the Green Line Program will also provide streetscape and pedestrian improvements at key locations along the corridor. These improvements will support the creation of higher density, mixed-use developments around transit stations in the southeast and along Centre Street, helping to achieve the goals of the Municipal Development Plan and Calgary Transportation Plan.

KEY BENEFITS:

- Proceed with first phase of construction and land acquisition for ultimate Green Line LRT.
- Improve bus travel times and schedule reliability.
- Improve customer experience with enhanced transit amenities.
- Provide streetscape and pedestrian improvements that will support land use intensification at strategic locations.
- Coordinated with major road reconstruction along Centre Street.



17 AVENUE S.E. TRANSITWAY: 26 STREET S.E. TO HUBALTA ROAD

BUDGET: \$98 MILLION FUNDED (2015-2022)

PROJECT SCOPE:

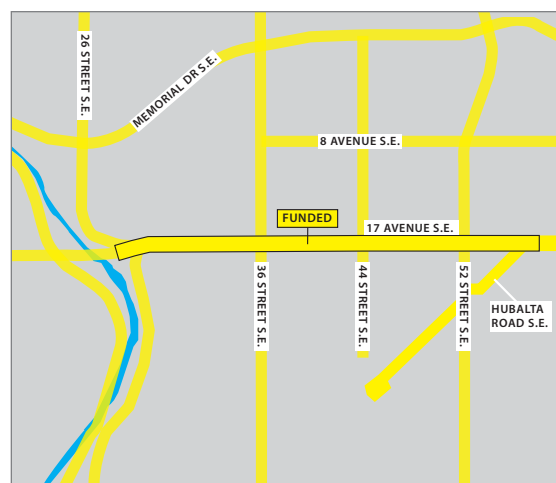
The 17 Avenue S.E. corridor between 26 Street S.E. and Hubalta Road plays many important roles. It is the original main street of the Forest Lawn community, a secondary highway with regional connections, a culturally diverse hub (International Avenue), and is part of Calgary's Primary Transit Network and Primary Cycling Network, as defined in the Calgary Transportation Plan. It is also defined as an Urban Boulevard which is expected to experience significant land use redevelopment in the future. New transportation infrastructure investments along 17 Avenue S.E. are crucial to support the wide range of roles along this corridor. This project includes construction of a median transitway (bus-only lanes), bus stations, and upgrading of sidewalks and streetscapes to support increasing pedestrian activity.

KEY BENEFITS:

- Improve transit service in east Calgary to meet the needs of current residents and business, while accommodating future residential and employment growth.
- Improve transit travel times and reliability from the east to downtown.
- Support land use redevelopment along the 17 Avenue S.E. urban corridor, as defined in the Municipal Development Plan.
- Provide streetscape improvements and better connectivity for pedestrians and cyclists to businesses along 17 Avenue S.E.



Concept of future 17 Avenue S.E. Transitway



Alignment of future 17 Avenue S.E. Transitway

SOUTHWEST TRANSITWAY: DOWNTOWN TO WOODBINE

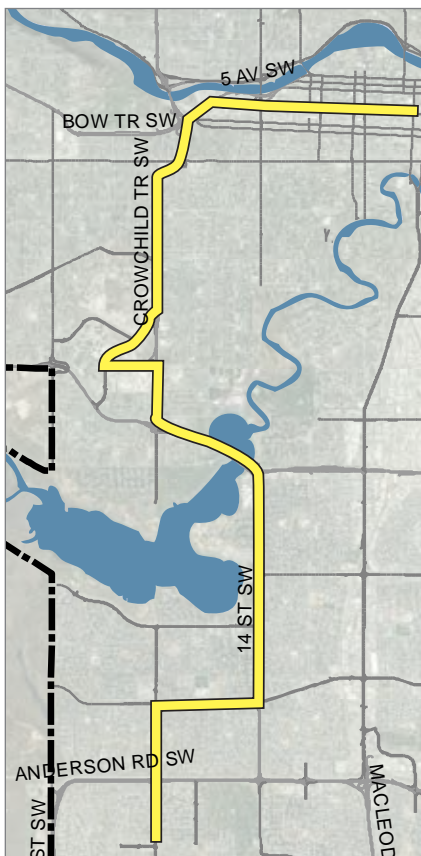
BUDGET: \$40 MILLION FUNDED (2015-2022)

PROJECT SCOPE:

Southwest Transitway will improve transit travel between southwest communities, the downtown and major destinations including Mount Royal University, Rockyview General Hospital, Heritage Park and Glenmore Landing with bus rapid transit (BRT) service. This project will offer a way for buses to operate in their own lane and build on the success of the Crowchild Trail bus-only lanes. The project includes extending the Crowchild bus-only lanes, constructing bus-only lanes along 14 Street South and grade separating the bus crossing at 90 Avenue South.

KEY BENEFITS:

- Reduce road congestion and reduce pressure on the south LRT line by providing a new transit option for southwest residents.
- Reduce travel time for transit users.
- Improve transit service reliability in southwest Calgary.



Alignment of future Southwest Transitway - Downtown to Woodbine

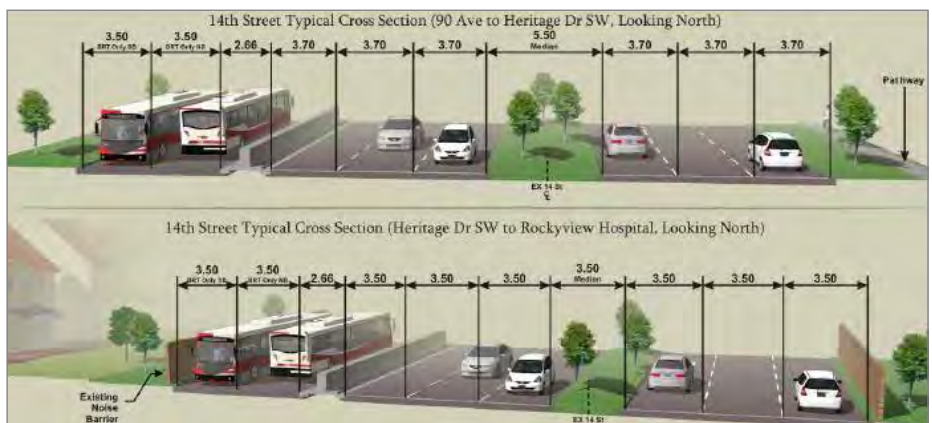


Figure showing transit-only lanes on the Southwest Transitway - Downtown to Woodbine

NORTH CROSS-TOWN BUS RAPID TRANSIT (BRT)

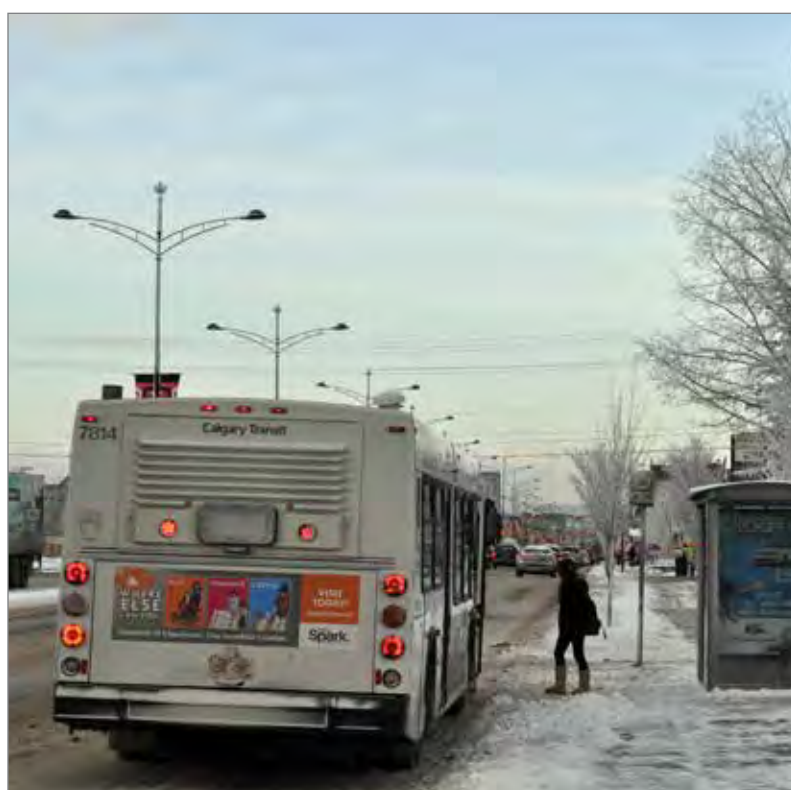
BUDGET: \$50 MILLION FUNDED (2015-2018)

PROJECT SCOPE:

The North Crosstown bus rapid transit (BRT) service provides a direct east-west cross-town transit connection between Saddletowne LRT Station (202 Blue Line), Brentwood LRT Station (201 Red Line), and the University of Calgary Major Activity Centre. The route also provides rapid transit service along the 16 Avenue N. Urban Corridor, as defined in the Municipal Development Plan. The service will operate mainly in regular traffic lanes, with potential for bus-only or HOV lanes on 16 Avenue N. and 52nd Street E., and transit priority at intersections along the entire route.

KEY BENEFITS:

- Reduce travel time for transit users, particularly for those travelling from northeast Calgary to the University of Calgary, Foothills Hospital or Children’s Hospital.
- Improve transit service reliability and passenger capacity in north Calgary and along the 16 Avenue N. urban corridor, as defined in the Municipal Development Plan.
- Reduce road congestion by providing a new cross-town transit option for residents on the north side of Calgary.



Proposed North Crosstown BRT Brentwood/Saddletowne

SOUTH CROSS-TOWN BUS RAPID TRANSIT (BRT)

BUDGET: \$20 MILLION FUNDED (2015-2018)

PROJECT SCOPE:

This project extends the existing Southwest Cross-Town BRT service between Westbrook (202 Blue Line) and Heritage (201 Red Line) LRT Station. This extension provides a connection between south LRT line at Heritage Station and the North-Central / Southeast LRT-Transitway at Quarry Park. The service will operate in mixed traffic, with transit priority measures installed along Heritage Drive. Use of high occupancy vehicle (HOV) or bus-only lanes on Glenmore Trail may also be included.

KEY BENEFITS:

- Reduce travel time for transit users travelling from west Calgary to the southeast.
- Improve transit service reliability and passenger capacity in south Calgary.
- Improve connection from LRT system to Mount Royal University
- Reduce overall road congestion by providing a new cross-town transit option for residents on the south side of Calgary.



South Cross-Town Bus Rapid Transit (BRT)

FOOTHILLS HOSPITAL/STADIUM/BANFF TRAIL STATION TRANSIT ORIENTED DEVELOPMENT (TOD)

BUDGET: \$32 MILLION FUNDED (2015-2020) (PLUS ADDITIONAL PRIVATE CONTRIBUTION)

PROJECT SCOPE:

The Banff Trail Station and Foothills Hospital are part of the University of Calgary Major Activity Centre, as defined in the Municipal Development Plan. The Stadium shopping centre redevelopment site is defined as a Neighbourhood Activity Centre adjacent to the University. A variety of infrastructure improvements are required to accommodate redevelopment and improve traffic flow. These include:

- New, direct westbound to northbound traffic ramp from 16 Avenue N.W. to Crowchild Trail, with north-south pedestrian underpass upgrades
- Widening of 16 Avenue N.W. to 6 lanes between Crowchild Trail and Shaganappi Trail
- Cost-sharing construction of a pedestrian overpass at 29 Street N.W. between the hospital and Stadium shopping centre site
- Developer-funded streetscape and pedestrian improvements.

KEY BENEFITS:

- Improve transit and vehicular access along 16 Avenue N.W. while reducing traffic moving through the Banff Trail Station Area site.
- Support employment and residential redevelopment of the University of Calgary Major Activity Centre defined in the Municipal Development Plan.
- Reduce long-term infrastructure and operating costs by supporting redevelopment and slowing the outward expansion of Calgary.



Banff Trail area identified for transit oriented development



WEST CAMPUS MOBILITY PROJECT

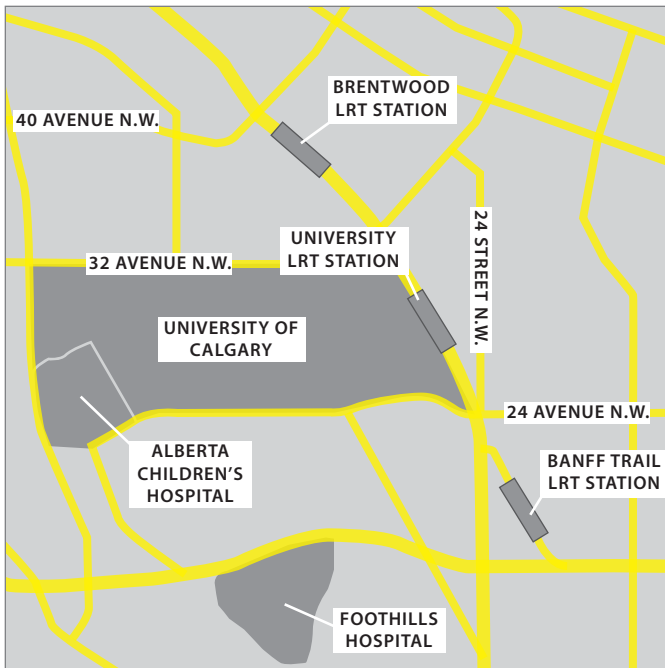
BUDGET: \$30 MILLION UNFUNDED

PROJECT SCOPE:

This project will implement an appropriate transportation technology for the West Campus area and integrate it with the transportation network to connect local destinations including Foothills General Hospital, Alberta Children’s Hospital, and the University of Calgary. The University of Calgary Major Activity Centre, as defined in the Municipal Development Plan, already represents Calgary’s second largest employment area and is expected to grow to include 77,000 residents and 65,000 jobs over the next 30 years.

KEY BENEFITS:

- Improve access to local destinations (i.e., Alberta Children’s Hospital, Foothills Medical Centre, University of Calgary, University Research Park, Brentwood Station area, West Campus development).
- Improve access and provide more direct travel to and from nearby CTrain stations.
- Reduce transit travel times within the University of Calgary Major Activity Centre, as defined in the Municipal Development Plan.



West Campus area identified for transit oriented development



NORTHEAST LRT STATION ENHANCEMENTS

BUDGET: \$22 MILLION UNFUNDED

PROJECT SCOPE:

The original northeast LRT platforms built in 1985 are currently having their platforms extended to accommodate four-car trains. However, they require further upgrades to improve passenger movement, safety and comfort. This includes improved lighting, monitoring of waiting areas, moving elevators into public areas, canopies in outdoor waiting areas and general repair of interior and exterior finishes. Several mechanical systems also require lifecycle replacement.

KEY BENEFITS:

- Improve customer safety and comfort on the northeast LRT line.
- Increase the lifespan of existing station infrastructure and equipment.



Station improvements will improve customer safety and comfort on the northeast LRT line.

SOUTH LRT STATION ENHANCEMENTS

BUDGET: \$16 MILLION UNFUNDED

PROJECT SCOPE:

The original south LRT stations are having their platforms extended to accommodate four-car trains. However, they require further upgrades to improve passenger movement, safety and comfort. The six oldest existing South LRT station buildings have been in operation since the early 1980's. The Victoria Park, Erlton, 39 Avenue, Heritage, Southland, and Anderson stations are now showing signs of considerable wear and deterioration. This warrants substantial improvements to accommodate increased expectations of passenger comfort, station functionality and appearance, as well as safety and security.

KEY BENEFITS:

- Improve customer safety and comfort on the south LRT line.
- Extend the lifespan of existing station infrastructure and equipment.



The south LRT station improvements will increase customer safety and comfort

SOUTH (RED LINE) LRT EXTENSION AND SUPPORTING MAINTENANCE FACILITY

BUDGET: \$350 MILLION UNFUNDED

PROJECT SCOPE:

The South LRT (201 Red Line) extension to 210 Avenue South is required to provide rapid transit service to new communities in Calgary south of Highway 22X, and to connect the LRT network to a planned storage and maintenance facility to be built in the area around 210 Avenue South. The LRT extension will serve over 85,000 Calgarians living in the future communities of the West Macleod Area Structure Plan (ASP) and surrounding communities, such as Silverado, Chaparral and Walden. The generalized land requirements for the LRT extension, park and ride facilities, and the light rail vehicle (LRV) storage and maintenance facility have been included in the planning process for the West Macleod ASP. LRV storage and maintenance facilities are required to provide indoor storage and maintenance of the LRT fleet to maximize vehicle lifespan and provide reliable customer service.

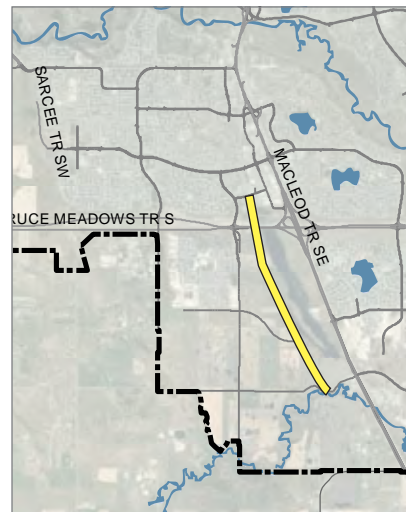
Factors influencing the timing of this extension include, but are not limited to: the pace of development in new south communities, logical mode progression from bus services to LRT, availability of capital budget, and the requirement for the LRV storage and maintenance facility.

KEY BENEFITS:

- Improve transit service in south Calgary and accommodate future residential and employment growth.
- Increase travel choices for residents south of the ring road to reach destinations across Calgary.
- Reduce operating and maintenance cost of vehicles through proper storage.



LRV storage and maintenance facilities help maximize vehicle lifespan and provide reliable customer service.



South (Red Line) LRT Extension alignment

NORTHEAST (BLUE LINE) LRT EXTENSION

BUDGET: \$151 MILLION UNFUNDED

PROJECT SCOPE:

The Northeast LRT (202 Blue Line) extension from Saddletowne to Country Hills Boulevard is required to provide rapid transit service to new communities in northeast Calgary. The LRT extension will serve over 85,000 Calgarians, including the future communities of Cityscape, Skyview Ranch and Redstone. The generalized land requirements for the LRT extension and park and ride facilities have been included in the planning process for these communities.

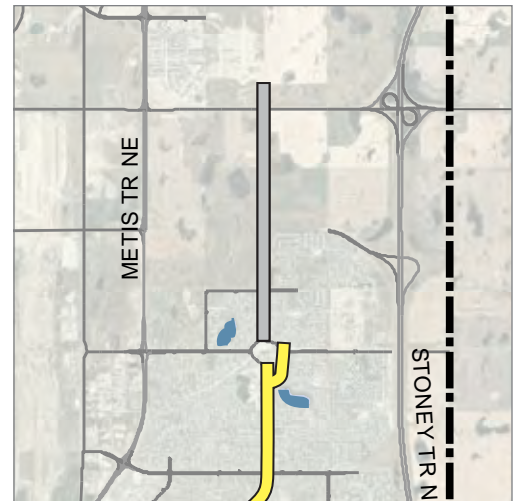
Factors influencing the timing of this extension include, but are not limited to: the pace of development in new northeast communities, logical mode progression from bus services to LRT, and the availability of capital budget.

KEY BENEFITS:

- Improve transit service in northeast Calgary and accommodate future residential and employment growth.
- Increase travel choices for residents in northeast Calgary to reach destinations across Calgary.
- Reduce the need for major investments in northeast roadway infrastructure to support residential development.



Saddletowne CTrain station



N.E. (Blue Line) LRT Extension

PROGRAM INFORMATION

TRACTION POWER UPGRADE

FUNDED: \$36 MILLION, UNFUNDED: \$3 MILLION

Traction power systems include all equipment and supporting infrastructure required to provide safe and reliable electrical service for the CTrain. As service demands increase and four-car trains are introduced, the capacity of the existing system must be increased. Without these system upgrades, the reliability of four-car CTrain service will be reduced.



BUS AND COMMUNITY SHUTTLE PURCHASES (GROWTH)

FUNDED: \$60 MILLION, UNFUNDED: \$101 MILLION

Calgary Transit must purchase new buses and community shuttles each year to increase transit service to meet demand, respond to customer expectations and reach CTP targets. With over 20,000 new people moving to Calgary each year, the demand for increased transit service is growing rapidly. Each new regular bus costs \$400,000, while articulated buses cost \$600,000. A community shuttle costs \$225,000.



CENTRE CITY MOBILITY PROGRAM

FUNDED: \$65 MILLION

Centre City, which includes downtown and the Beltline, is expected add to 40,000 new residents and 60,000 new jobs by 2035. With traffic capacity limited, increased mobility in the Centre City will focus on walking, cycling and transit. Upgrades funded by this program include improved sidewalks, CPR underpass rehabilitation, bike lanes where approved, barrier-free access to transit and enhanced streetscapes including lighting and wayfinding.



PROGRAM INFORMATION

TRANSIT BUILDINGS AND STATIONS



FUNDED: \$10 MILLION, UNFUNDED: \$18 MILLION

Calgary Transit currently has over 110 Buildings and Stations. As these buildings age, major rehabilitation and lifecycle replacement is required to ensure that facilities continue to meet the demands of both the travelling public and internal Calgary Transit customers (CT Fleet, Service Design, Operations), and ensure public as well as employee safety.

AUXILIARY TRANSIT VEHICLES



FUNDED: \$7 MILLION

This program purchases new and replacement vehicles to support Calgary Transit services in the field. This includes highly specialized vehicles that perform LRT track maintenance. There are currently about 120 support vehicles in the Calgary Transit fleet. Continued purchase of these vehicles directly supports reliable transit service to citizens.



View of the Airport Tunnel - August 2011

SECTION 3: GOODS MOVEMENT AND TRAFFIC GROWTH



WHAT IS IT?

Projects in this category are designed to improve travel speeds and reliability for commercial vehicles and commuters on heavily used road corridors. A number of projects facilitate residential growth by connecting new suburban communities to the rest of Calgary. Supporting annual programs such as traffic signal construction and noise barriers improve traffic flow and reduce impacts on adjacent residential communities.

TYPES OF PROJECTS INCLUDE:

- New interchanges and bridges.
- Road widening and upgrades.
- New road connections to provincial highways.
- New traffic signals and noise barriers.

WHY IS IT IMPORTANT?

Investments on the Primary Goods Movement Network, as defined in the Calgary Transportation Plan, will help improve travel time, safety and reliability for commercial vehicles conducting business in Calgary. They also support the economy by ensuring Calgary's continued role as a major distribution hub for western Canada.

Infrastructure improvements that address bottlenecks on the road network reduce congestion for commuters travelling across the city. This increases the productivity of Calgary's economy by reducing the amount of time that commuters spend in traffic. These improvements also connect new suburban communities and accommodate new traffic as Calgary continues to grow.

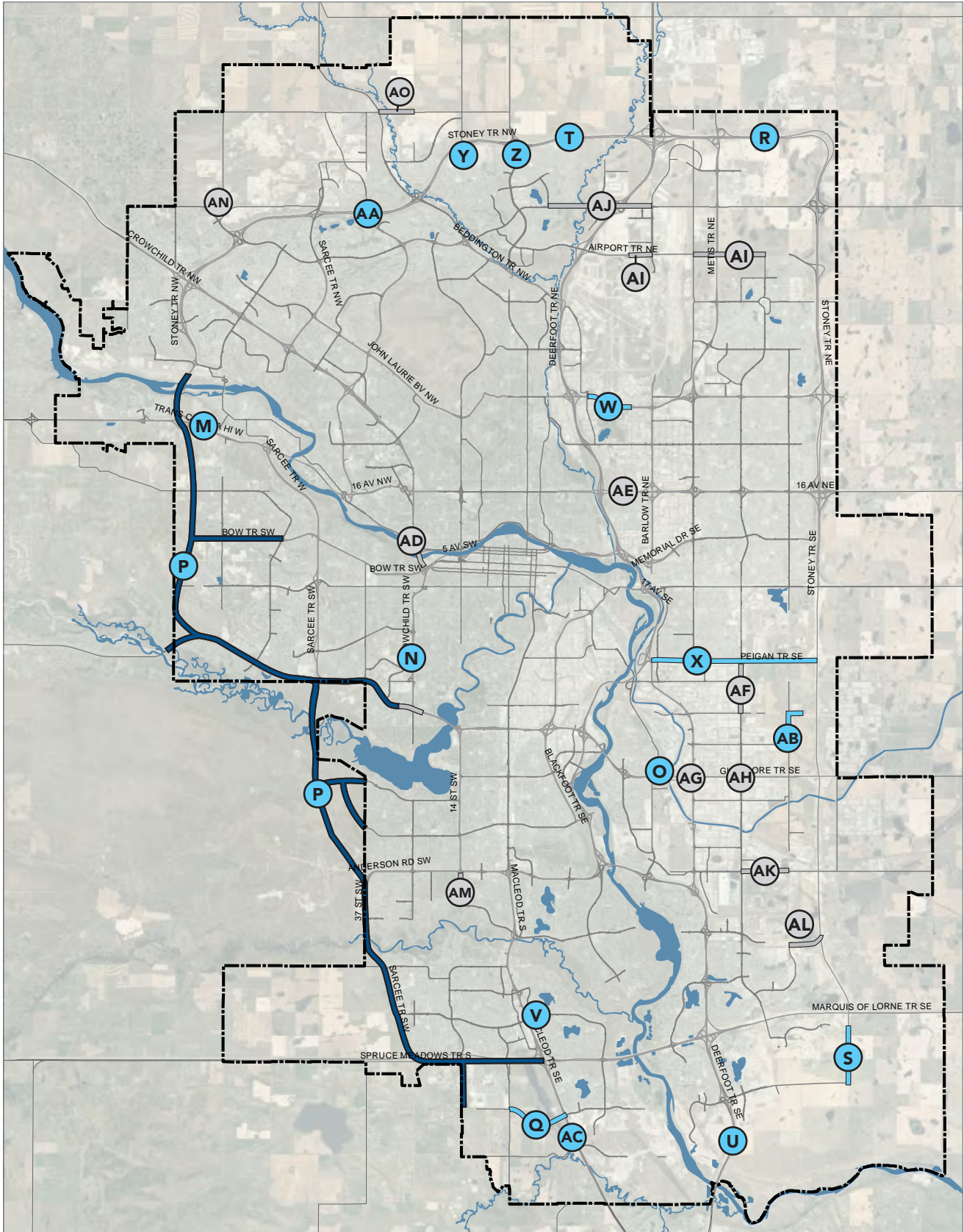
THE FUNDING SITUATION

New suburban growth projections for Calgary indicate that there will be increased funding available from acreage assessments to build major road projects which support new residential communities. Funding from Provincial fuel taxes will also enable The City to build critical connections to the Southwest and West Ring Road.

Due to declining Provincial grant programs, there is not enough funding to build all of the major road projects needed on Calgary's skeletal roads. This includes Glenmore Trail and Crowchild Trail upgrades. This will result in increasing congestion and reduced travel time reliability for goods, services and commuters driving on these heavily used roadways.

INFRASTRUCTURE TYPE OVERVIEW MAP

GOODS MOVEMENT AND TRAFFIC GROWTH



FUNDING STATUS FOR PROJECTS & PROGRAMS

GOODS MOVEMENT AND TRAFFIC GROWTH

	PROJECT	PRIORITY	FUNDED* (\$MILLIONS)	UNFUNDED (\$MILLIONS)
M	Trans Canada Highway and Bowfort Road Interchange	Approved	\$49**	-
N	Crowchild Trail and Flanders Avenue Interchange Upgrade	Approved	\$20	-
O	Glenmore Trail and Ogden Road Interchange	Approved	\$105**	-
P	Southwest and West Ring Road Connections	Required	\$133	-
Q	Priddis Slough Crossing (194 Avenue S.) and CPR Grade Separation (GM)	Required	\$47	-
R	Stoney Trail and 60 Street N.E. Ramps (GM)	Required	\$6	-
S	88 Street S.E. Skeletal Road Extension (GM)	Required	\$17	-
T	Stoney Trail and 11 Street N.W. Ramps (GM)	Required	\$6	-
U	Deerfoot Trail and 212 Avenue S.E. Ramps (GM)	Required	\$16	-
V	Macleod Trail and 162 Avenue S. Interchange	High	\$55	-
W	McKnight Boulevard Widening - 12 Street N.E. to 19 Street N.E.	High	\$17	-
X	Peigan Trail Twinning - Barlow Trail to Stoney Trail	High	\$35	-
Y	Stoney Trail and 14 Street N.W. Interchange	High	\$60	-
Z	Stoney Trail and Centre Street Interchange Upgrade	Medium	\$15	-
AA	Stoney Trail and Shaganappi Trail Interchange Upgrade	Medium	\$15	-
AB	61 Avenue S.E. Extension - 68 Street S.E. to Ring Road	Medium	\$3**	-
AC	Macleod Trail and 194 Avenue / 210 Avenue Improvements	Medium	\$70	-
AD	Crowchild Trail - Bow River Crossing	High	-	\$150
AE	16 Avenue N.E. and 19 Street N.E. Interchange	High	-	\$105
AF	52nd Street S.E. Widening - Peigan Trail to 61 Avenue S.E.	High	-	\$6
AG	Glenmore Trail and Barlow Trail S.E. Interchange	High	-	\$82
AH	Glenmore Trail and 52nd Street S.E. Interchange	Medium	-	\$101
AI	Airport Trail N.E. Phase 2 - Connection to 60 Street N.E. and Interchanges	Medium	-	\$83
AJ	Country Hills Boulevard Widening - Barlow Trail to Coventry Boulevard	Medium	-	\$20
AK	114 Avenue S.E. Widening - 52 Street S.E. to 68 Street S.E.	Medium	-	\$15
AL	Stoney Trail and 130 Avenue S. Ramp	Medium	-	\$12
AM	14 Street S.W. Widening - Anderson Road to Canyon Meadows Drive	Medium	-	\$15
AN	85 Street N.W. Realignment at Country Hills Boulevard	Medium	-	\$4
AO	144 Avenue N.W. Crossing of West Nose Creek	Medium	-	\$15

ANNUAL PROGRAMS				
	New Traffic Signals / Pedestrian Corridors	Medium	\$23	-
	Roads Equipment and Systems	Medium	\$8	\$7
	Noise Barriers	Medium	\$9	-
	Subdivision Road Construction	Medium	\$13	-
	Development of Subdivision Access Roads	Medium	\$40	\$7

Category Total (Funded)	\$762 Millions
Category Total (Unfunded)	\$622 Millions
Percent Total (Funded)	23%
* Pending Council approval through Action Plan budgets. Amounts reflect 2015 to 2024 budget years only.	
** Value is remaining budget for 2015-2024	
(GM) - Growth Management Project	

TRANS CANADA HIGHWAY AND BOWFORT ROAD INTERCHANGE

REMAINING BUDGET: \$49 MILLION

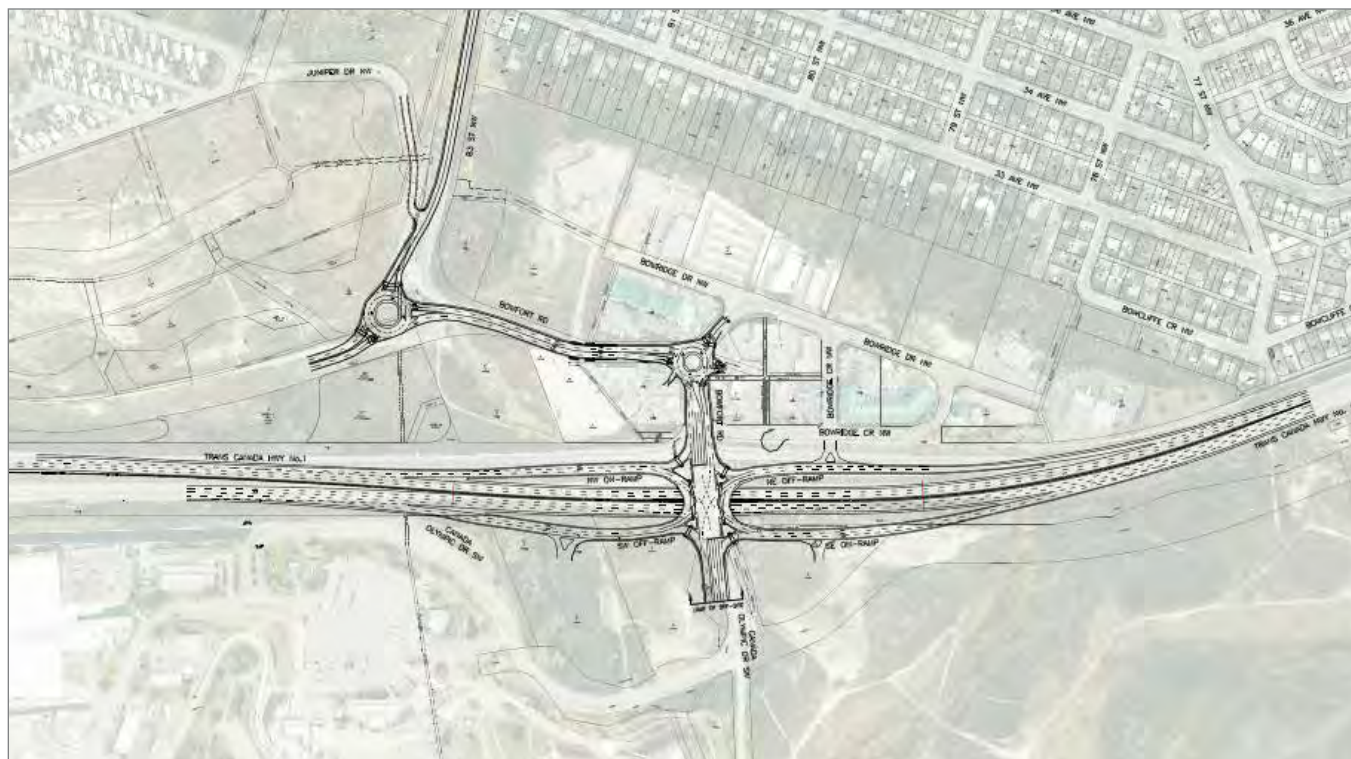
FUNDED (2015-2016) (PLUS ADDITIONAL PRIVATE CONTRIBUTION)

PROJECT SCOPE:

This project starts construction in 2014. Project funding commitments support the completion of an interchange on the Trans Canada Highway at Bowfort Road. This project includes a reconstruction of the existing Trans Canada Highway lanes and a new interchange bridge at Bowfort to facilitate access to and from the Bowness commercial district, the Greenbriar development north of the Trans Canada Highway, as well as development at Canada Olympic Park.

KEY BENEFITS:

- Provide for free-flow traffic on the Trans Canada Highway from the west city limits through Sarcee Trail to Home Road, and along Sarcee Trail to Bow Trail.
- Provide better pedestrian and cyclist connectivity across the Trans Canada Highway.
- Retain current access into the community of Bowness to the north.
- Provide capacity for approved and planned area developments.



Planning study map showing key features of the interchange

CROWCHILD TRAIL AND FLANDERS AVENUE INTERCHANGE UPGRADE

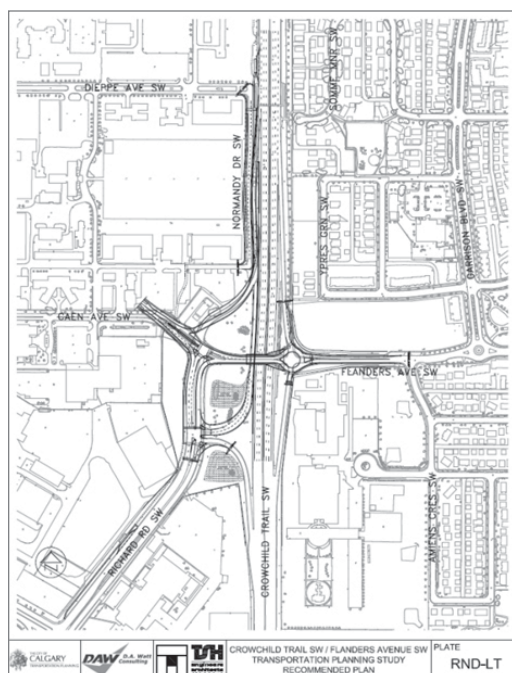
BUDGET: \$20 MILLION FUNDED (2018) (PLUS ADDITIONAL PRIVATE CONTRIBUTION)

PROJECT SCOPE:

This project provides key infrastructure upgrades to the existing interchange to meet growing traffic demands along Flanders Avenue. Improvements include a new off-ramp configuration for southbound Crowchild Trail, and intersection upgrades and bridge enhancements along Flanders Avenue. The upgrades will better facilitate active modes of transportation (e.g., walking, cycling, etc.) across Crowchild Trail and future southwest Bus Rapid Transit (BRT) service.

KEY BENEFITS:

- Accommodate additional traffic from the continued redevelopment of the Currie Barracks by the Canada Lands Company.
- Accommodate anticipated increase in pedestrian, cyclist and transit movements.
- Allow for land use intensification adjacent to the Mount Royal University, a Major Activity Centre as defined in the Municipal Development Plan.



Conceptual map of Crowchild Trail and Flanders Avenue project





GLENMORE TRAIL AND OGDEN ROAD INTERCHANGE

REMAINING BUDGET: \$105 MILLION FUNDED (2015-2016)

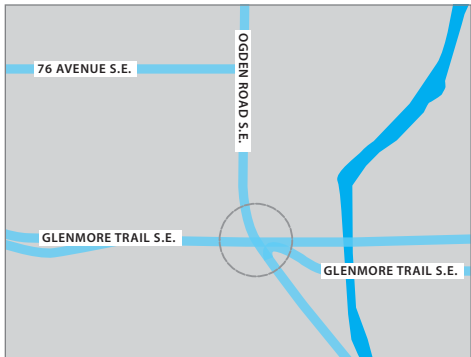
PROJECT SCOPE:

This project begins construction in 2014, and includes construction of an interchange along Glenmore Trail at Ogden Road, with additional overpasses spanning over the CPR tracks, CN tracks, future Green Line LRT and the Western Irrigation District (WID) canal. This project increases capacity on one of the busiest commercial goods movement corridors in Calgary, which is also one of the most significant bottlenecks on Glenmore Trail. Trains crossing on the Canadian Pacific Railway (CPR) tracks are the primary cause of delays. The project reconstructs a significant portion of the main travel lanes on Glenmore Trail between 18 Street S.E. and Barlow Trail, and provides local access to 30 Street and 31 Street through the provision of service roads.

KEY BENEFITS:

- Significantly increase vehicular capacity along this portion of Glenmore Trail. Reduce travel time for goods movement by eliminating delays at the CPR rail crossing.
- Accommodates Green Line BRT and future LRT.

Support the long-term upgrades of the Glenmore Trail corridor, which already accommodates high truck volumes, as part of the Primary Goods Movement Network in the Calgary Transportation Plan.



Glenmore Trail S.E. and Ogden Road S.E. project area



Glenmore Trail S.E. over Ogden Road S.E. looking southwest (artist rendering)



Glenmore Trail S.E. and Ogden Road S.E. currently



SOUTHWEST AND WEST RING ROAD CONNECTIONS

BUDGET: \$133 MILLION FUNDED (2015-2019)

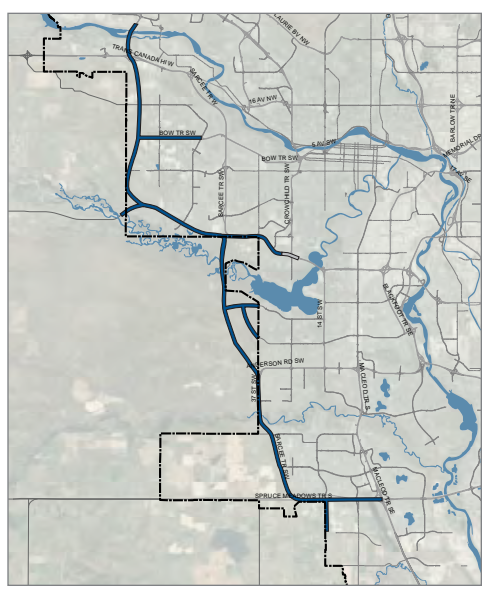
PROJECT SCOPE:

The Province of Alberta has committed to completing the Southwest and West portions of the ring road (Stoney Trail) by 2020. Although the majority of the ring road construction costs will be covered by the Province, The City of Calgary is responsible for funding and building a number of connections to the 20 new or upgraded interchanges along this portion of Stoney Trail. The connections will require upgrades to existing streets, building new streets and upgrading provincial facilities for adequate space for pedestrians, cyclists and transit. This project also includes several major road widenings:

- Bow Trail between 69 Street and 85 Street S.W.
- Glenmore Trail between 37 Street and Crowchild Trail S.W.
- Spruce Meadows Way between Stoney Trail and 194 Avenue S.
- Widening 163 Ave S.W. structure for future BRT.

KEY BENEFITS:

- Improve access and connectivity for communities and businesses along Stoney Trail.
- Help ensure links crossing the Southwest and West Ring Roads provide appropriate facilities for all modes of transportation.
- Provide increased capacity for goods movement and automobile traffic travelling between southwest and northwest Calgary.



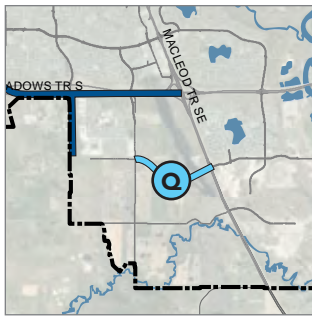
Glenmore Trail S.E. east of 37 Street S.W.

CORPORATE GROWTH MANAGEMENT PROJECTS

As part of the Corporate Growth Management Framework, all City departments have committed to coordinating construction of leading infrastructure that will enable priority growth areas to begin development. This integrated approach will allow The City to achieve the land supply targets set in the Municipal Development Plan. Lagging infrastructure (such as interchanges) will be built as prioritization and available funding allows.

The five leading infrastructure projects listed below specifically support suburban growth priorities. Individual investments that support urban redevelopment (such as the Chinook TOD project) are listed under the Mobility Hubs and Transit Corridors category.

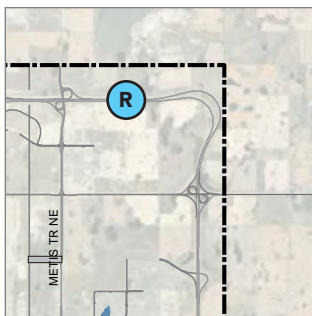
Construction timelines for each of the following projects align with the growth investment timing outlined in report PFC2014-0175: Framework for Growth and Change: Investing in Growth.



PRIDDIS SLOUGH CROSSING (194 AVENUE S.) AND CPR GRADE SEPARATION

FUNDED: \$47 MILLION (2015-2016)

This project is required to allow new suburban development to proceed west of Macleod Trail, between Stoney Trail and 210 Avenue S. In coordination with Water Resources, 194 Avenue S will be extended across the Priddis Slough, connecting to Sheriff King Street. This also requires a grade-separated crossing over the CPR tracks (and future South “201 Red Line” LRT tracks) to ensure adequate fire response times in the area, and to prevent conflicts with CPR activities in the area.



STONEY TRAIL AND 60 STREET N.E. RAMPS

FUNDED: \$6 MILLION (2017)

This project is required to allow development to begin on new suburban communities northeast of the airport. The ramps will allow traffic to exit eastbound Stoney Trail to head southbound on 60 Street N.E., or for traffic to exit northbound from 60 Street N.E. to head eastbound on Stoney Trail. These ramps represent the first phase of the full interchange, which will be built later than 2024.

CORPORATE GROWTH MANAGEMENT PROJECTS



88 STREET S.E. SKELETAL ROAD EXTENSION

FUNDED: \$17 MILLION (2020)

This project is required to allow new suburban development to begin east of the new SETON Town Centre. The four-lane 88 Street S.E. skeletal road will extend south 1.6 kilometres from the interchange at Stoney Trail and Highway 22X, connecting to 196 Avenue S.



STONEY TRAIL AND 11 STREET N.W. RAMPS

FUNDED: \$6 MILLION (2021)

This project is required to allow suburban development to begin north of Stoney Trail, between Centre Street and Highway 2. The ramps will allow traffic to exit Stoney Trail westbound to head north on 11 Street N.E., or traffic to exit southbound from 11 Street N.E. to head west on Stoney Trail. These ramps represent the first phase of the full interchange, which will be built later than 2024.



DEERFOOT TRAIL AND 212 AVENUE S.E. RAMPS

FUNDED: \$16 MILLION (2023-2024)

This project is required to start new suburban developments near the southeast hospital, and to support ongoing development in Cranston to the west of Deerfoot Trail. The ramps will allow traffic to exit Deerfoot Trail southbound to head west on 212 Avenue S., or traffic to exit westbound 212 Avenue S. to head north on Deerfoot Trail. These ramps represent the first phase of the full interchange, which will be built later than 2024.

MACLEOD TRAIL AND 162 AVENUE S. INTERCHANGE

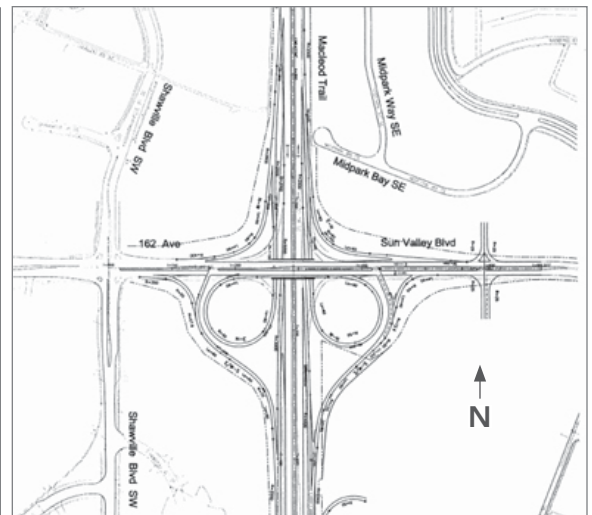
BUDGET: \$55 MILLION FUNDED (2015-2017)

PROJECT SCOPE:

The project provides for the construction of an interchange on Macleod Trail at 162 Avenue South. This project removes the last intersection on Macleod Trail between Fish Creek Provincial Park and Highway 22x (Stoney Trail) allowing for free flow conditions along Macleod Trail from 194 Avenue S.E. to Lake Fraser Gate S.E.

KEY BENEFITS:

- Provide long-term transportation improvements on Macleod Trail between Anderson Road and Marquis of Lorne Trail (Hwy 22X).
- Improve access and connectivity to and from Macleod Trail for the communities of Sundance, Midnapore, Shawnessy, Somerset, Bridlewood and Evergreen, and the Shawnessy Towne Centre.
- Coordinate with planned Provincial improvements at Macleod Trail and Highway 22X.
- Increase road capacity to accommodate desirable transit oriented development.



Conceptual map of the Macleod Trail and 162 Avenue S. Interchange

MCKNIGHT BOULEVARD WIDENING: 12 STREET N.E. TO 19 STREET N.E.

BUDGET: \$17 MILLION FUNDED (2015)

PROJECT SCOPE:

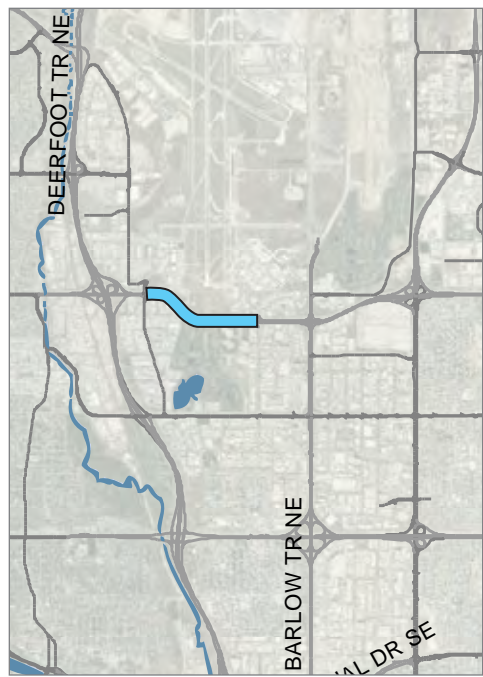
This project involves widening McKnight Boulevard to six lanes from 12 Street N.E. to 19 Street N.E. This will provide a consistent six lane cross-section from Deerfoot Trail to Métis Trail. This will improve traffic flow along segment of McKnight Boulevard, which carries some of the highest commercial truck volumes in Calgary.

KEY BENEFITS:

- Improve traffic flow along McKnight Boulevard by increasing capacity by 50 per cent.
- Reduce delay and congestion along McKnight Boulevard within the project area.
- Address pavement and concrete problems along this section of McKnight Boulevard.
- Support the long-term upgrades of the McKnight Boulevard corridor as part of the Primary Goods Movement Network, as defined in the Calgary Transportation Plan.



Current situation on McKnight Boulevard



McKnight Boulevard Widening - 12 Street N.E. to 19 Street N.E.

PEIGAN TRAIL TWINNING: BARLOW TRAIL TO STONEY TRAIL

BUDGET: \$35 MILLION FUNDED (2019-2020)

PROJECT SCOPE:

The project widens Peigan Trail from a two-lane undivided road to a four-lane divided road between Barlow Trail and Stoney Trail. This project responds to increased traffic on Peigan Trail with the connection to Stoney Trail in 2014. The project also improves the Peigan Trail intersections at 26 Street S.E., 36 Street S.E. and 52 Street S.E.

KEY BENEFITS:

- Improve traffic flow along Peigan Trail by doubling its capacity.
- Support the long-term upgrades of Peigan Trail as part of the Primary Goods Movement Network, as defined in the Calgary Transportation Plan.



Peigan Trail Twinning: Barlow Trail to Stoney Trail

STONEY TRAIL AND 14 STREET N.W. INTERCHANGE

BUDGET: \$60 MILLION FUNDED (NORTH RAMPS 2014; INTERCHANGE 2020-2022)

PROJECT SCOPE:

This interchange will provide a new access point onto and across Stoney Trail. It also provides a second access point to the community of Evanston, which is currently primarily accessed from Symons Valley Road.

The interchange will be constructed in two phases. The ramps on the north side of the interchange will be built in 2014 to provide improved access for Evanston right away. The rest of the interchange will be start construction five years later, providing all-directional access to Stoney Trail for existing and future suburban developments.

KEY BENEFITS:

- Provide a second access point for the community of Evanston.
- Increase connectivity across Stoney Trail.
- Support development of new suburban communities north of Stoney Trail, in alignment with the Corporate Growth Management Framework.



Stoney Trail and 14 Street N.W. Interchange

STONEY TRAIL AND CENTRE STREET INTERCHANGE UPGRADE

BUDGET: \$15 MILLION FUNDED (2023)

PROJECT SCOPE:

Currently, Centre Street crossing Stoney Trail is only three lanes wide, with two lanes northbound and only a single lane southbound. Once development of Keystone Hills north of Stoney Trail begins, traffic congestion will increase, particular for morning rush-hour traffic. Since Centre Street will be the primary route for transit to Keystone Hills, this also means significant delays for transit customers.

This project will upgrade the interchange by building a second three-lane bridge adjacent to the existing north-south bridge (providing two travel lanes each way, plus auxiliary lanes). The interchange is already designed to accommodate the addition of the second bridge.

KEY BENEFITS:

- Improve travel time reliability for automobiles and transit vehicles crossing Stoney Trail at Centre Street.
- Accommodate the development of new suburban communities north of Stoney Trail, consistent with the Corporate Growth Management Framework.
- Improve pedestrian and cycling connectivity across Stoney Trail.



Stoney Trail and Centre Street Interchange Upgrade

STONEY TRAIL AND SHAGANAPPI TRAIL INTERCHANGE UPGRADE

BUDGET: \$15 MILLION FUNDED (2022)

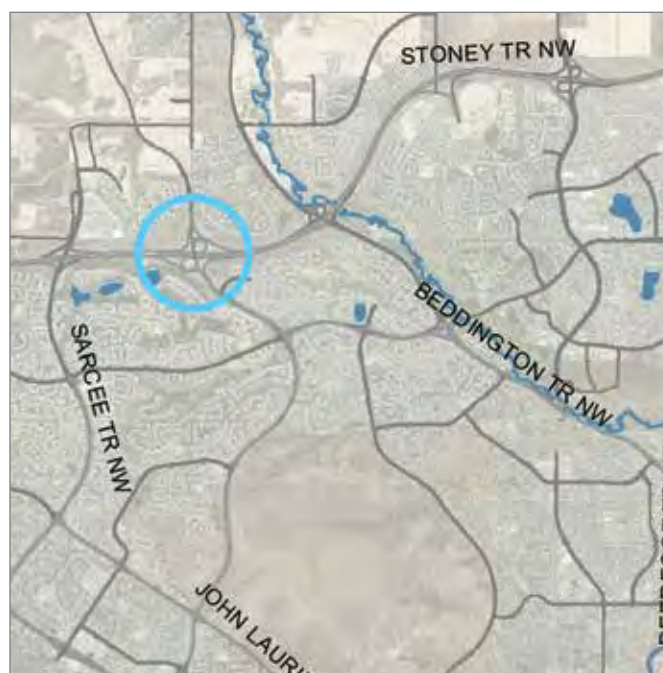
PROJECT SCOPE:

Currently, Shaganappi Trail crossing Stoney Trail is only three lanes wide, with two lanes northbound and only a single lane southbound. As residential development continues north of Stoney Trail, traffic congestion will increase for traffic along Shaganappi Trail.

This project will upgrade the interchange by building a second three-lane bridge adjacent to the existing north-south bridge (providing two travel lanes each way, plus auxiliary lanes). The interchange is already designed to accommodate the addition of the second bridge.

KEY BENEFITS:

- Improve travel time reliability for automobiles and transit vehicles crossing Stoney Trail at Shaganappi Trail.
- Accommodate the development of new suburban communities north of Stoney Trail, consistent with the Corporate Growth Management Framework.
- Improve pedestrian and cycling connectivity across Stoney Trail.



Stoney Trail and Shaganappi Trail Interchange Upgrade

61 AVENUE S.E. EXTENSION: 68 STREET S.E. TO STONEY TRAIL

REMAINING BUDGET: \$3 MILLION FUNDED (2015)

PROJECT SCOPE:

The project involves the construction of a 2-lane roadway connection along 61 Avenue S.E. between 68 Street S.E. and the 61 Avenue S.E. Stoney Trail flyover. 68 Street S.E. will also be upgraded from a rural gravel road to a paved 2-lane street from 61 Avenue S.E. and 68 Avenue S.E. Wetland disruptions will be properly managed according to provincial legislation.

KEY BENEFITS:

- Increase accessibility in-and-out of Calgary for vehicles crossing Stoney Trail at 61 Avenue S.E.
- Support business activity between Calgary and neighbouring municipalities.



61 Avenue S.E. Extension: 68 Street S.E. to Stoney Trail

MACLEOD TRAIL AND 194 AVENUE / 210 AVENUE IMPROVEMENTS

BUDGET: \$70 MILLION FUNDED (2022-2024)

PROJECT SCOPE:

Improvements will be required at both of the intersections along Macleod Trail at 194 Avenue S and 210 Avenue S in order to accommodate new residential development to the west. Connection of 194 Avenue S across the Priddis Slough (planned for 2015-2016) to support initial development will increase the need for improvements at these intersections within the first decade of residential growth. Improvements may include the construction of up to one interchange, or a mix of less expensive capacity improvements at both intersections. These improvements will enable The City to maintain level-of-service commitments, as agreed to with the Province of Alberta, along Macleod Trail.

KEY BENEFITS:

- Accommodate new suburban developments west of Macleod Trail, consistent with the Growth Management Framework.
- Maintain acceptable levels of service for traffic along Macleod Trail, south of Stoney Trail.



Macleod Trail and 194 Avenue / 210 Avenue Improvements

CROWCHILD TRAIL - BOW RIVER CROSSING

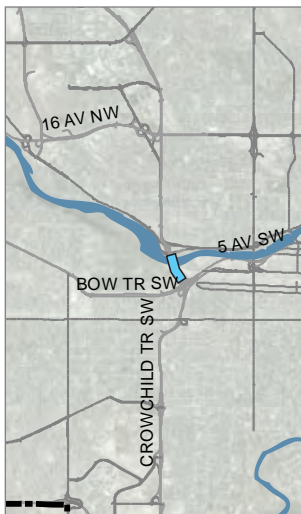
BUDGET: \$150 MILLION UNFUNDED

PROJECT SCOPE:

The Bow River crossing on Crowchild Trail is one of Calgary's most heavily travelled river crossings—the current bridge carries over 100,000 vehicles per day. This area of Crowchild Trail is part of the future Crowchild Trail Corridor Study, which will identify a series of medium to long-term investments to improve traffic flow. This project is a proposed first phase, providing a parallel bridge beside the current Bow River Crossing to address capacity and operational concerns. Should funding become available for this project, it is expected construction would commence closer to the end of Investing in Mobility's 10-year timeframe, once the public engagement and design phases are completed.

KEY BENEFITS:

- Improve safety by minimizing weaving movements on the existing Bow River crossing by separating turning traffic from traffic travelling north and south on Crowchild Trail.
- Increase traffic capacity while maintaining connections to adjacent communities and amenities.
- Provide for enhanced transit opportunities through the provision of HOV lanes.
- Provide enhanced pedestrian and cyclist connectivity across the Bow River.



Crowchild Trail - Bow River Crossing



Artist's sketch of 10 Avenue north of Bow River looking south



16 AVENUE N.E. AND 19 STREET N.E. INTERCHANGE

BUDGET: \$105 MILLION UNFUNDED

PROJECT SCOPE:

This project involves construction of an interchange along 16 Avenue N.E. (Trans Canada Highway) and 19 Street N.E. This project changes the current configuration of the 16 Avenue N.E. and Barlow Trail interchange to ensure that both interchanges operate as a system to continue to provide access to and from the communities of Mayland Heights, Vista Heights and Aero Park. Construction of the interchange will improve traffic flow for the high number of commercial trucks that pass through this location. It will also help to reduce the high number of collisions that currently occur at this intersection. In addition, this project removes the current pedestrian overpass at 19 Street N.E. and incorporates pedestrian and cyclist mobility across 16 Avenue N.E. on a new interchange bridge.

KEY BENEFITS:

- Improve traffic safety at this high collision location.
- Provide better access management and traffic flow conditions at 16 Avenue and 19 Street N.E.
- Provide free flow traffic on 16 Avenue between Deerfoot Trail and 68 Street N.E.
- Significantly improve pedestrian and cyclist connectivity across 16 Avenue and accommodate primary transit movements in northeast Calgary.



16 Avenue N.E. and 19 Street N.E. Interchange



52 STREET S.E. WIDENING: PEIGAN TRAIL TO 61 AVENUE S.E.

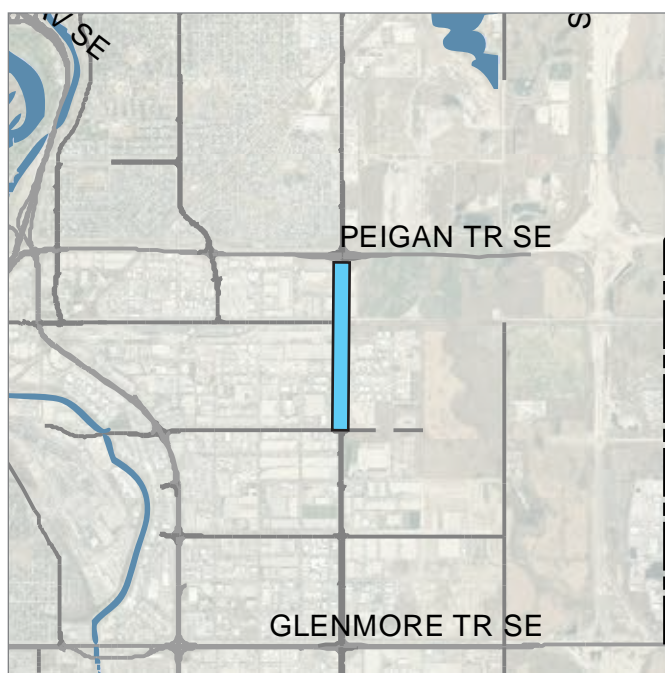
BUDGET: \$6 MILLION UNFUNDED

PROJECT SCOPE:

The project provides for the widening of 52nd Street S.E. from four lanes to six lanes between Peigan Trail and 61 Avenue S.E.

KEY BENEFITS:

- Improve traffic flow along 52nd Street S.E. by increasing capacity by 50 per cent.
- Support the long-term upgrades of 52nd Street S.E. as part of the Primary Goods Movement Network, as defined in the Calgary Transportation Plan.



52 Street S.E. Widening - Peigan Trail to 61 Avenue S.E.

GLENMORE TRAIL AND BARLOW TRAIL S.E. INTERCHANGE

BUDGET: \$82 MILLION UNFUNDED

PROJECT SCOPE:

The project provides funding for construction of an interchange at Glenmore Trail at Barlow Trail, two of the busiest commercial goods movement corridors in Calgary. Both Glenmore Trail and Barlow Trail are part of the Primary Goods Movement Network as defined in the Calgary Transportation Plan. This project provides for a continuation of the interchange and local access system initiated with the construction of the Glenmore Trail and Ogden Road interchange.

KEY BENEFITS:

- Provide significant improvements to traffic flow along Glenmore Trail and Barlow Trail.
- Reduce travel time for goods movement by lessening delays along Glenmore Trail and Barlow Trail.
- Supports the long-term upgrades of the Glenmore Trail corridor, which accommodates high truck volumes, as part of the Primary Goods Movement Network in the Calgary Transportation Plan.



Glenmore Trail and Barlow Trail S.E. Interchange

GLENMORE TRAIL AND 52 STREET S.E. INTERCHANGE

BUDGET: \$101 MILLION UNFUNDED

PROJECT SCOPE:

This project provides funding for construction of an interchange at Glenmore Trail at 52nd Street S.E., along with the widening of Glenmore Trail from four to six lanes between Barlow Trail and 52nd Street S.E. These roads are two of the busiest commercial goods movement corridors in Calgary, and are part of the Primary Goods Movement Network as defined in the Calgary Transportation Plan. This project is a continuation of the interchange system initiated with the construction of interchanges along Glenmore Trail at Ogden Road and at Barlow Trail.

KEY BENEFITS:

- Provide significant improvements to traffic flow along Glenmore Trail and 52nd Street S.E.
- Reduce travel time for goods movement and lessen delays along Glenmore Trail and 52nd Street S.E.
- Support the long-term upgrades of the Glenmore Trail corridor as part of the Primary Goods Movement Network in the Calgary Transportation Plan.



Glenmore Trail and 52 Street S.E. Interchange

AIRPORT TRAIL N.E. PHASE 2 - CONNECTION TO MÉTIS TRAIL AND INTERCHANGES

BUDGET: \$83 MILLION

(ADDITIONAL \$20 MILLION FROM THE CALGARY AIRPORT AUTHORITY) UNFUNDED

PROJECT SCOPE:

This project involves the extension of Airport Trail east of 36 Street N.E. through Métis Trail to 60 Street N.E. Due to contractual obligations with the Calgary Airport Authority (as identified in the sublease agreement between The City and the Airport Authority), this also requires construction of interchanges along Airport Trail at 19 Street N.E. and Barlow Trail. It includes the reconstruction of Airport Trail, west of the Airport Tunnel, to facilitate the construction of the interchange at Barlow Trail.

KEY BENEFITS:

- Provide direct access to and from Stoney Trail and Deerfoot Trail.
- Facilitate free flow movement along Airport Trail from Deerfoot Trail to Métis Trail.
- Improve access to and from the Calgary International Airport and increase connectivity to all communities in northeast Calgary.



Airport Trail N.E. Phase 2 - Connection to Métis Trail and Interchanges

COUNTRY HILLS BOULEVARD WIDENING: BARLOW TRAIL TO COVENTRY BOULEVARD

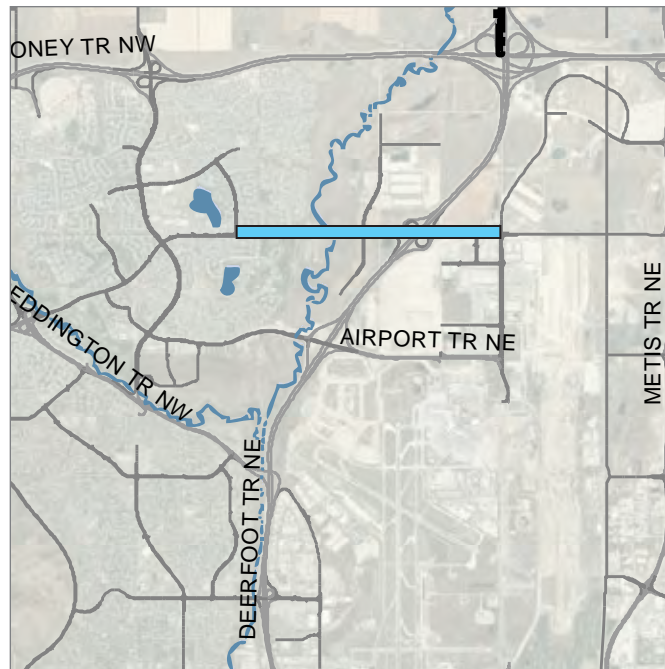
BUDGET: \$20 MILLION UNFUNDED

PROJECT SCOPE:

This project provides funding for the widening of Country Hills Boulevard from four to six lanes from Barlow Trail N.E. to Coventry Boulevard N.W. The widening requires a new bridge south of the Deerfoot Trail and Country Hills Boulevard interchange. This project supports the long-term upgrades of Country Hills Boulevard as a key east/west connector in north Calgary. Additional upgrades to Country Hills east of Barlow Trail are primarily the responsibility of the adjacent land owners at the time of development.

KEY BENEFITS:

- Improve traffic flow along Country Hills Boulevard by increasing capacity by 50 per cent.
- Facilitate improved access to and from Deerfoot Trail for north Calgary.
- Provide capacity for land use intensification in adjacent industrial areas.



Country Hills Boulevard Widening - Barlow Trail to Coventry Boulevard

114 AVENUE S.E. WIDENING: 52 STREET S.E. TO 68 STREET S.E.

BUDGET: \$15 MILLION UNFUNDED

PROJECT SCOPE:

This project widens 114 Avenue S.E. from a two-lane undivided road to a four-lane divided road between 52 Street S.E. and 68 Street S.E. This will accommodate increased traffic demand resulting from the recent connection to Stoney Trail.

KEY BENEFITS:

- Improve traffic flow along 114 Avenue S.E. by increasing roadway capacity.
- Improve accessibility between Stoney Trail and the southeast industrial area.



114 Avenue S.E. Widening - 52 Street S.E. to 68 Street S.E.

STONEY TRAIL AND 130 AVENUE S. RAMP

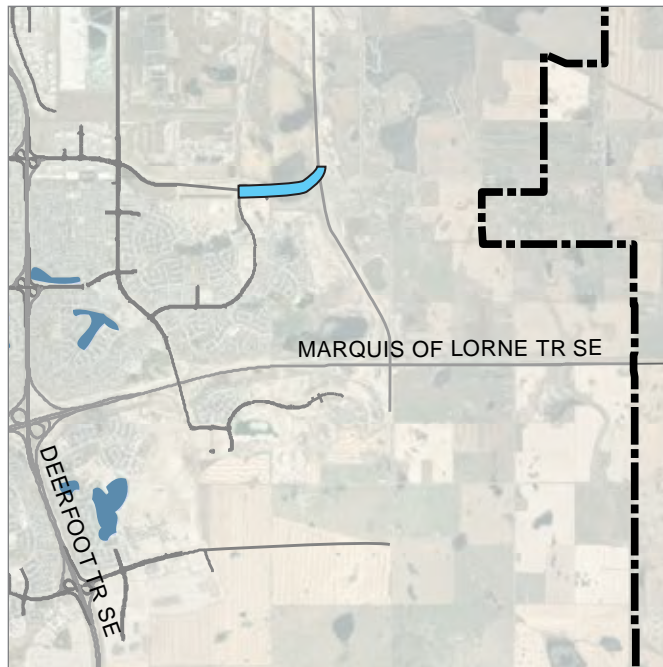
BUDGET: \$12 MILLION UNFUNDED

PROJECT SCOPE:

This project represents the first phase of the interchange planned for Stoney Trail and 130 Avenue S.E. in the longer-term. The ramp will provide a connection from Stoney Trail southbound to 130 Avenue westbound, connecting to the completed two-lane portion of 130 Avenue S.E. at 68 Street S.E.

KEY BENEFITS:

- Builds the first phase of the ultimate Stoney Trail and 130 Avenue S.E. interchange.
- Improves access to communities and businesses along 130 Avenue S.E.
- Mitigates increasing congestion at Deerfoot Trail and 130 Avenue S.E. by providing a secondary access to commercial developments.
- Reduces traffic across the future Green Line BRT crossing at 52 Street S.E.



Stoney Trail and 130 Avenue S Ramp

14 STREET S.W. WIDENING: ANDERSON ROAD TO CANYON MEADOWS DRIVE

BUDGET: \$15 MILLION UNFUNDED

PROJECT SCOPE:

This project widens 14 Street S.W. from two to four lanes between Anderson Road and Canyon Meadows Drive. This will also bring the design of this portion of 14 Street S.W. up to urban standards.

KEY BENEFITS:

- Improve road safety through an upgraded design standard.
- Improve capacity and traffic flow along 14 Street S.W.
- Completion of 14 Street S.W. at urban design standards.
- Improve pedestrian and cycling connectivity along 14 Street S.W.



14 Street S.W. Widening - Anderson Road to Canyon Meadows Drive

85 STREET N.W. REALIGNMENT AT COUNTRY HILLS BOULEVARD

BUDGET: \$4 MILLION UNFUNDED

PROJECT SCOPE:

The 85 Street N.W. connector project completes a missing link in the road network in northwest Calgary. This one-kilometre roadway project provides an alternate connection for commercial truck traffic from Country Hills Boulevard to 85 Street N.W. and serves to distribute commercial traffic more evenly.

KEY BENEFITS:

- Reduce truck traffic along 112 Avenue N.W. through the commercial area.
- Remove the conflict between southbound left-turning trucks and northbound right-turning vehicles at the existing Country Hills Boulevard and 85 Street N.W. intersection.
- Improve access for trucks on Country Hills Boulevard to exit onto Stoney Trail.



85 Street N.W. Realignment conceptual map

144 AVENUE N.W. CROSSING OF WEST NOSE CREEK

BUDGET: \$15 MILLION UNFUNDED

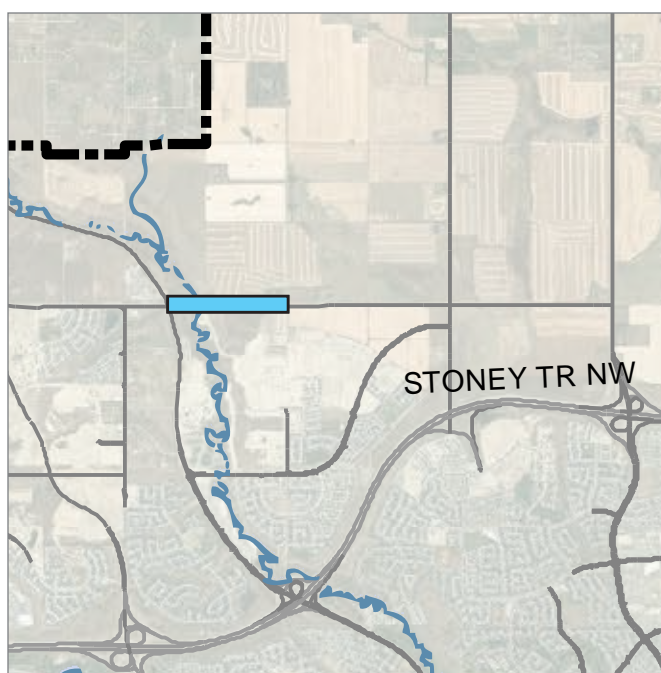
PROJECT SCOPE:

This crossing of West Nose Creek along 144 Avenue N.W. will support completion of the Evanston community (which is currently underway) and the future West Keystone Hills community. It may become a leading infrastructure requirement for any new communities to the north of 144 Avenue N.W., and would be identified through the Growth Management Framework if required.

The bridge over West Nose Creek will provide four lanes for vehicular traffic, and accommodate pedestrians and cyclists as part of the Primary Cycling Network.

KEY BENEFITS:

- Improve transportation network connectivity in northwest Calgary.
- Support the completion of suburban residential communities, consistent with the Growth Management Framework.



144 Avenue N.W. Crossing of West Nose Creek

PROGRAM INFORMATION

NEW TRAFFIC SIGNALS / PEDESTRIAN CORRIDORS



FUNDED: \$23 MILLION

New traffic signals and pedestrian corridors (i.e., signalized crossings) are prioritized using a set of warrant procedures to ensure they are installed where they are needed most.. Both procedures consider vehicle and pedestrian volumes, and intersection characteristics. Procedures for pedestrian corridors also consider pedestrian ages and collision history.

ROADS EQUIPMENT AND SYSTEMS



FUNDED: \$8 MILLION, UNFUNDED: \$7 MILLION

Funding in this program is used for computer, application and system hardware and software, consulting and studies, interior facility improvements, field equipment and tools, and office equipment. Program initiatives include, Roads' weather information systems stations, automatic vehicle location sensors, Eposat GPS-controlled spreading, and the grader training simulator.

NOISE BARRIERS



FUNDED: \$9 MILLION

The Noise Barrier Retrofit Program installs new noise walls in existing residential areas that experience traffic noise exceeding thresholds specified in the Surface Transportation Noise Policy. Qualified locations are prioritized based on severity of noise measurements along with an overall benefit/cost assessment of the barrier, and if two-thirds of the directly affected property owners support the project. Replacement of existing noise walls is a separate program.

PROGRAM INFORMATION

SUBDIVISION ROAD CONSTRUCTION

FUNDED: \$13 MILLION

This program includes the purchase of land, engineering fees for studies, design and preparation of specifications, construction of roadway infrastructure such as paving, concrete, sidewalk, walkway, street-lighting, fencing, guardrail, barriers, and traffic controls in subdivisions. Private industry contributes further funding in addition to The City's contribution, as outlined in development agreements with private developers and related development permits.

DEVELOPMENT OF SUBDIVISION ACCESS ROADS

FUNDED: \$40 MILLION, UNFUNDED: \$7 MILLION

Development of access roads help address key missing links in major road networks in newly developing areas, a result of fractional ownerships and discontinuous subdivisions in areas with multiple landowners which are beyond the obligations of immediately adjacent developments. Development of access roads also promotes safe traffic flow and accommodates increasing traffic volumes through continuity of roadway sections. These costs are recovered over time from private developers as they complete adjacent developments.





Memorial Drive lane reversal

SECTION 4: TRANSPORTATION NETWORK OPTIMIZATION



WHAT IS IT?

The programs in this category maximize the use of existing infrastructure to improve travel times, reliability and safety for all transportation choices. The capital projects in this category provide low-cost but high-benefit improvements to the transportation network.

TYPES OF PROJECTS INCLUDE:

- Safety enhancements.
- Optimization projects (e.g., lane reversals, minor roadway improvements, etc.)
- City-wide walking, cycling and pathway improvements.
- Intelligent Transportation Systems (ITS) to monitor, manage and inform travellers.

WHY IS IT IMPORTANT?

Funding for safety enhancements ensures that the transportation system is safe for all users, whether they are walking, cycling, using transit or driving. This improves the quality of life for all citizens.

Investments in low-cost optimization and ITS projects can delay the need for more expensive infrastructure projects (e.g., transitways, interchanges) for years. This allows The City to stretch limited funding to implement multiple smaller but beneficial projects across Calgary.

Coordinated funding between Transportation and Parks for city-wide walking, cycling and pathway improvements provides a seamless network for these sustainable transportation choices, making it easier for both commuters and recreational pathway users to get around.

THE FUNDING SITUATION

Overall projects and programs in this category are well funded, thanks in large part to the low cost of most optimization initiatives. Ideally, additional funding could be used for traffic congestion relief, transit optimization, and intelligent transportation systems.

Programs in this category are primarily funded through civic taxes and provincial fuel taxes.

FUNDING STATUS FOR PROJECTS & PROGRAMS

TRANSPORTATION NETWORK OPTIMIZATION

PROJECT		PRIORITY	FUNDED* (\$MILLIONS)	UNFUNDED (\$MILLIONS)
-	Next Generation Traffic Management Centre	High	\$8	\$4

ANNUAL PROGRAMS				
Pathway Missing Links (Parks)		Required	\$30	-
Traffic Congestion Relief		High	\$6	\$14
Primary Transit Network Optimization		High	\$10	\$10
Various Street Improvements (VSI)		High	\$30	-
Safety Improvements		High	\$10	-
City-Wide Active Modes Program		High	\$32	-
Operational Improvements on Roads & Streets		Medium	\$83	-
Intelligent Transportation Systems		Medium	\$9	\$17

Category Total (Funded)	\$218 Millions
Category Total (Unfunded)	\$45 Millions
Percent Total (Funded)	6%
* Pending Council approval through Action Plan budgets. Amounts reflect 2015 to 2024 budget years only.	

NEXT GENERATION TRAFFIC MANAGEMENT CENTRE

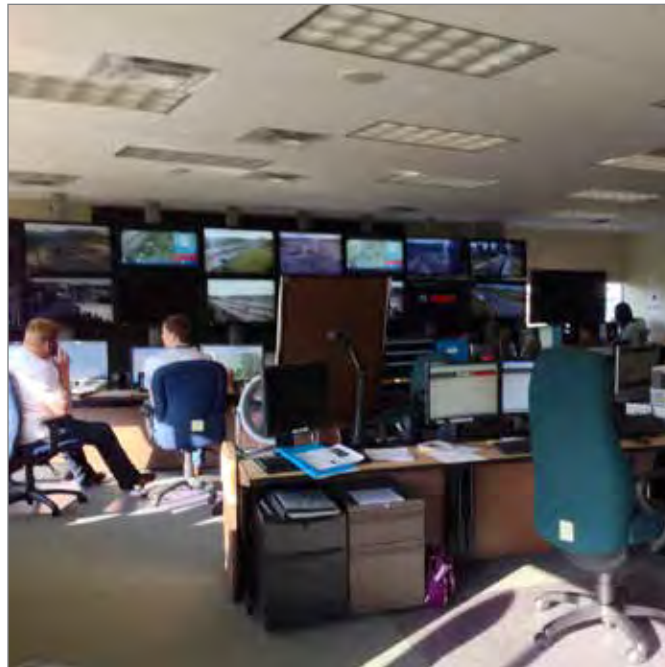
BUDGET: \$12 MILLION FUNDED: \$8 MILLION, UNFUNDED: \$4 MILLION (2015-2018)

PROJECT SCOPE:

The current traffic management centre is reaching capacity and falling behind emerging technology, causing it to operate in a reactive mode. The 2013 floods highlighted a number of opportunities to improve responsiveness. The next generation centre will upgrade and integrate technical systems, centralize operations and make them more customer-focused.

KEY BENEFITS:

- Reduce delays, enhance safety and reliability for all roadway users.
- Enable more proactive traffic management during regular operations and unplanned events.
- Respond to emerging vehicle and smart device technologies which will improve traveller information and thus customer service.



PROGRAM INFORMATION

PARKS PATHWAYS



FUNDED: \$30 MILLION

Pathways are a critical component of Calgary's pedestrian and cycling networks. The Parks Pathway program will facilitate Parks building pathways where there are missing connections and across lands that would not be developed by the private sector. This program will link communities and destinations by providing additional pathway connections within the network.

TRAFFIC CONGESTION RELIEF

FUNDED: \$6 MILLION, UNFUNDED: \$14 MILLION

This program maximizes the capacity of existing roadways in order to improve traffic operations and safety. These small scale improvements include changes in traffic controls, technological upgrades and minor geometric changes. Improvements may be focused at a single intersection, or along short sections of a street. Larger scale improvements are completed by the 'Operational Improvements on Roads and Streets' program.

PRIMARY TRANSIT NETWORK OPTIMIZATION



FUNDED: \$10 MILLION, UNFUNDED: \$10 MILLION

Transit priority measures address travel time delays experienced by transit buses and CTrains. Saving a few seconds at traffic signals or congestion points along a route can add up to savings of minutes for the entire route. This improves transit customer experience, and can provide significant operating cost savings. The improvements under construction at Centre Street and McKnight Boulevard N. will reduce bus delays by up to 4500 passenger-minutes in the peak hour, and improve reliability. Funding for most of the short-term RouteAhead rapid transit corridors has reduced the need for funding in this program over the next 10 years. Additional funding would allow Calgary Transit to optimize other corridors on the Primary Transit Network.

PROGRAM INFORMATION

VARIOUS STREET IMPROVEMENTS (VSI)

FUNDED: \$30 MILLION

This program constructs various smaller-scale improvements on roadways, sidewalks, bicycle and pedestrian paths, and transit infrastructure across Calgary. Projects focus on increased comfort and convenience of vehicular, cyclist and pedestrian traffic throughout the city.

SAFETY IMPROVEMENTS

FUNDED: \$10 MILLION

Calgary's transportation system requires a new approach to insure the system's level of safety is not only maintained, but continuously enhanced. Safety standards must also be in line with provincial, national and global initiatives. This program provides funding for small-scale safety improvements across all aspects of the transportation system.



CITY-WIDE ACTIVE MODES PROGRAM

FUNDED: \$32 MILLION

The connectivity and quality of the pathway, bikeway and pedestrian networks are key to providing Calgarians with active transportation options such as walking and cycling, and are critical in achieving the modal split targets identified in the Calgary Transportation Plan. This program focuses on transportation infrastructure that improves connectivity around Activity Centres and Corridors, as defined in the Municipal Development Plan.



PROGRAM INFORMATION

OPERATIONAL IMPROVEMENTS ON ROADS AND STREETS



FUNDED: \$83 MILLION

This program proactively develops, plans, designs and implements high benefit, medium cost projects to benefit the transportation network. Improvements built under this program maximize the existing infrastructure and rights of way before larger, more costly improvements are needed. An example project is the lane reversal system recently installed on Memorial Drive, which increases capacity for vehicles leaving the downtown during afternoon rush hour without requiring construction of new traffic lanes.

INTELLIGENT TRANSPORTATION SYSTEMS



FUNDED: \$9 MILLION, UNFUNDED: \$17 MILLION

Intelligent Transportation Systems use new and emerging technology to reduce congestion, save money, improve safety and reduce environmental impacts in all areas of transportation. These systems include sensors, electronic signs, cameras, controls and communication technologies. The components of an Intelligent Transportation System work together to provide information and allow greater control of the operation of the transportation system.



Elbow Drive Road Reconstruction - May 2011

SECTION 5: LIFECYCLE AND ASSET MANAGEMENT



WHAT IS IT?

Projects and annual programs in this category maintain the transportation system in a reasonable state of repair to provide safe and reliable service for all transportation modes. This ensures that the transportation network meets the needs and expectations of citizens who use it every day.

TYPES OF PROJECTS INCLUDE:

- Roadway maintenance (e.g., pavement and sidewalk repair, bridge rehabilitation, streetlight and traffic signal maintenance).
- Transit maintenance (e.g., replacing or rehabilitation of ageing buses and trains, LRT track repair).
- Bikeway, pathway and pedestrian overpass maintenance.
- Neighbourhood and local improvement programs.

WHY IS IT IMPORTANT?

Citizen satisfaction surveys consistently show that the quality, reliability and safety of the transportation system are their top priorities. Adequate investment in maintaining and replacing Calgary's existing infrastructure is essential to meeting that expectation.

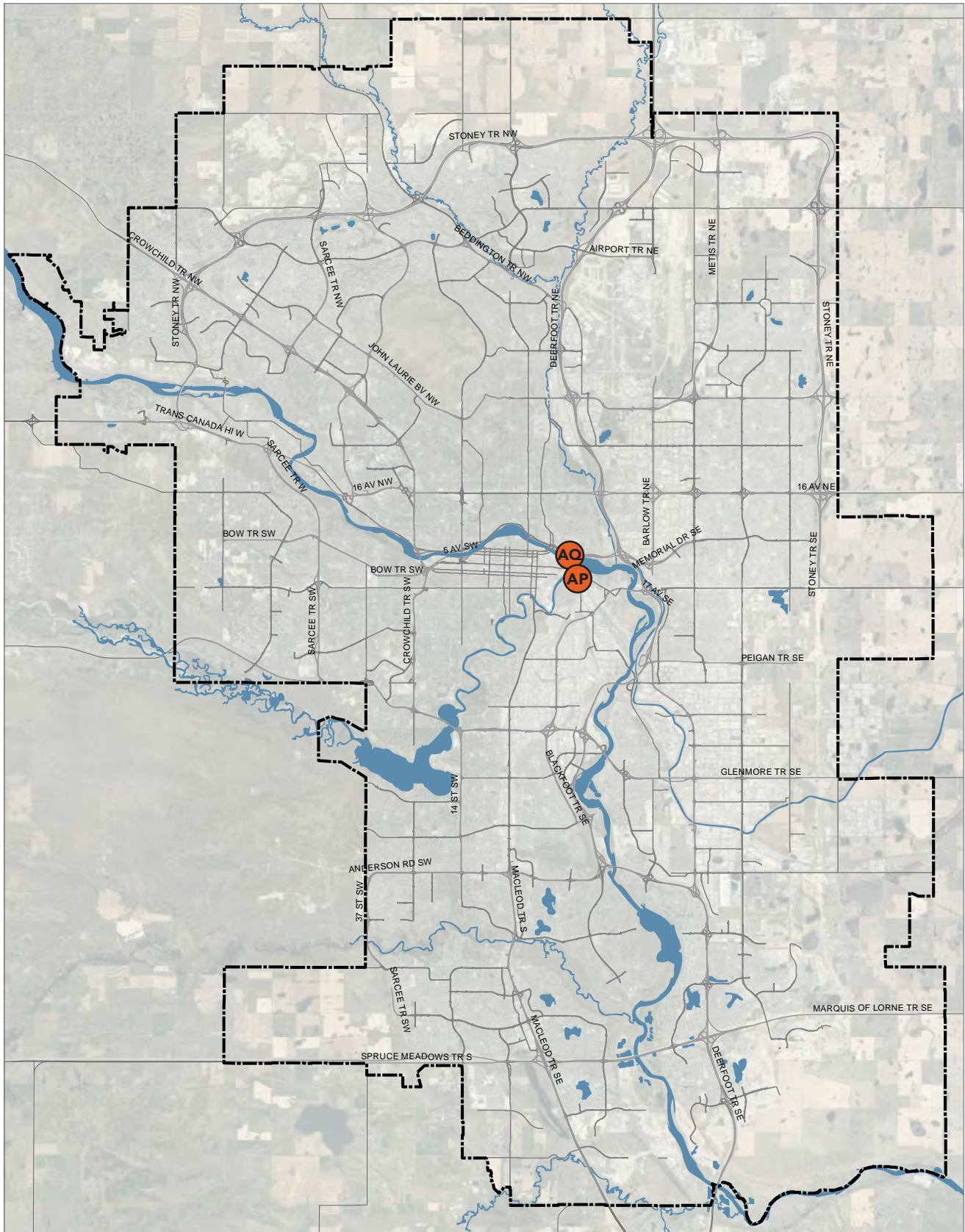
Timely investments in lifecycle and asset management also minimize financial risks to The City. Lengthy delays to scheduled maintenance can significantly increase overall asset management costs. For example, a failure of the catenary wire on the LRT system would lead to system wide disruption. Limited funding is best allocated to maintaining existing infrastructure and keeping long-term asset management costs low.

THE FUNDING SITUATION

Funding for the maintenance and lifecycle replacement of transportation infrastructure is the highest proportion of total spending that it has ever been in Calgary. This is good news as it demonstrates that The City is keeping our mobility infrastructure in good condition, reducing long-term costs. A number of important lifecycle and maintenance programs require additional funding to maintain full functionality of our infrastructure.

INFRASTRUCTURE TYPE OVERVIEW MAP

LIFECYCLE AND ASSET MANAGEMENT



FUNDING STATUS FOR PROJECTS

LIFECYCLE AND ASSET MANAGEMENT

PROJECT		PRIORITY	FUNDED* (\$MILLIONS)	UNFUNDED (\$MILLIONS)
-	Train Cars for LRT (Replacement)	Required	\$278	-
AP	Vehicle Bridge Replacement - 12 Street S.E. (Zoo)	High	\$19	-
AQ	Vehicle Bridge Replacement - 9 Avenue S.E. (Inglewood)	High	\$11	-

ANNUAL PROGRAMS			
Pathway Lifecycle and Asset Management (Parks)	Required	\$10	-
Transit Reliability	High	\$6	\$14
Pavement Rehabilitation	High	\$100	\$73
Asphalt Surface Overlay	High	\$25	-
Major Road Reconstruction	High	\$106	-
Bus and Community Shuttle Purchases (Replacement)	High	\$135	\$25
Bridge Rehabilitation and Protection	High	\$100	\$20
Traffic Signals / Pedestrian Corridor Lifecycle	High	\$43	\$20
Pedestrian Bridge Replacement and Upgrading	High	\$58	-
Streetlights - Maintenance & Upgrades	High	\$52	\$27
Transit Physical Security Measures	High	\$2	-
Train Car Refurbishment	Medium	\$43	-
Bus Refurbishment	Medium	\$37	\$2
LRT Infrastructure Rehabilitation	Medium	\$88	\$13
Transit Building Lifecycle Rehabilitation	Medium	\$24	\$11
Roads Plants Capital	Medium	\$3	-
Roads District Yards and Depots	Medium	\$7	-
Activity Centre and Corridor Maintenance	Medium	\$6	-
Transit Signals and Communication	Medium	\$31	\$25
Access Calgary Technology	Medium	\$9	\$3
Transit Technology Upgrades and Sustainment	Medium	\$14	\$22
Fare Collection Equipment	Medium	\$9	\$19
Slope Stabilization	Medium	\$5	-
Local Improvement Paving and Sidewalk	Medium	\$6	\$19
Transit Security Technologies	Medium	-	\$5
Transit Public Safety and Enforcement Technologies	Medium	-	\$4
Transit Training Simulators	Medium	-	\$4
Transit Parking Lot Asset Management	Medium	-	\$3

Category Total (Funded)	\$1,227 Millions
Category Total (Unfunded)	\$309 Millions
Percent Total (Funded)	36%
* Pending Council approval through Action Plan budgets. Amounts reflect 2015 to 2024 budget years only.	

TRAIN CARS FOR LRT (REPLACEMENT)

BUDGET: \$278 MILLION FUNDED (2015-2024)

PROJECT SCOPE:

Calgary's original train cars are over 30 years old and are reaching the end of their lifespan. The aging cars require more frequent repairs, and it is becoming increasingly difficult to obtain replacement parts. This program will fully replace all of the original train cars in the fleet. Calgary Transit will purchase the next generation of train cars to provide enhanced customer amenities such as climate control, improved accessibility, improved reliability and lower operating costs.

KEY BENEFITS:

- Increase passenger capacity compared to older vehicles.
- Improve customer experience with better climate control including air-conditioning, real-time information, and universal accessibility
- Improve vehicle reliability (i.e., fewer breakdowns).
- Provide additional safety and security features.
- Reduce operating cost of vehicles.



Older CTrain design



New train cars are required to expand the fleet to accommodate growing ridership

VEHICLE BRIDGE REPLACEMENT: 12 STREET S.E. (ZOO)

BUDGET: \$19 MILLION FUNDED (2015-2016)

PROJECT SCOPE:

The 12 Street S.E. (Zoo) bridge accessing the Calgary Zoo is inspected annually due to its deteriorated condition. An inspection of the bridge was conducted by an external contractor in 2010 and again post-flood in 2013. A replacement of the existing structure was recommended. The current bridge also has narrow traffic lanes, and restricted pedestrian connectivity. The replacement bridge will maintain two-lanes of traffic, but with adequate lane widths, and will provide pedestrian connectivity on both sides of the structure.

A scour inspection was completed post flood. The report indicated that the condition of the bridges foundations and piers below the water line are in poor condition. The impact of debris during a future flood event is a concern. The bridge has very limited resiliency. Without funding for full replacement of this bridge, the current bridge will need to be closed to vehicular traffic this decade.

KEY BENEFITS:

- Maintain access for vehicular traffic across the 12 Street S.E. bridge between Inglewood and the Calgary Zoo.
- Improve pedestrian access between Inglewood and the Calgary Zoo.
- Reduce ongoing maintenance and repair costs associated with the existing bridge.



The 12 Street S.E. (Zoo) bridge accessing the Calgary Zoo will be replaced



VEHICLE BRIDGE REPLACEMENT: 9 AVENUE S.E. (INGLEWOOD)

BUDGET: \$11 MILLION FUNDED (2017-2018)

PROJECT SCOPE:

The 9 Avenue S.E. bridge spanning the Elbow River is inspected annually due to its age and deteriorated condition. The bridge was assessed in 2011, followed by a detailed hands-on inspection of all elements by an external contractor in 2012. Based on the inspection findings, it is recommended that this bridge be replaced. Replacement of the bridge will include widening the structure from three to four traffic lanes, and accommodating pedestrians on both sides of the bridge. Widening of the bridge will improve capacity for all modes.

KEY BENEFITS:

- Maintain access for vehicular traffic across the 9 Avenue S.E. bridge between downtown and Inglewood.
- Increase capacity for vehicles and transit by installing a wider bridge structure.
- Reduce ongoing maintenance and repair costs associated with the existing bridge.
- Accommodate HOV transit operations from 17 Avenue S.E.



The 9 Avenue S.E. bridge spanning the Elbow River will be replaced



PROGRAM INFORMATION

PATHWAYS LIFECYCLE

FUNDED: \$10 MILLION

Pathways are a critical component of Calgary's pedestrian and cycling networks. There are currently over 700 kilometres of pathways within Calgary, and the pathway system continues to grow. While some funds flow through the Parks business unit budget, the funding has not kept up with the growth of the pathway system over the past two decades. An increase in funds through the Investing in Mobility budget is needed to keep pace with the aging and growing pathway system.



TRANSIT RELIABILITY

FUNDED: \$6 MILLION, UNFUNDED: \$14 MILLION

This program investigates and implements new technologies that will improve transit performance and reduce operational costs. Key elements of the program include enhanced monitoring of the LRT tracks, and improved inspection and replacement of problematic LRT catenary (overhead poles and wires) components.

ASPHALT SURFACE OVERLAY

FUNDED: \$25 MILLION

Asphalt surface overlay is a process of minor repairs and replacements to surface asphalt to improve the safety and extend the service life of our roadways. This reduces safety hazards for vehicles and cyclists. It also adds structural capacity and is instrumental in maintaining the long-term quality of roadways. Repairs that exceed the scope of asphalt surface overlay may require pavement rehabilitation.



PAVEMENT REHABILITATION

FUNDED: \$100 MILLION, UNFUNDED: \$73 MILLION

Major rehabilitation of roadways improves safety and ride-quality for all vehicles and cyclists, and prolongs lifespan of existing roadways before a major road reconstruction is required. Current funding levels will allow The City to maintain Calgary's roadways at the current overall condition, but not to improve the overall roadway network condition.



PROGRAM INFORMATION

MAJOR ROAD RECONSTRUCTION



FUNDED: \$106 MILLION

Major road reconstruction projects include full rehabilitation and upgrades to existing roadways and intersections. The objective of this program is to identify the highest-priority arterial roadways and implement a multi-year reconstruction program. Reconstruction improves the ride-quality for all vehicles, significantly reduces maintenance costs and the potential of a major structural failure that would result in a significant disruption to traffic. It typically improves adjacent pedestrian facilities as well.

BUS AND COMMUNITY SHUTTLE PURCHASES (REPLACEMENT)



FUNDED: \$135 MILLION, UNFUNDED: \$25 MILLION

In addition to buying new buses and shuttles to accommodate growth, Calgary Transit must replace aging buses each year. The typical service life of a bus is 18 years, while the service life of a community shuttle can be as little as two years due to high operational demands. Each new standard bus costs \$400,000 while articulated buses cost \$600,000. A community shuttle costs \$225,000.

BRIDGE REHABILITATION AND PROTECTION



FUNDED: \$100 MILLION, UNFUNDED: \$20 MILLION

Bridges are subjected to many physical forces, elements and chemicals that contribute to their deterioration. To achieve the typical 75 to 100 year design life, bridges require ongoing maintenance and several major repairs throughout their service life to preserve and extend their service life, ensure public safety and maximize value from the initial capital investment.

PROGRAM INFORMATION

TRAFFIC SIGNALS / PEDESTRIAN CORRIDOR LIFECYCLE

FUNDED: \$43 MILLION, UNFUNDED: \$20 MILLION

Lifecycle improvements and upgrades to existing signalized intersections, including level train crossings, are identified to improve operation, safety, accessibility and efficiency for motorists, pedestrians, cyclists, and Calgary Transit. Improvements may include the repair, replacement or upgrading of aging steel mast arms, deteriorated concrete bases, cabinets, controllers, signal heads, electrical devices, underground ducting and large information sign structures, and installing wireless communications.



PEDESTRIAN BRIDGE REPLACEMENT AND UPGRADING

FUNDED: \$58 MILLION

Pedestrian bridges are a critical link in Calgary's walking and cycling networks. This program would address the issues of aging infrastructure and infrastructure that does not accommodate all modes of accessibility. The current conditions of these bridges include bridges reaching the end of their design life, and bridges with stair access only. In order to maintain the pedestrian network, they must be upgraded or replaced. It is anticipated that this program would replace or upgrade approximately one bridge every year.



STREETLIGHTS - MAINTENANCE AND UPGRADES

FUNDED: \$52 MILLION, UNFUNDED: \$27 MILLION

The program includes the upgrade and preventative maintenance of the existing streetlight system including painting poles, cleaning fixtures and bases, replacing aging, unsafe, or critical system components to meet safety requirements. The program also includes group bulb replacement which replaces approximately 10,000 bulbs annually prior to burning out. This program is also used to replace street light bulbs with LED lights or other technologies.



PROGRAM INFORMATION

TRANSIT PHYSICAL SECURITY MEASURES

UNFUNDED: \$2 MILLION

Physical security measures for Calgary Transit’s facilities and employees include fencing, gates, locks, guard huts, access control systems and CCTV cameras. These measures prevent unauthorized access to transit facilities or help assist in detecting trespassers. Many of these security measures require maintenance, upgrading and replacement to address current and emerging security risks.

TRAIN CAR REFURBISHMENT



FUNDED: \$43 MILLION

This program is for the mid-life refurbishment of the SD160 train cars, which are now 12 years old. Refurbishment involves a painting and overhaul of the structure and major mechanical and electrical systems to achieve the 30-year service life target for these train cars. Refurbishment of the SD160s depends on obtaining funding to replace 60 older train cars (the original CTrain cars) now at the end of their service life. Without the replacement cars, the SD160s cannot be pulled from service without reducing passenger capacity.

BUS REFURBISHMENT



FUNDED: \$37 MILLION, UNFUNDED: \$2 MILLION

Mid-life refurbishment of buses is necessary to maintain transit service reliability and extend the life of these assets. Buses require major structural work, bodywork and replacement of mechanical and electrical systems to ensure adequate reliability and extend the service life of these buses. The unfunded portion of this program would be dedicated to retrofitting bike racks on the current bus fleet.

PROGRAM INFORMATION

LRT INFRASTRUCTURE REHABILITATION

FUNDED: \$88 MILLION, UNFUNDED: \$13 MILLION

Multiple parts of the LRT system require life-cycle replacement on an ongoing basis. Older traction power lines built in the 1980s must be replaced and worn segments of LRT track require replacement. Minor maintenance of electrical substations is also required over the next 10 years. Together, these repairs will maintain safe and reliable CTrain service.



TRANSIT BUILDING LIFECYCLE REHABILITATION

FUNDED: \$24 MILLION, UNFUNDED: \$11 MILLION

Calgary Transit currently has over 110 Buildings and Stations. As these buildings age, major rehabilitation and lifecycle replacement is required to ensure that facilities continue to meet the demands of both the travelling public and internal Calgary Transit customers (CT Fleet, Service Design, Operations), and ensure public as well as employee safety.



ROADS PLANTS CAPITAL

FUNDED: \$3 MILLION

The Manchester asphalt plant and the Spyhill crusher plant produce and supply gravel and asphalt for use by City operations and private contractors in the construction and maintenance of streets and utilities. The asphalt plant continues to be the only producer of hot-mix asphalt for the Calgary region during the winter months. This program includes mechanical upgrades, energy-efficient equipment, dust and odour control, and supports safety and environmental programs. This program is self funded by retained earnings.

PROGRAM INFORMATION

ROADS DISTRICT YARDS AND DEPOTS



FUNDED: \$7 MILLION

The program enables Roads to build, improve and maintain facilities that are crucial to its service delivery. Facilities include permanent and temporary buildings, material storage and handling buildings, fencing and yard safety. Depot sites are maintained with pavement repairs, site upgrades, geotechnical investigations and structural assessments. Constructing and maintaining district depots is important for service response times, productivity, and quality service delivery across the city.

ACTIVITY CENTRE AND CORRIDOR MAINTENANCE



FUNDED: \$6 MILLION

Activity centres and corridors are high-density, mixed-use locations such as the Beltline or Kensington areas. Because they are high usage locations, local infrastructure requires more frequent maintenance. This program re-invests some funds collected by the Calgary Parking Authority (CPA) to modestly enhance maintenance in Centre City and business revitalization zones that have CPA-managed paid parking.

TRANSIT SIGNALS AND COMMUNICATION



FUNDED: \$31 MILLION, UNFUNDED: \$25 MILLION

This program covers maintenance of a wide range of supporting transit infrastructure. Life-cycle maintenance and upgrading of existing bus stops and shelters provide safe stopping areas for passengers and buses. Replacement of aging communications systems, such as PA systems and help phones, improves customer service and safety. Maintenance of LRT control and crossing signals is critical to ensure safe operations and allow a high frequency of service.

PROGRAM INFORMATION

ACCESS CALGARY TECHNOLOGY

FUNDED: \$9 MILLION, UNFUNDED: \$3 MILLION

This program addresses the lifecycle and replacement of systems and hardware that Access Calgary relies on to provide customers with high-quality, reliable service. This includes systems such as accessibility technology on Access Calgary vehicles, radios, and other supporting computer software to manage day-to-day operations.



TRANSIT CUSTOMER SERVICE TECHNOLOGY LIFECYCLE

FUNDED: \$14 MILLION, UNFUNDED: \$22 MILLION

Calgary Transit is implementing a variety of new technologies to enhance customer experience and improve reliability of transit service. The rapid advancement of these technologies requires hardware and software lifecycle and upgrading over the next 10 years. Older, pre-existing systems will also require hardware and software upgrades to remain effective while handling more complex tasks.



TRANSIT FARE COLLECTION EQUIPMENT

FUNDED: \$9 MILLION, UNFUNDED: \$19 MILLION

Calgary Transit is implementing an Electronic Fare Collection (EFC) system to improve customer access to transit service by introducing a more convenient and flexible means of purchasing and paying fares using electronic media. Computer aided Dispatch (CAD), Automatic Vehicle Location (AVL), and Automated Passenger Information System (APIS) are three technologies that will provide accurate travel data to customers in real-time improving the customer experience. The EFC and CAD/AVL/APIS programs will ensure these important technologies are properly maintained.



PROGRAM INFORMATION

SLOPE STABILIZATION

FUNDED: \$5 MILLION

This program was created to deal with slope failures within City boundaries that are not on private property. Costs include geotechnical borehole drilling, scientific slope stability analysis, geotechnical design and construction. Many past slope instabilities have resulted in damage to public infrastructure or posed risks to public safety, and needed intensive geotechnical investigation, monitoring and study. Slope failures often have to be repaired to mitigate impacts to developed areas.

LOCAL IMPROVEMENT PAVING AND SIDEWALK



FUNDED: \$6 MILLION, UNFUNDED: \$19 MILLION

Local improvements are done in specific locations of Calgary that require repairs to local infrastructure. This includes street or lane paving (which is community initiated), driveway-crossing construction, new or replacement sidewalk, curb and gutter, and street-lighting. As part of an on-going program, all sidewalks, curbs and gutters in older communities are inspected and ranked on a priority list based on their condition. This program picks up the property owner costs previously collected through local improvement replacement projects.

TRANSIT SECURITY TECHNOLOGIES

UNFUNDED: \$5 MILLION

This program would fund the implementation of new technologies to enhance security on the CTrain system and infrastructure. Technologies include tunnel intrusion detection, a Physical Security Information Management (PSIM) system, and CCTV system video analytics.

PROGRAM INFORMATION

TRANSIT PUBLIC SAFETY AND ENFORCEMENT TECHNOLOGIES

UNFUNDED: \$4 MILLION

The first part of this program would be to implement an early fine payment system, and integration of 'intelligence led' policing systems with Calgary Police Services. This would be followed by further integration of Calgary Transit systems with Police systems to improve the flow of information between the two organizations.



TRANSIT TRAINING SIMULATORS

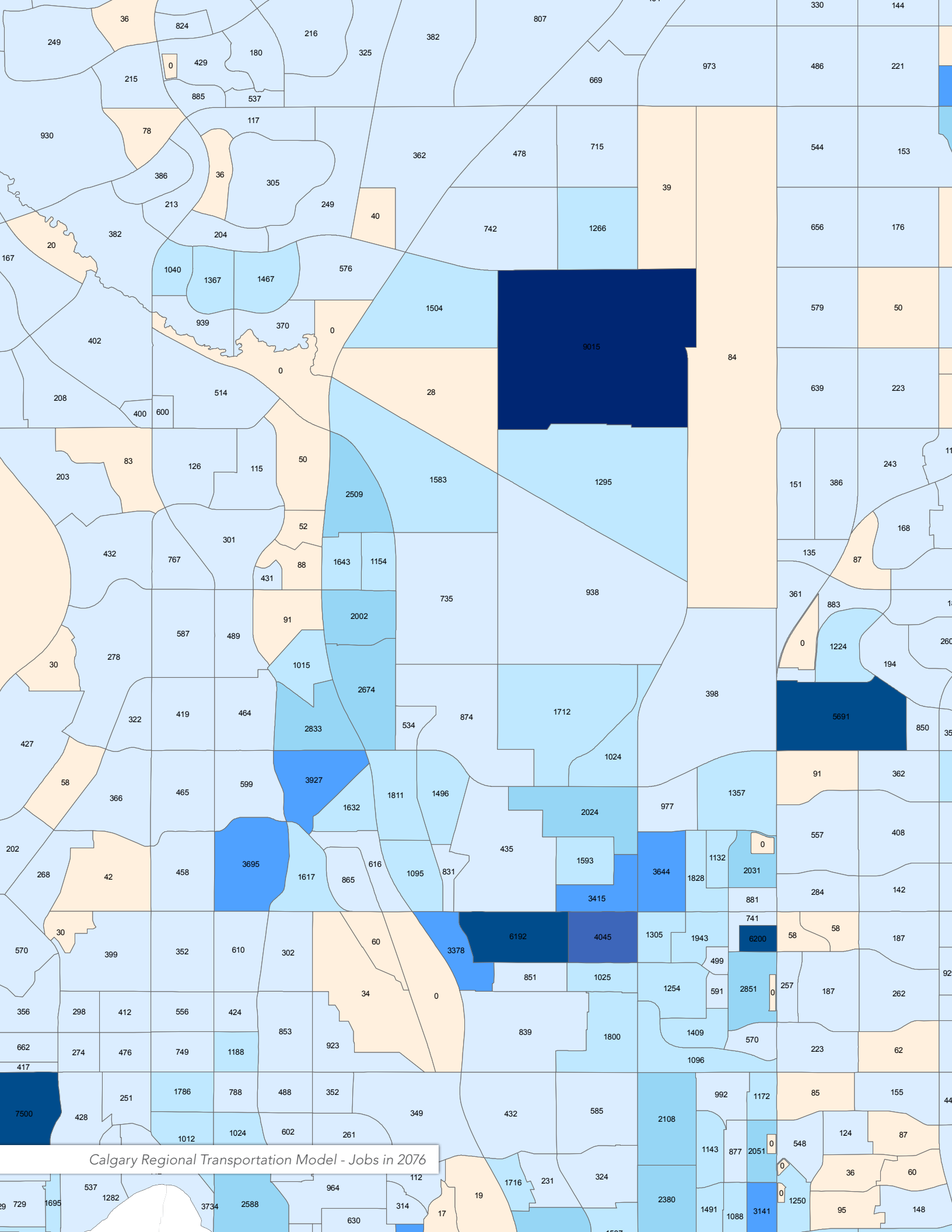
UNFUNDED: \$4 MILLION

The need to maintain operations on a growing system makes it increasingly difficult to train new and current employees on the use of the bus and train fleet on the live system. This program would purchase one train simulator and two bus simulators to reduce customer service and operating impacts.

TRANSIT PARKING LOT ASSET MANAGEMENT

UNFUNDED: \$3 MILLION

Calgary Transit owns 44 LRT stations and over 60 other properties with parking lots. As these lots age the cost of patchwork repair and maintenance continues to increase. A phased rehabilitation of these lots will ensure they remain functional and safe for Calgary Transit customers and staff.



Calgary Regional Transportation Model - Jobs in 2076

SECTION 6: SUPPORT FUNCTIONS

WHAT IS IT?

Several annual programs provide ongoing support for the projects identified in the four infrastructure categories. These programs require capital funding for planning and design studies and to forecast future conditions on the transportation system. Borrowing costs to bridge the gap between construction of large capital projects and receipt of government grants is also included in this category.

TYPES OF PROJECTS INCLUDE:

- Functional studies and detailed pre-engineering studies for major infrastructure projects.
- Maintenance and upgrading of the regional transportation model.
- Land purchases for future projects.
- Borrowing costs for large capital projects.

FUNDING STATUS FOR PROGRAMS

SUPPORT FUNCTIONS

ANNUAL PROGRAMS	PRIORITY	FUNDED* (\$MILLIONS)	UNFUNDED (\$MILLIONS)
Functional Studies	Required	\$25	-
Detailed Design Studies	Required	\$20	-
Regional Transportation Model	Required	\$7	-
MSI Financing Costs	Required	\$45	-
Future Land	High	\$143	-

* Pending Council approval through Action Plan budgets. Amounts reflect 2015 to 2024 budget years only.

PROGRAM INFORMATION

FUNCTIONAL STUDIES



FUNDED: \$25 MILLION

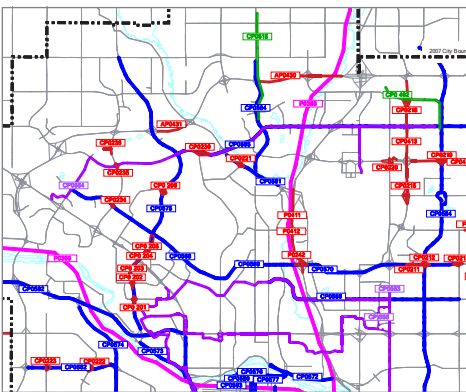
This program pays for long-range transportation planning studies for LRT lines, interchanges, roadway widening and other street upgrades. These studies determine the optimal type of infrastructure to support future transportation needs. Land requirements and high-level cost estimates are also determined. These studies are required before detailed engineering plans can be produced, and are used to evaluate private development applications.

DETAILED DESIGN STUDIES

FUNDED: \$20 MILLION

Pre-engineering studies take the high-level information produced by functional planning studies and create detailed design drawings that can be used for construction. Completion of a pre-engineering study makes a transportation project partially or fully 'shovel ready', meaning that construction can proceed quickly once funding has been secured for the project. This is critical since many new federal or provincial grants have short timelines.

REGIONAL TRANSPORTATION MODEL



FUNDED: \$7 MILLION

The regional transportation model is a computerized model used to support decisions about transportation project designs and project priority. The model forecasts traffic volumes and transit ridership based on different land use and transportation assumptions. The model must be updated regularly to reflect changes in how people make travel decisions. Since 2013, annual surveys have been conducted to inform The City on the evolving travel behaviours of Calgarians.

PROGRAM INFORMATION

FUTURE LAND

FUNDED: \$143 MILLION

This program allows land acquisition to be completed for future projects when key properties become available on the open market. Many transportation infrastructure projects require the City to acquire land to allow for construction of new projects, or expansion of existing infrastructure. The future land program allows the City to acquire property for future priority projects from motivated sellers, thereby minimizing the need to obtain property through lengthy and potentially expensive expropriation.

MUNICIPAL SUSTAINABILITY INITIATIVE (MSI) FINANCING

FUNDED: \$45 MILLION

The Municipal Sustainability Initiative (MSI) is a provincial grant that began in 2007, and has been used to fund many transportation projects in Calgary including the West LRT and the Airport Tunnel. In order to fund these large projects, The City was required to borrow the funding in advance, and repays it through this program. Repayments will be complete when the MSI grant program finishes in 2017.



CAUTION
WHEN CROSSING BRIDGE
CYCLISTS DISMOUNT
JOGGERS WALK

Riverdale Bridge - June 2013

SECTION 7: FLOOD-RELATED PROJECTS

WHAT IS IT?

In response to the 2013 flood, and the lessons learned from that event, the Transportation Department has identified a number of projects that will restore functionality to the transportation system, or will position the system to better withstand future flood events.

Projects that replace lost functionality are included in the previous sections of Investing in Mobility, and will be paid for through a mix of regular City funding and special Provincial funding (through the Resilience and Mitigation Framework). These include:

- Transit Operation Centre relocation
- Reconstruction of the 12 Street S.E. (Zoo) bridge, and
- Reconstruction of three Elbow River pedestrian bridges (with provincial funding in 2014).

Given Transportation's capital funding constraints, projects that increase our ability to withstand future flood events will need to seek funding from other sources. Flooding of the scale witnessed in 2013 is a periodic event, and these projects may or may not be required for some time. The non-flood projects in previous sections, on the other hand, are definitely required over the next 10 years to maintain our existing infrastructure and to accommodate growth. These non-flood projects therefore take priority over flood resiliency projects for funding from regular sources.

THE FUNDING SITUATION

Projects identified either as Quick-Wins (short term, smaller amount of efforts, immediate resiliency benefits) and Community (benefiting the community and citizens at large) are being brought forward to the Priorities and Finance Committee on 2014 April 1 for funding approval by Council.

Projects outside of the above categories are longer term and fit the criteria for resiliency and mitigation funding from the Province. A total of 13 transportation projects are being submitted to the Recovery Operations Centre for funding consideration.

FLOOD-RELATED PROJECTS OVERVIEW

BU	PROJECT ID	PROJECT SUMMARY	ESTIMATED TOTAL CAPITAL COST (\$000s)
PROJECTS SUBMITTED TO THE PROVINCE (VIA ROC) FOR MITIGATION FUNDING APPROVAL ON 2014 MAR 29:			
Longer term projects. ROC did NOT ask for Council support or funding on these projects. These are to be received for information only at this time with ROC's commitment to report back on any funding decision by November.			
CT	P-25	South LRT Corridor - Track Drainage Improvements	\$1,500
CT	P-24	Raise Victoria Park switch gear	\$250
CT	P-21	South LRT Corridor - Tunnel relamping	\$350
CT	P-23	Relocation of Erlton LRT Station signal room to higher elevation	\$500
CT	P-22	Relocation of Cemetery Hill electrical and pump station to higher elevation	\$250
RD	I-44/P-33	Emergency Access to Bow River and Weir Area	\$350
RD	P-27	Construction of enhanced erosion and scour protection	\$8,550
RD	P-28	Next Generation Roads Traffic Management Centre	\$11,875
RD	P-29	Back Lane Paving (In Flood Zones)	\$6,000
RD	P-30	Calgary Communication Network (CCN)	\$5,000
RD	P-31	Signal Controller Upgrades to IP Address-able	\$3,000
RD	C-19	Streetlight Relay Replacement	\$1,800 - \$2,400
TI	P-39	Replacement of Elbow River Traffic Bridge – Pattison (Macleod Trail)	\$14,000
TI	P-36	Replacement of Elbow River Traffic Bridge – Scollen (24th Avenue)	\$9,000
TI	P-38	Replacement of Elbow River Traffic Bridge – Victoria (Macleod Trail)	\$18,000
TI	P-35	Replacement of Elbow River Traffic Bridge – Mission (4th Street)	\$16,000
TI	P-37	Replacement of Elbow River Traffic Bridge – Elboya Bridge	\$13,000
TI	P-34	Elbow River Pedestrian Bridges Replacements	\$10,500
QUICK-WIN PROJECTS - SUBMITTED TO ROC ON 2014 MAR 17:			
Short-term (<6 months) projects, deliver resiliency benefits quickly. ROC requested Council support and budget.			
CT	I-39	LRT Tugger Hi-Rail Truck	\$850
CT	I-40	Access Calgary IVR network switch/backup	\$250
CT	I-41	Access Calgary Phone backup system	\$300
CT	I-42	Internet mobile backup connection	\$25
RD	I-43	Signal Cabinet Retrofit	\$300
RD		Tender out contracts for road construction contractors to be on stand by during the flood season.	\$200
RD		Review existing Transit Priority routes and HOV lanes to determine if priority would be beneficial for Roads maintenance vehicles during flood response	\$250
RD	I-46	Inglewood Bird Sanctuary Bridge C - construction of a deep (piled) foundation	\$500
COMMUNITY PROJECTS - SUBMITTED TO ROC ON 2014 MAR 17:			
Deliver direct benefits to the community and citizens at large. ROC requested Council support and budget.			
RD	C-18	Underground Signal Duct Replacement	\$150
RD		Median / Other Detours / Crossovers	TBD

FLOOD-RELATED PROJECTS OVERVIEW

BU	PROJECT ID	PROJECT SUMMARY	ESTIMATED TOTAL CAPITAL COST (\$000s)
Approved projects as per April 14, 2014 Combined Meeting of Council. Capital budget funded through the Fiscal Stability Reserve and Administration will bring forward for consideration any continuing costs as part of Action Plan 2015-2018.			
RD	C-18	Underground Signal Duct Replacement	\$75 (2015)
RD	C-19/P-32	Streetlight Relay Replacement	\$1,200 (2015)

TAB A-1(F)

BYLAW NUMBER 2M2016

**BEING A BYLAW OF THE CITY OF CALGARY
TO ESTABLISH OFF-SITE LEVIES PURSUANT
TO SECTION 648 OF THE MUNICIPAL
GOVERNMENT ACT**

WHEREAS pursuant to s.648 of the Municipal Government Act, R.S.A. 2000, c.M-26, as amended, Council may provide for the imposition and payment of an off-site levy in respect of land that is to be developed or subdivided and to authorize agreements to be entered into in respect of the payment of the levy;

AND WHEREAS pursuant to s.648 of the Municipal Government Act an off-site levy may be used to pay for all or part of the capital cost of new or expanded facilities or land required for or in connection with any new or expanded facilities for:

- (a) the storage, transmission, treatment or supplying of water;
- (b) the treatment, movement or disposal of sanitary sewage;
- (c) storm sewer drainage; or
- (d) roads required for or impacted by a subdivision or development;

AND WHEREAS The City of Calgary requires developers to contribute to the funding of the above-noted infrastructure;

AND WHEREAS following an extensive engagement and consultation process, The City of Calgary has calculated levies that are based on the application of the principles and criteria set out in the Principles and Criteria for Off-site Levies Regulation, AR 48/2004, , as outlined in The City of Calgary Off-site Levy & Community Services Charges Background Report, contained as Schedule "C" of this bylaw;

AND WHEREAS notice of this Bylaw has been provided pursuant to the provisions of section 606 and 648 of the Municipal Government Act;

NOW, THEREFORE, THE COUNCIL OF THE CITY OF CALGARY ENACTS AS FOLLOWS:

1. This bylaw may be cited as the "Calgary Off-site Levies Bylaw".

OBJECT OF THE LEVY

2. This bylaw creates off-site levies to pay for all or part of the capital cost of new or expanded facilities or land required for or in connection with any new or expanded facilities for:
 - (a) the storage, transmission, treatment or supplying of water;
 - (b) the treatment, movement or disposal of sanitary sewage;
 - (c) storm sewer drainage; or
 - (d) roads required for or impacted by a subdivision or development.

DEFINITIONS AND INTERPRETATION

3. (1) In this bylaw, the following definitions apply:

“*approving authority*” means a person or body appointed as a development authority or subdivision authority in accordance with the *Municipal Government Act*, and does not include an appeal board;

“*commercial development*” means the uses described in Table 3 of Schedule “B”;

“*Established Area*” means the area identified as “Established Area” on the map in Schedule “A”;

“*Greenfield Area*” means collectively the areas identified as “Greenfield Area by Watershed” on the map in Schedule “A”;

“*industrial development*” means the uses described in Table 3 of Schedule “B”;

“*Interim Indemnity Agreement*” means the standard City of Calgary Interim Indemnity Agreement;

“*levy*” or “*levies*” means either individually or collectively the *sanitary sewer levy*, *storm sewer levy*, *transportation levy*, *treatment plant levy*, or *water levy* imposed pursuant to this bylaw;

“*Manager, Growth Management*” means *The City* employee appointed to the position of Manager, Growth Management, or the individual authorized to act in that person’s place;

“*residential development*” means the uses described in Table 3 of Schedule “B”;

“*sanitary sewer levy*” means an off-site levy created and imposed under this bylaw to pay for all or part of the capital costs of new or expanded facilities required for the movement or disposal of sanitary sewage;

“*site development area*” means any portion of land that is the subject of a subdivision or development permit application, and may be portions of, or all of, one or more areas of land described in a certificate of title or described in a certificate of title by reference to a plan filed or registered in a land titles office;

“*storm sewer levy*” means an off-site levy created and imposed under this bylaw to pay for all or part of the capital costs of the construction of new or expanded storm sewer drainage facilities;

“*The City*” means the municipal corporation of The City of Calgary;

“*transportation levy*” means an off-site levy created and imposed under this bylaw to pay for all or part of the capital costs of the construction of new or expanded roads required for or impacted by a subdivision or development;

“*treatment plant levy*” means an off-site levy created and imposed under this bylaw to pay for all or part of the capital costs of the construction of water and sanitary sewage treatment facilities;

“*unit*” means a Dwelling Unit or a Live Work Unit, but does not include a Secondary Suite or Backyard Suite, as those terms are defined in The City of Calgary Land Use Bylaw, 1P2007;

“*water levy*” means an off-site levy created and imposed under this bylaw to pay for all or part of the capital costs of new or expanded facilities required for the storage, transmission, or supply of water.

- (2) Headings or sub-headings are inserted for ease of reference and guidance purposes only and do not form part of this bylaw.
- (3) Each provision of this bylaw is independent of all other provisions and if any provision is declared invalid for any reason by a Court of competent jurisdiction, all other provisions of this bylaw remain valid and enforceable.
- (4) Where this bylaw cites or refers to any other Act, bylaw, regulation, agreement or publication, the citation or reference is to the Act, bylaw, regulation, agreement or publication as amended, whether amended before or after the commencement of this bylaw, and includes reference to any Act, bylaw, regulation, agreement or publication that may be substituted in its place.
- (5) All schedules attached to this bylaw form a part of this bylaw.

CALCULATION

4. (1) The city is divided into geographical areas as shown in Schedule ‘A’ for the purpose of calculating the *levies* to be imposed.
- (2) The *levies* were determined according to the calculations set out in The City of Calgary Off-site Levy & Community Services Charges Background Report, attached to this bylaw as Schedule “C”.

LEVIES

5. (1) Subject to subsections (4), (5) and (6), the following *levies* shall be imposed on all land within the *Greenfield Area* that is to be subdivided or developed for which such a *levy* has not previously been paid:
 - (a) *sanitary sewer levy*,
 - (b) *storm sewer levy*,
 - (c) *transportation levy*,
 - (d) *water levy*, and
 - (e) *treatment plant levy*.
- (2) Subject to subsections (4), (5) and (6), the *treatment plant levy* shall be imposed on all land within the *Established Area* that is to be subdivided or developed for which a *levy* for water or sanitary sewers has not previously been paid.

- (3) For the purpose of this bylaw only, despite subsection (2), the *treatment plant levy* must not be imposed on land that:
- (a) was the subject of a City of Calgary Master Development Agreement executed between January 1, 2000 and December 31, 2010,
 - (b) was the subject of a City of Calgary Master Development Agreement executed between January 1, 2011 and December 31, 2011 and paid a 2010 levy rate, or
 - (c) is the subject of a development permit for the addition of floor area for *commercial or industrial development* and the gross floor area is less than 150 square metres.
- (4) Despite subsections (1) and (2), a *levy* must not be imposed on land that is designated as environmental reserve or that is a skeletal road.
- (5) Despite subsections (1) and (2), where only portions of a parcel are subject to a subdivision or development permit approval, nothing shall prevent the imposition of a *levy* on the remaining land, or portions thereof, on subsequent subdivision or development.
- (6) Despite subsections (1) and (2), the *Manager, Growth Management* may defer the imposition of a *levy* on all or part of a parcel where, in his or her sole discretion, there will be opportunity to collect the *levy* on future subdivision or development.

AMOUNT OF LEVIES

6. (1) Subject to the following subsections and section 9, the rates and amounts of the *levies* to be imposed pursuant to this bylaw are the rates and amounts indicated in Schedule "B".
- (2) Subject to subsection 5(4), in the *Greenfield Area*, the *levies* to be imposed pursuant to this bylaw are calculated at the rates per hectare, based on the watershed in which the lands are located as shown in Schedule "A" if applicable, multiplied by the number of hectares in the *site development area*.
- (3) Subject to subsection 5(4), in the *Established Area*, for *industrial developments*, or a combination of *industrial* and *commercial developments* on a development permit application, the *levy* to be imposed pursuant to this bylaw is the total gross floor area of *industrial* and *commercial development* approved in the development permit, multiplied by the rate for *industrial* and *commercial development*.
- (4) Subject to subsection 5(4), in the *Established Area*, for *residential, commercial*, or a combination of *residential* and *commercial development* on a development

permit application, the amount of the *levy* to be imposed pursuant to this bylaw is:

- (a) the total number of *units* and the total gross floor area of *commercial development* approved in the development permit, multiplied by the rates for each type of *unit* and the rate for *commercial development*, or
 - (b) where the combined equivalent population per hectare for *residential* and *commercial development* proposed in the development permit is greater than or equal to 285 equivalent population per hectare, the lesser of:
 - i. the calculation as set out in subsection (4)(a), or
 - ii. \$615,885.00 multiplied by the number of hectares in the *site development area*.
- (5) For the purpose of subsection (4), the equivalent population per hectare for *residential* and *commercial development* is calculated using the equivalent population formula indicated in Table 2 of Schedule “B” per type of development for the total number of *units* and the total gross floor area of *commercial development* on the *site development area*, divided by the *site development area*.
- (6) For the purpose of subsections (3) and (4), the number of *units* or gross floor area used to calculate the *levy* must exclude any *units* or gross floor area of *commercial* or *industrial development* that:
- (a) are demolished or will be demolished, provided the development existed within ten years prior to the development permit application and was connected to both the water and sanitary sewer systems, or
 - (b) will be retained on site.
- (7) The amounts of the *levies* indicated in Schedule “B” will be automatically adjusted every year on January 1 by *The City* without amendment to this bylaw:
- (a) for the *sanitary sewer levy*, *storm sewer levy*, *water levy*, and *treatment plant levy* by 3.3 per cent; and
 - (b) for the *transportation levy*, by the percentage equal to the average Statistics Canada’s non-residential construction price index for Calgary for the previous 4 published quarters.
- (8) Subject to section 5(6), the amounts of the *levies* to be imposed pursuant to this bylaw are determined:
- (a) in the case of a development permit, on the date of the *approving authority’s* decision on a development permit, and

- (b) in the case of a subdivision, on the date of execution of an *Interim Indemnity Agreement*.

PAYMENT OF LEVIES

- 7. (1) A *levy* that has been imposed on a subdivision pursuant to this bylaw must be paid as follows:
 - (a) 30 (thirty) per cent within one year of the date of execution of an *Interim Indemnity Agreement*,
 - (b) 30 (thirty) per cent within two years of the date of execution of an *Interim Indemnity Agreement*, and
 - (c) the remaining 40 (forty) per cent within three years of the date of execution of an *Interim Indemnity Agreement*.
- (2) A *levy* that has been imposed on a development pursuant to this bylaw must be paid on or before the release of the development completion permit.
- (3) Despite section 6 and subject to section 9, the amount of a *treatment plant levy* that has been imposed on land in the *Established Area* must only be paid as follows:
 - (a) 1/3 of the amount calculated pursuant to this bylaw, where the *approving authority's* decision on the development permit was made between February 1, 2016 and December 31, 2016,
 - (b) 2/3 of the amount calculated pursuant to this bylaw, where the *approving authority's* decision on the development permit was made between January 1, 2017 and December 31, 2017, and
 - (c) the full amount calculated pursuant to this bylaw, where the *approving authority's* decision on the development permit was made on or after January 1, 2018.
- (4) Interest on any outstanding *levy* or portion of a *levy* will be calculated from the time of the payment at the rate of one and one half per cent (1.5%) per month (18% per annum) or as otherwise provided by Bylaw 104/75.

AGREEMENTS

- 8. *The City* may enter into agreements with respect to the payment of *levies*.

TRANSITION

- 9. (1) This bylaw applies to all subdivision or development approvals made on or after February 1, 2016.

- (2) Despite subsection (1), a *treatment plant levy* must not be imposed on land in the *Established Area* on a development permit application which was received on or before January 31, 2016 and approved on or before January 31, 2018.
- (3) Despite subsection (1), the provisions of previous bylaws imposing off-site levies continue to apply to all subdivision and development where:
 - (a) in the case of a development permit, the date of the *approving authority's* decision occurs on or before January 31, 2016, or
 - (b) in the case of a subdivision, the date of the *approving authority's* decision occurs on or before January 31, 2016 and the date of execution of a *Interim Indemnity Agreement* for that approval occurs on or before February 15, 2016.
- (4) Except as provided for in subsection (3), Bylaw 34M2011 is hereby repealed.
- (5) Bylaw 41M2010 is hereby repealed.

OTHER LEVIES AND CHARGES

- 10. (1) In addition to the *levies* pursuant to this bylaw, the Centre City Levy Bylaw, Bylaw 38M2009, shall continue to apply.
- (2) Nothing in this bylaw prevents *The City* from imposing or collecting further or different levies or charges on any land subject to this bylaw.

ENACTMENT

11. This bylaw comes into force on February 1, 2016.

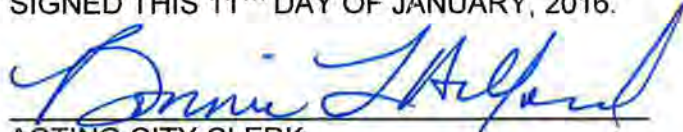
READ A FIRST TIME THIS 11TH DAY OF JANUARY, 2016.

READ A SECOND TIME THIS 11TH DAY OF JANUARY, 2016.

READ A THIRD TIME THIS 11TH DAY OF JANUARY, 2016.



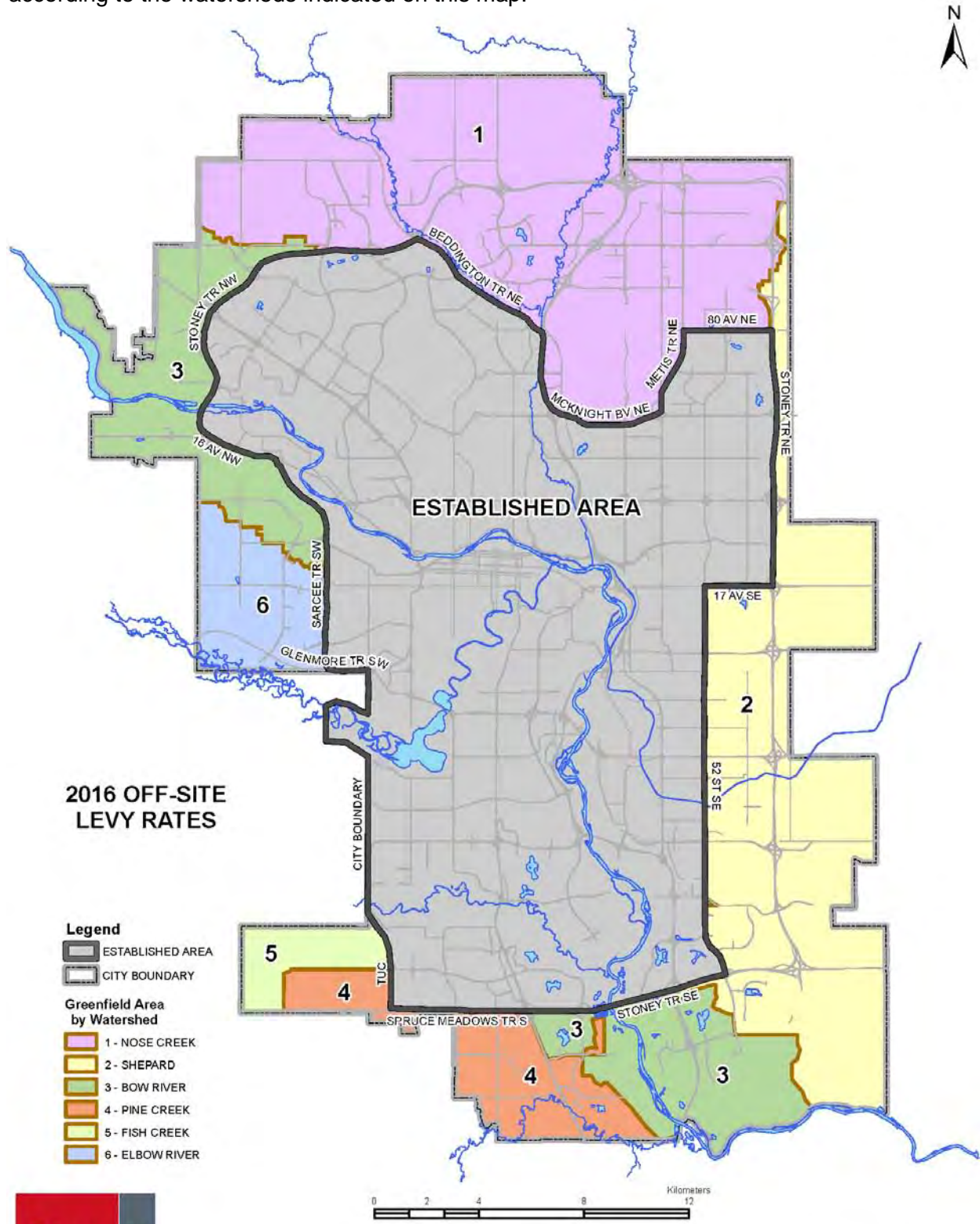
DEPUTY MAYOR
SIGNED THIS 11TH DAY OF JANUARY, 2016.



ACTING CITY CLERK
SIGNED THIS 11TH DAY OF JANUARY, 2016.

SCHEDULE "A"

The following map illustrates the geographic areas and watersheds. Despite any changes made to grades or changes to natural drainage courses that might occur, the *levies* will be imposed according to the watersheds indicated on this map.



SCHEDULE "B"

TABLE 1 - Levy Rates in the Greenfield Area

LEVY		Rate(\$/ha)
<i>Transportation levy</i>		\$136,789.00
<i>storm sewer levy (by watershed)</i>	Bow River	\$6,983.00
	Elbow River	\$0
	Fish Creek	\$0
	Nose Creek	\$11,325.00
	Pine Creek	\$16,812.00
	Shepard	\$42,704.00
<i>sanitary sewer levy</i>		\$44,449.00
<i>water levy</i>		\$32,325.00
<i>treatment plant levy</i>		\$129,660.00

TABLE 2 - Levy rates for *treatment plant levy* in the *Established Area*

TYPE		LEVY RATE	Equivalent Population (EP)
Residential development	Single Detached development with only one <i>unit</i>	\$6,267.00 per <i>unit</i>	<i>units</i> × 2.9 EP/ <i>unit</i>
	Semi-detached/Duplex development with only two <i>units</i>	\$5,619.00 per <i>unit</i>	<i>units</i> × 2.6 EP/ <i>unit</i>
	Multi-Residential Grade-Oriented development with three or four <i>units</i> , regardless of the form, or five or more <i>units</i> , where the <i>units</i> are provided in a Cottage Housing Cluster*, Townhouse* or Rowhouse Building*	\$3,890.00 per <i>unit</i>	<i>units</i> × 1.8 EP/ <i>unit</i>
	Multi-Residential Non Grade-Oriented development with five or more <i>units</i> , where the <i>units</i> are provided in a Multi-residential Development* but are not provided in a Cottage Housing Cluster*, Townhouse* or Rowhouse Building*	\$3,242.00 per <i>unit</i> if a <i>unit</i> contains 2 or more bedrooms	<i>units</i> × 1.5 EP/ <i>unit</i>
		\$2,593.00 per <i>unit</i> if a <i>unit</i> contains less than 2 bedrooms	<i>units</i> × 1.2 EP/ <i>unit</i>
Commercial development		\$36.62/m ² of gross floor area	gross floor area × 0.017 EP/m ²
Industrial development		\$17.58/m ² of gross floor area	gross floor area × 0.008 EP/m ²
* The terms “Cottage Housing Cluster”, “Townhouse”, “Rowhouse Building”, and “Multi-Residential Development” have the same meanings as provided for in the City of Calgary Land Use Bylaw, 1P2007 and include any similar uses defined in a Direct Control District.			

TABLE 3 – Residential, Commercial and Industrial Development

<p><i>Residential development</i> means a use identified on a development permit, and any use that is ancillary to the principal use listed on a development permit, listed in the following City of Calgary Land Use Bylaw 1P2007 Schedule A Group of Uses, in place on the date of passage of this bylaw:</p> <p>a. Residential Group, with the exception of Hotel.</p>
<p>2. <i>Industrial development</i> means a use identified on a development permit, and any use that is ancillary to the principal use listed on a development permit, that is one of the following:</p> <p>a. a use listed in the following City of Calgary Land Use Bylaw 1P2007 Schedule A Group of Uses, in place on the date of passage of this bylaw:</p> <p>i. Direct Control Uses, with the exception of the following:</p> <ol style="list-style-type: none"> 1. Adult Mini-theatre, 2. Emergency Shelter, 3. Gaming Establishment – Casino, 4. Jail; <p>ii. General Industrial Group,</p> <p>iii. Industrial Support Group, with the exception of the following:</p> <ol style="list-style-type: none"> 1. Artist’s Studio, 2. Health Services Laboratory – Without Clients, <p>iv. Storage Group; or</p> <p>b. one of the following specific uses:</p> <ol style="list-style-type: none"> i. Auction Market – Other Goods, ii. Auction Market – Vehicles and Equipment, iii. Bulk Fuel Sales Depot, iv. Fleet Service, v. Large Vehicle Service, vi. Large Vehicle and Equipment Sales, vii. Large Vehicle Wash, viii. Recreational Vehicle Sales, ix. Recreational Vehicle Service, or x. Restored Building Products Sales Yard.
<p>3. <i>Commercial development</i> means a use identified on a development permit, and any use that is ancillary to the principal use listed on a development permit, that is neither <i>residential development</i> nor <i>industrial development</i>.</p>

SCHEDULE "C"

The City of Calgary Off-site Levy & Community Services Charges Background Report,
December 2015 (82 pages)