

Guiding Framework for Prioritization of Future RouteAhead Capital Projects

This attachment describes the criteria by which future rapid transit network growth projects identified in Calgary Transit's 30-year strategic plan, RouteAhead, will be evaluated in terms of the relative benefits to customers, the transportation network and Calgarians in general, and overall capital and net operating costs. Any such prioritization could then be advanced to departmental and corporate infrastructure prioritization frameworks to align with other transportation and city needs and make the best match with available funding.

Prioritization of the projects will not change the current approved capital projects in One Calgary 2019-2022 as the projects are outside of the 4-year anticipated capital funding envelope.

Prioritizing Future RouteAhead Capital Projects

Administration is in the process of updating and evaluating the benefits and costs of RouteAhead capital projects to help inform when and where the next major rapid transit network growth projects should be built. Previously, Council directed the RouteAhead team to develop open and transparent criteria that was easy to understand, easy to apply to a variety of transit capital projects, evaluated relative benefits of various projects across the city and could be replicated in the future with different projects

The general outcomes desired by future projects reflect those in the RouteAhead document:

- Support of Land Use
- Improving the Customer Experience
- Provision to serve high ridership and overall mobility

These measures can then be compared to the capital and net operating costs of the project to assess the relative benefits and value of each project.

Prioritizing New Projects with a Focus on Reducing Operating Costs

Operating funding remains a significant constraint for expansion of transit service. One way of reducing required future operating funding is prioritization of future projects by evaluating reduced net operating costs. This would favour new transit capital projects that reduce, or minimize the need for additional operating funding over projects that would require significant new operating dollars. The impacts of this scenario will also be evaluated as part of future prioritization evaluations.

Framework

The table below outlines the prioritization criteria from RouteAhead as well as including Triple Bottom Line criteria that was used in the prioritization of Green Line Stage 1.

RouteAhead Project Prioritization - Project Criteria and Weighting

	Weighting (%)	Criteria	Metric
Benefits	30	Ridership	Passengers per avg. weekday
	20	Customer Experience	Increases travel time advantage
			mins / trip
			Overcomes issues of reliability and delay
			on time performance
			Increases passenger capacity
			capacity / corridor
	20	Economic	Population Opening Day
			# Population in 800m radius
			Population Future
			# Population in 800m radius
	20	Social	Jobs Opening Day
			# Jobs in 800m radius
			Jobs Future
			# Jobs in 800m radius
	20	Social	Community Services
			# of Services in 1,000m radius
			Affordable Housing Units
			# of Affordable Housing Units in 600m
			Low Income Population Served
			Total # of Low Income Pop in 600m radius
	10	Environmental	GHG Emissions Reductions
			Tonne CO2/Year
			Proximity to MDP Activity Centres and Corridors
			# Stations within Corridor in 800m
Costs		Capital Cost	\$ / Million
		Net Operating and Maintenance Cost	\$M / Year
Additional Considerations		Additional Considerations and Project Characteristics	Serves high ridership corridors and mode progression
			Ridership on existing corridors (supports existing travel patterns and alleviate overcrowding)
			Contributes to lifecycle maintenance and asset management
			Broader reconstruction of existing corridors
			Transit Oriented Development
			Coordination with other City of Calgary TOD projects, TOD Strategy and priorities
			Coordination with other City Departments
			Alignment with other City department capital and operating projects
			Community/Project Readiness
			Community and project readiness on project needs and goals
			Strategic Alignment
			Alignment with additional approved City strategies
			Alignment with technological advancements and resiliency
			Future Technology Implications

Based on feedback from Council and other stakeholders, the highest weight has been placed on Ridership (30%), followed by Customer Experience (20%), Economic (20%), Social (20%) and Environmental (10%) benefits. These signify a focus on maximizing benefits and return on investment for the most customers, as well as highlight associated positive outcomes from rapid transit projects.

Prioritization Approach

The intention of the criteria and weighting presented above will be to produce an assessment of the rapid transit projects based solely on benefits first, independent of capital and operating cost constraints. The second part of the approach will be to compare the projects against the net operating costs and capital costs, to evaluate the relative benefits, value and financial impacts. Additional considerations such as High Ridership Corridors, Transit Oriented Development and Coordination with other City Departments and key City strategies will also be incorporated from a qualitative perspective to account for project readiness and corporate coordination.



Prioritizing RouteAhead Projects

This approach provides an objective evaluation of the relative benefits, constraints and value of rapid transit network growth projects across the city, and allows for informed decision-making when considering funding availability. Prioritizing projects across the entire network ensures decisions provide the greatest value to Calgarians.

Ongoing capital investment programs in assets such as bus and train procurement, infrastructure maintenance and station refurbishments will not be prioritized against the rapid transit network expansion projects through this process, but will need to be identified and accounted for as further capital funding streams are identified. Appropriate funding is needed for ongoing maintenance of these critical assets to remain in a state of good repair and support safe and reliable transit service.

Project List

The rapid transit network growth projects listed below have been identified in RouteAhead as well as some additional projects approved by Council after RouteAhead (Westbrook to MRU Transit Connection, in-street MAX improvements to Routes 301 and 302). Some projects (e.g. 162 Ave Transitway, Shaganappi HOV and North Regional Context Study BRT) were previously identified as beyond the RouteAhead timeframe, but are now being included because of advances in approved development adjacent to the project area.

In the case of Green Line North and South, Blue Line NE and MAX Purple extensions, projects have been defined into discrete segments to allow for incremental expansion based on operational and customer requirements, development and consistent with the traditional, successful expansion model of the LRT network. This does not preclude multiple segments from being constructed together if funding is available at the time.

The rail and bus rapid transit (BRT) projects to be included in further evaluation for prioritization are presented below in alphabetical order. An update on project prioritization will be provided to Council through the SPC on Transportation & Transit by Q4 2019.

Rail Programs

Airport Transit Connector	Blue Line to Airport
	Green Line to Airport
Blue Line NE extension	Saddletowne to 88 AV NE
	88 AV NE to 128 AV NE
	128 AV NE to Stonegate
Blue Line W extension	69 ST SW to 85 ST SW
Green Line N extension	16 AV N to 64 AV N
	64 AV N to Beddington BV N
	Beddington BV N to 96 AV N
	96 AV N to North Pointe
	North Pointe to 160 AV N
Green Line S extension	Shepard to McKenzie Towne
	McKenzie Towne to Auburn Bay/Mahogany
	Auburn Bay/Mahogany to Seton
Red Line S extension	Somerset-Bridlewood to 210 AV S
Westbrook to MRU Transit Connection	Blue Line connection to Mount Royal University and Currie Barracks area
8 AV Subway	Red Line/Blue Line downtown separation

BRT Programs

MAX 301 North	In-street improvements to Route 301 BRT North
MAX 302 Southeast	In-street improvements to Route 302 BRT Southeast
MAX Purple extension	Transitway extension: 52 ST SE to 84 ST SE
	Transitway extension: 84 ST SE to City Limits
	Downtown/Green Line tie-in
MAX Teal extension	In-street extension from Douglas Glen to 68 ST SE
North Regional Context Study/144 AV N BRT	New in-street BRT route: Tuscany Station to Nose Creek
NW-HUB/West Campus Mobility	New in-street routes
Route 305 West	In-street improvements to Route 305 BRT West
Shaganappi HOV	HOV lanes: Bowness RD to Stoney TR
52 ST BRT	In-street BRT route from Saddletowne to Seton
162 AV S Transitway	New transitway BRT route: Somerset-Bridlewood to west Providence