West LRT – Mount Royal University Rail Connection Feasibility

EXECUTIVE SUMMARY

This report provides a high level examination of the feasibility of an LRT spur line service between the West LRT Blue Line and Mount Royal University (MRU) and Currie Barracks area.

ADMINISTRATION RECOMMENDATION

That the SPC on Transportation and Transit recommends that Council direct Administration to undertake a review of suitability of LRT for the Blue Line to Mount Royal University primary transit network linkage, in consideration of planned area land use and other potential corridor characteristics, as part of the next update to the Calgary Transportation Plan/Municipal Development Plan.

RECOMMENDATION OF THE SPC ON TRANSPORTATION AND TRANSIT, DATED 2016 NOVEMBER 09:

That the Administration Recommendation contained in Report TT2016-0851 be approved.

Opposition to Recommendation:

Opposed: P. Demong

PREVIOUS COUNCIL DIRECTION / POLICY

Council provided direction to Administration at the 2015 May 11 Combined Meeting of Council with a Motion Arising as follows:

MOTION ARISING, Moved by Councillor Farrell, Seconded by Councillor Woolley, that with respect to Report CPC2015-065, that Council direct Administration to undertake a long-range alignment investigation to bring a spur line of Calgary Transit Route 202 (Blue Line) to Mount Royal University and the Currie Barracks, and return to Council through the SPC on Transportation and Transit, with a work plan, including time, costs and impacts to the Action Plan work program.

CPC2015-065 dealt with land use changes to Currie Barracks.

BACKGROUND

The Municipal Development Plan (MDP) and Calgary Transportation Plan (CTP) identify several Primary Transit corridors whose defining characteristics, irrespective of vehicle technology, would include frequency/span of service (a vehicle every 10 minutes, 15 hours a day, 7 days a week), speed and directness, service reliability and increased capacity. 37 Street SW has been identified as a future Primary Transit service corridor in the CTP. RouteAhead, a 30-year plan for public transit in Calgary, identifies several transit projects to support the implementation of the Primary Transit network over time. RouteAhead outlines the proposed mode progression and vehicle type for each of the proposed priority transit projects. In some cases this means

moving from a bus based service to rail service over a specified time period. In other cases, Bus Rapid Transit is identified in a corridor at the end of the 30-year mode progression.

No mode progression was identified beyond the RouteAhead time frame of 30 years for either the Southwest BRT or South Crosstown BRT.

Both the Southwest BRT and South Crosstown BRT will provide a rapid transit service connection to MRU and Currie Barracks. Both the Southwest BRT and the South Crosstown BRT were developed as part of the new BRT network which will provide frequent and reliable transit service through infrastructure investments that will include transit signal priority at key intersections and dedicated bus only lanes. The flexibility that BRT provides allows Calgary Transit to provide rapid transit service options at less cost of construction compared to LRT. LRT on the other hand provides much higher capacity per vehicle. The determining factor is the customer base being served and which routes and technology fit best.

Within the West LRT pre-design a provision for a future rail spur line was included. The provision is located west of the Westbrook LRT station within the Westbrook tunnel. This report explores the challenges involved in making this connection, and explores whether other alternatives are more feasible means of achieving the outcome of a long-term future rail connection to the MRU and Currie Barracks area.

INVESTIGATION: ALTERNATIVES AND ANALYSIS

To physically connect a rail spur line to the West LRT, a rail turnout is required in an appropriate location. Several locations along the West LRT alignment were evaluated, and a detailed review was conducted west of the Westbrook LRT station in the Westbrook tunnel. The details of the evaluation are included in the attachment.

Several corridors between 37 Street SW and Crowchild Trail to the east were evaluated for feasibility of a rail spur line. The feasibility of selecting a corridor was evaluated on the right of way that is available and how LRT would fit within the community context. It was determined that the majority of corridor routes between the West LRT and MRU do not have the adequate right of way available or support the integration of Calgary Transit's current high-floor 2.65m wide light rail vehicles. It was determined that 37 Street SW does have adequate right of way to accommodate Calgary Transit's current high-floor light rail vehicles, however a more detailed investigation to determine the optimal configuration through this corridor would be required.

Through this study it was determined that most of the corridors between 37 Street SW and Crowchild Trail have the required right of way to accommodate a low-floor 2.4m wide streetcar vehicle. Several concepts were explored with the use of a 2.4m wide low-floor streetcar (See Attachment 1 page 19). Specifically an unconnected stub streetcar option was explored to run from the south side of Westbrook Station along the north edge of 17 Avenue SW to 37 Street SW, then south on 37 Street SW to Richardson Way and then east to MRU. However, a stub-line would mean no direct connection to the West LRT line. A vehicle maintenance facility would be required for cleaning, storage and on-going maintenance of the streetcars. To mitigate the need for such a facility, designing a system to allow the streetcar to connect to the

existing rail network to be stored at either Calgary Transit's Anderson Garage or Oliver Bowen Maintenance Facility is preferable.

A rail connection from the West LRT to the MRU and Currie Barracks area is feasible. However there are broader questions prompted by this feasibility review, such as:

- How to best integrate land use and mobility throughout the desired corridor?
- What other origin/destinations are there aside from MRU and Currie Barracks?
- Should other potential spur lines be reviewed in the context of the MDP/CTP and the Primary Transit Network?

Stakeholder Engagement, Research and Communication
Staff from Urban Strategy has provided input to this report. No external engagement or communications have been completed at this time due to the limited scope of this report to determine a high level technical feasibility of rail connection between the West LRT and MRU.

Strategic Alignment
The RouteAhead plan is aligned with the policy direction and strategic goals of the Municipal Development Plan and Calgary Transportation Plan, the 2020 Sustainability Direction and Council's Action Plan priorities. RouteAhead was developed in coordination with Investing in Mobility to ensure strategic alignment within the Transportation Department capital plans and growth management strategies.

Social, Environmental, Economic (External)
Improving travel options in established communities such as West LRT – MRU corridor makes them more attractive to live in and provides development opportunities in the city. This in turn can slow the rate of urban expansion, in turn reducing the associated loss of natural habitat and agricultural land. The longer extents of transit infrastructure help create complete communities in suburban areas.

Investment in public transit also provides environmental benefits that extend beyond the reduction of greenhouse gases with every vehicle removed from the road. However, there are limited capital and operating funds to allocate across the transit network. As a result, despite these benefits, no change to the mode progression plan identified in RouteAhead in this corridor is recommended at this time.

Financial Capacity
Current and Future Operating Budget:
Operating cost implications were not assessed as part of this proposed LRT connection. Further analysis would need to be completed to determine potential operating budget implications.

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Current and Future Capital Budget:
There is currently no approved budget program associated with this report. Further study would be required to determine a Class 5 Level estimate for capital budgeting purposes.

Risk Assessment
The stakeholder engagement completed as part of RouteAhead did not include any plans that outlined a rail connection from the West LRT line to MRU. A revaluation of the current transit priority projects outlined in RouteAhead may bring into question currently approved projects and future projects scheduled for the near term.

The Southwest BRT and South Crosstown BRT have already been approved with significant engagement, planning and design work completed to date. Both the Southwest BRT and South Crosstown BRT projects will be providing rapid transit connections to MRU, and in the case of the South Crosstown BRT a direct connection from Westbrook Station to MRU is provided via 17 Avenue SW and 37 Street SW.

REASONS FOR RECOMMENDATIONS:
This report provides Council with the requested information about the feasibility of providing a rail connection form the West LRT to MRU and Currie Barracks area. This report confirms that rail connection is technically feasible, however prior to inserting this into the current long range transit plans, an analysis of the combined land use and mobility need to be further explored as part of an update to the CTP, MDP and RouteAhead.

ATTACHMENT
1. Scoping and Options Feasibility Report – West LRT/Mount Royal University Rail Connection