

INVESTING IN MOBILITY - NW-HUB AND CTRAIN TRACTION POWER UPGRADES

EXECUTIVE SUMMARY

This report provides detailed information regarding two projects that Administration identified as part of Transportation's 10-year Investing in Mobility capital plan with varying funding levels. The report includes details on the NW-HUB Transit Enhancement Study and the Light Rail Transit (LRT) Traction Power Upgrades required for full four-car train operation on the Red Line and Blue Line.

ADMINISTRATION RECOMMENDATIONS

That Council direct Administration to:

1. Include Traction Power Upgrade (funded) and NW-HUB (unfunded) as part of the updated 10-year Investing in Mobility plan, informing Action Plan 2015-2018; and
2. Identify funding sources for the NW-HUB project as part of the NW-HUB Transit Enhancement Study.

PREVIOUS COUNCIL DIRECTION/POLICY

In 2014 May, Council approved the funded and unfunded transportation infrastructure lists outlined in Attachment 2 of TT2014-0308: Investing in Mobility Update, with the exception of the Traction Power Upgrade project and the NW-HUB West Campus Mobility project. Council directed Administration to develop more information on both the NW-HUB and the Traction Power Upgrade project and return to Council no later than 2014 July 28.

At the Regular Meeting of Council on 2014 July 28, report C2014-0566 Investing in Mobility – NW-HUB and CTrain Traction Power Upgrades – Deferral, was approved was adopted, as follows:

“That Council approve Administration’s request to defer the Investing In Mobility - NW-HUB and CTrain Traction Power Upgrades Report to no later than the 2014 September 08 Meeting of Council.”

BACKGROUND

The overall gap between the Transportation department's infrastructure needs and available funding is \$1.9 billion. As a result, a number of projects contained in Investing In Mobility will remain unfunded until new funding sources are secured.

Administration originally recommended the NW-HUB project be included in the funded 10-year capital plan when the Bus Rapid Transit Strategy was presented to Council as part of RouteAhead in 2013. However, in the absence of sufficient funding for all competing priorities, it is currently recommended to be unfunded in the 10-year period. Other higher-priority projects that were funded include LRT Traction Power Upgrades, which are necessary for operating four-car CTrains to address ridership demand which is growing at a faster rate than previously forecast. It should be noted that in addition to the NW-HUB, numerous other projects remain unfunded.

The funding requirement for traction power upgrades is higher in the current update to Investing in Mobility (2014) than in the 2011-2014 plans. In the past (2009), Administration planned a limited amount of four-car train service because of the limited funding available for light rail

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vehicle purchases. However, in the period between 2011 and 2014, procurement of additional vehicles had been enabled, and four-car train operation has now been identified as a capital and operating priority in the update to Investing in Mobility. This reflects Administration's heightened sensitivity to the customer experience, the need for reliability on the CTrain network, the increasingly high passenger demand on the existing CTrain network, the rapid growth across Calgary, and the increase in transit-oriented development adjacent to CTrain stations (e.g. Brentwood, Bridgeland and Heritage). Details regarding traction power upgrades to support four-car train operation are included in Attachments 1 and 2.

The concept of a rapid transit solution in the NW-HUB area is included in RouteAhead: a 30-year Strategic Plan for Calgary Transit. The project is identified in RouteAhead as "West Campus Mobility". Two phases were included:

- Phase 1 - generally bound by the University of Calgary, Alberta Health Services campuses, and the Northwest CTrain stations
- Phase 2 - a connection to Westbrook Station – a link currently provided by bus route 72/73.

Council approved the RouteAhead plan in 2013 March, but no firm date was proposed for implementation of what we called "improved mobility" and "new technology". The uncertainty in this language reflects that Administration was in the preliminary planning process for the NW-HUB. Further detail on the NW-HUB Transit Enhancement Study is included in Attachment 3.

During budget deliberations in 2013 November, Council approved \$52 million per year for the 2015-2024 timeframe for the Green Line – Southeast and North Central Transitway.

Administration reported to Council in 2014 January 31, and indicated (based on knowledge of our capital needs and available funding at that time) that a portion of the bus-based Green Line improvements, and all other rapid transit corridors presented in RouteAhead, could be funded using a variety of sources available to The City. At that time, Council approved funding rapid transit corridors through the funding sources known to be available and using the \$52 million per year in tax room to fund the initial stages of the Green Line Transitway.

INVESTIGATION: ALTERNATIVES AND ANALYSIS

The table below identifies the considerations taken into account by Administration in developing the recommendation in Investing in Mobility.

	NW-HUB	CTrain Traction Power Upgrade
Ridership affected	Estimated 10,000-20,000 existing daily riders on NW-HUB corridors (not including CTrain line)	350,000 existing daily riders on CTrain network
Capital cost estimate	\$30 million Class 5 estimate (-50%/+100%)	\$36 million (remaining in program) Class 3 estimate (-30%/+50%)
Examples of adjacent future	West Campus (U of C); Cancer Centre building (AHS); Stadium Shopping Centre	Brookfield Place; Eighth Avenue Place; New Central Library;

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developments	redevelopment; etc.	Telus Sky; Transit-oriented developments at Sunnyside, Banff Trail, Brentwood, Bridgeland, Heritage, Anderson, etc.
Revenue Potential	Significant opportunity, but low in the short-term until development activity is completed and residents/employees move in larger numbers.	Existing demand due to demand/capacity ratio on 201-Red Line (see Attachment 1) and limited parking supply in downtown.
Social	Improved mobility in NW-HUB area for all users, particularly students, patients and employees.	Broad impacts in all four quadrants of the city; four-car train operation addresses peak period crowding, a key issue for people with disabilities
Environmental	Reduced ecological footprint of developments in the area; reduced parking and road surface requirements for new developments; some emissions from bus engines.	Adds capacity to support transit-oriented development on entire 201-Red Line and 202-Blue Line; supports regional transit use and a lower ecological footprint in the Calgary Region; CTrain power is greenhouse gas free.
Economic	Increased competitiveness of the city through access to higher learning; improved employee mobility for hospitals, research parks and universities; additional capacity for special events at University of Calgary and McMahon Stadium.	Adds capacity that enables employment growth in downtown Calgary; addresses reliability issues associated with low traction power levels; releases existing constraint on 201-Red Line – South (reached capacity already), to support TOD development; additional capacity for special events at several venues, including Stampede Park and McMahon Stadium.

The pace and intensity of development in the NW-HUB area is modest compared to what is occurring adjacent to the total CTrain network. The pace of development in the West Campus area is aligned with the recommendations in this report. Short term land development can be served by enhanced regular bus service.

The West Campus development is at the land use approval stage. Typical development permit and building processes will result in the first employees and residents appearing in late 2017. This provides Calgary Transit time to explore alternate funding.

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Administration has identified several opportunities for funding to explore in the course of completing the NW-HUB Transit Enhancement Study. These include:

- Provincial grants that are specifically targeted to innovative technologies
- Coordination of improvements between related projects (North Crosstown bus rapid transit and Banff Trail transit-oriented development improvements)
- Implementation of smaller packages of transit service improvements, such as increasing service on existing routes (if operating funds are available)

A final consideration is the maturity of the plans. Traction Power Upgrades are underway and need to be concluded. The NW-HUB is a place in development and is not ready to proceed to detail design and construction.

Stakeholder Engagement, Research and Communication

During the development of the Investing in Mobility plan, Traction Power Upgrades and the NW-HUB projects were only two candidate projects in a long list of transit capital projects. Through analysis and an iterative selection process Calgary Transit landed on the final recommendation included in Investing in Mobility.

Letters of support have been received in favour of funding NW-HUB and in favour of funding four-car train operation and other unfunded transportation priorities. Administration remains committed to, and is continuing to conduct engagement as part of the NW-HUB Transit Enhancement Study. Transportation has confirmed with the West Campus team that their plans will include the NW-HUB and that near term development can be served by enhanced bus service.

Strategic Alignment

Both projects are identified as part of the RouteAhead 30-year Strategic Plan for Transit in Calgary. The RouteAhead plan is aligned with the policy direction and strategic goals of the Municipal Development Plan/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. The identification of priorities in this report is consistent with the Growth Management Framework and the balance of growth between established communities and new green field communities.

Social, Environmental, Economic (External)

Social

Public transit provides low-cost mobility and accessibility to people, places, goods and services. Continuing to make the CTrain system accessible by addressing peak period crowding will benefit all users.

Environmental

Movement of people on public transit makes the most efficient use of natural resources, allows for a more compact city and offsets the need for motor vehicle travel, resulting in fewer impacts to natural areas and the existing built environment. Calgary Transit continues to offer zero-emission travel opportunities through its operating and capital investments on the CTrain network.

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Economic

Adequately funded public transportation is vital to reducing the costs associated with urban travel and to support investments (both public and private) in transit oriented developments. The traction power upgrade project has a lower investment per passenger served.

Financial Capacity

Current and Future Operating Budget:

Anticipated operating budget impacts for Traction Power Upgrades are \$250,000 for maintenance and \$1.3 million for utilities. This information will contribute to the development of Transportation's operating budget for Action Plan 2015-2018. This project will help mitigate long-term operating costs by supporting more compact development in the city and reducing service disruption failure costs. The projected operating costs for NW-HUB have not been estimated.

Current and Future Capital Budget:

The capital projects identified for funding within Investing in Mobility, including traction power upgrades, fit within anticipated available capital budgets for 2015-2024. The remaining projects in the plan, including the NW-HUB will remain unfunded until new, reliable sources of capital funding become available. A GreenTRIP funding application for several public transit projects will be submitted to the Calgary Regional Partnership and the Province of Alberta upon approval of these recommendations.

Risk Assessment

Public submissions to Council in 2014 May included discussion of risks associated with transit capacity in the NW-HUB area and the approval of new developments. Development projects in the NW-HUB area (Stadium Shopping Centre, Foothills Hospital, West Campus, etc.) are supported by other projects that are funded in Investing in Mobility.

Delaying the traction power upgrades risks the reliability of the LRT system and the capacity that can be provided for passengers. Reliability relates to the replacement of original LRT infrastructure and the load capacity of the system.

A key project that is funded in Investing In Mobility is the North Crosstown Bus Rapid Transit (\$50 million). This project will improve transit service between Northeast Calgary and the NW-HUB area, and is envisioned to include improvements in the same area as the NW-HUB project.

Another related project that is funded is Foothills Hospital/Stadium/Banff Trail Transit-Oriented Development mobility improvements (\$32 million). This project reflects the work Transportation is doing with development applicants in order to make existing transit service more accessible to people, thereby increasing the attractiveness of walking, cycling and taking transit. These improvements will support the NW-HUB project when the time comes for its implementation.

Calgary Transit can make improvements to existing transit service/routes through allocation of operating hours to individual routes/corridors (e.g. changing the frequency of buses to match demand). This will play a key role in supporting the staged development of the NW-HUB lands

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over time. Calgary Transit reviews the performance of routes regularly as part of the annual budget review process.

There is no opportunity for staging/overlap of projects associated with CTrain traction power upgrades.

REASONS FOR RECOMMENDATIONS:

The urgency for traction power upgrades to support four-car train operation exists today, while the need for enhancements to transit access in the NW-HUB area will grow steadily in the future. Administration will continue to pursue opportunities for new funding for NW-HUB infrastructure through the transit enhancement study.

ATTACHMENT(S)

1. Traction Power Upgrade Program & Four-Car Train Service
2. Timeline of Traction Power Upgrade Decisions
3. NW-HUB Transit Enhancement Study Overview