

Metro Line Crossing at 111 Avenue

Recommendation

That the October 30, 2018, Integrated Infrastructure Services report CR_5849, be received for information.

Previous Council/Committee Action

At the October 23, 2018, Agenda Review Committee meeting, the October 29, 2018, Integrated Infrastructure Services report CR_5849, was re-routed to the October 30, 2018, Urban Planning Committee meeting.

At the March 21, 2018, City Council meeting, the following motion was passed:

That Administration evaluate and provide options to address higher traffic volumes at the Metro Line crossing at 111 Avenue and report back to Council.

Executive Summary

As part of the Metro Line Northwest LRT (NAIT to Blatchford) extension, Administration conducted an LRT crossing assessment for the existing Metro Line crossing at 111 Avenue, using the Council approved Crossing Assessment Framework. Administration conducted a comparative analysis for options at this location and the results confirmed that the most appropriate way to address traffic congestion is to continue making signal timing and other operational refinements at the impacted intersections along 111 Avenue. This work is dependent upon the outcome of the ongoing work with the Metro Line signalling contractor.

Report

Background

In 2008, City Council approved the concept plan for the North LRT extension to NAIT, now known as the Metro Line, which will ultimately operate from Health Sciences Station to NAIT Station (until such time as the line expands north of NAIT all the way to St. Albert city limits). Among Council's priorities for the line were minimizing land acquisition, optimizing capital costs and promoting a balanced transportation system where transit use is prioritized over private vehicle use. Similar principles were applied on the south extension from the University of Alberta.

Based on these priorities, the Metro Line crosses several intersections at street level. It

also resulted in the relocation of the transit centre from the Kingsway Mall site to be directly adjacent to the Kingsway/Royal Alex LRT Station on the south side of 111 Avenue. Resultant wait and travel times have been an adjustment for motorists and pedestrians in the area and a priority for Administration.

Administration has been carefully monitoring traffic flow since the Metro Line opened and has made adjustments to the timing of traffic lights and modified train schedules to optimize when traffic lights turn red and the trains arrive at the intersection. As a result, wait times have generally been reduced. Administration continues to monitor traffic flow to make necessary adjustments.

In June 2017, Council approved Integrated Infrastructure Services report CR_4512 (*LRT Crossing Assessment Framework*), which established the process and weighted criteria that guide decision-making on LRT roadway crossings for future LRT projects. Although this framework is a planning level tool to be applied on future crossings, at Council's direction, Administration applied the framework to the existing Metro Line crossing at 111 Avenue. This crossing was constructed as part of the first portion of the Metro Line (Churchill to NAIT) that went into operation in 2015.

Metro Line at 111 Avenue - Crossing Assessment

Attachment 1 provides a summary of the Council-approved LRT Crossing Assessment Framework initial screening graph and weighted criteria used to evaluate crossing options. Administration applied this framework to the existing 111 Avenue crossing of the Metro Line.

Based on the initial screening graph, this crossing has traffic volumes within the zone that warrants further assessment.

Three categories of options were assessed for this crossing, including:

- Option A - grade separation (including over and under for both the LRT and 111 Avenue)
- Option B - modifications to 106 Street
- Option C - making operational refinements to the existing configuration

Administration conducted a comparative analysis of these options. Option C (operational refinements) was the highest performing option.

As presented in Attachment 2, the main reasons for maintaining this crossing in its current configuration are:

- Significant cost, time, and risk involved with retrofitting a grade separation into an existing LRT crossing;
- Minimizing impacts to existing stakeholders in the area (i.e. Royal Alexandra Hospital, Glenrose and Norwood Medical Facilities, Kingsway Transit Centre and Kingsway Mall);
- Grade separation and alternate alignment options would cause interruptions to service on the portion of reconstructed line resulting in a negative impact to current transit users and potentially use of the transit system. While the City would run an alternate bus service during construction, it would be more susceptible to delay from traffic and/or weather than the existing LRT line. Research of similar multi-year retrofits in other jurisdictions has shown that running alternate bus service for extended periods of time resulted in a loss of ridership that takes time to recover after the original service is restored; and
- The overall cost to benefit ratio does not support grade separation.

Operational refinements include continuing to modify the traffic signalling interface with the LRT system. These refinements will improve, but not drastically change current congestion levels until there is a resolution on the LRT signalling system.

Public Engagement

No public engagement was undertaken to support this assessment. However, Administration understands the public's concern regarding the Metro Line crossing at 111 Avenue. This has been shared by commuters at public engagement events for other projects, through the LRT Projects information e-mail and phone line, and through social media. Administration will continue to work to reduce congestion through operational refinements.

Corporate Outcomes and Performance Management

Corporate Outcome(s): Edmontonians use public transit and active modes of transportation			
Outcome(s)	Measure(s)	Result(s)	Target(s)
Edmontonians use public transit and active modes of transportation	Transit ridership (rides per capita)	96.9 rides/capita (2016)	105 rides/capita (2018)
	Journey to work mode (percent of survey respondents who select auto passenger, transit, walk, cycle or other)	26.1% (2017)	25.9% (2018)

Corporate Outcome(s): Edmonton is attractive and compact
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Outcome(s)	Measure(s)	Result(s)	Target(s)
Edmonton is attractive and compact	Edmontonians' assessment: Well-designed, attractive City (percent of survey respondents who agree/strongly agree)	53% (2017)	55% (2018)

Corporate Outcome(s): The City of Edmonton has sustainable and accessible infrastructure			
Outcome(s)	Measure(s)	Result(s)	Target(s)
The City of Edmonton has sustainable and accessible infrastructure	Edmontonians' assessment: Access to infrastructure, amenities and services that improve quality of life (percent of survey respondents who agree/strongly agree)	68% (2017)	70% (2018)

Attachments

1. LRT Crossing Assessment Framework
2. Metro Line LRT and 111 Avenue - Crossing Assessment Summary

Others Reviewing this Report

- R. Kits, Acting Deputy City Manager, Financial and Corporate Services
- C. Owen, Deputy City Manager, Communications and Engagement
- G. Cebryk, Deputy City Manager, City Operations
- P. Ross, Acting Deputy City Manager, Urban Form and Corporate Strategic Development