

Further Transportation Development Options – 102A Avenue

Downtown LRT Additional Information

Recommendation:

That the January 18, 2012, Transportation Services report 2012TS8480 be received for information.

Report Summary

This report provides additional information requested from the Transportation and Infrastructure Committee related to the Downtown LRT Concept Plan.

Previous Council/Committee Action

At the November 15, 2011, Transportation and Infrastructure Committee meeting, the following motions were passed:

That the November 15, 2011, Transportation Services report 2011TS5339rev, be referred to the January 18, 2012, Council meeting without a committee recommendation.

That Administration bring a report to the January 18, 2012, City Council meeting, outlining the following:

- a) More details regarding Transportation Oriented Development, redevelopment and mixed use potentials for 102 Avenue and 102A Avenue

- b) Further details regarding the potential for an LRT stop at 95 Street and Jasper Avenue
- c) Alternate options for 102A Avenue /103 Avenue, including details regarding why 102A Avenue was not used, and implications of any possible changes

Report

Transit Oriented Development

- In general, the entire Downtown and Quarters areas can be considered Transit Oriented Development. 102 Avenue is currently a more developed corridor and in the near term, has a number of development proposals underway. In comparison, 102A Avenue currently has more areas of undeveloped land, which limits its immediate ridership potential. In the future, the development density will be greater along 102 Avenue corridor in comparison to 102A Avenue.
- The existing undeveloped land is 1.3 hectares along 102 Avenue and 1.6 hectares along 102A Avenue. The current population is also higher on 102 Avenue in comparison to 102A Avenue.
- 102 Avenue currently has 10 activity centres including the Salvation Army, Toi Shan Society, Alberta Kaiping District Association, Chow's Association, Lee's Association, United Grocer's and Edmonton Chinatown Multicultural Centre. 102A Avenue in comparison has three existing activity centres.
- There is greater existing and imminent development along 102 Avenue, more activity centres and higher density future development potential along 102 Avenue versus

102A Avenue. These characteristics of the 102 Avenue corridor make it more attractive for LRT than 102A Avenue.

- The eastern edge of the Downtown will be well served with LRT and the opportunities for development around the LRT. In addition to the proposed station on 102 Avenue a future station is planned on the existing Northeast LRT line in the proximity of 97 Street and 103A Avenue or possibly on 95 Street near 106 Avenue. This station would provide overlap in terms of development potential offering bookend stations north and south of the Quarters and Boyle Renaissance Areas.

Station at 95 Street / Jasper Avenue

- Providing a station on 95 Street south of Jasper Avenue is feasible with either a surface or underground station. Each station configuration results in significant changes to the existing concept plan approved for the Southeast LRT and the plan currently identified for the Downtown connection.
- Providing an at-grade station requires the LRT to remain surface running across Jasper Avenue onto 95 Street. The station could be placed south of 101A Avenue and would necessitate reducing 95 Street to only one travel lane unless considerable property is acquired. As the LRT continues south a high level bridge is required to cross the North Saskatchewan River as shown in Attachment 4 and 5. Such a bridge would impact the properties south of 100A Avenue and may also necessitate the closure of Cameron

Avenue – a key exit road from Riverdale. This is illustrated in Attachment 6.

- The proposed station at the Muttart Conservatory would also be eliminated due to the significant increase in height from what is proposed in the approved Concept Plan.
- The following outlines the advantages and disadvantages of the surface station/high level bridge option.

Advantages

- Station in close proximity to Riverdale
- Eliminates the need for the Downtown portal
- Less complicated geotechnical design

Disadvantages

- Contrary to approved Concept Plan
- Property impacts – Cameron Co-op would be demolished
- Restricted access to Rowland Road and the Riverdale community
- Muttart Station eliminated
- Increased capital costs attributed to the premium associated with the high level bridge - additional \$115 million
- Potential negative aesthetics to river valley vistas
- Pedestrian accommodation on 1.3 kilometre long bridge
- Operational challenges associated with poor accessibility to the bridge.
- High level bridge has not been vetted by communities south of the river
- May impact proposed development on the Southwest

- corner of Jasper Avenue and 95 Street.
- Accommodating an underground station south of Jasper Avenue results in similar design elements as the surface LRT station. The station would be located south of 101A Avenue resulting in similar property impacts to accommodate construction and surface access. Similar to the surface station the river crossing would be at a higher elevation than the Concept Plan but not to the same extent as the surface option.
 - The underground station could be constructed with the portal entrance either on 102 Avenue or on 95 Street allowing the LRT to remain surface running on 102 Avenue. The portal south of Jasper Avenue would remove travel lanes on 95 Street and result in significant road network impacts as the 95 Street connections to Rowland Road would be eliminated. This has a significant impact to the surrounding road network and access to the Dawson Bridge as Alex Taylor Road would need to accommodate the diverted traffic.
 - The advantages and disadvantages of the underground station option are the same as the surface option with the following differences:
 - Increased capital costs - additional \$70 million.
 - Increased operating costs associated with underground station.
 - An elevated Muttart Station could be accommodated.
 - Both options result in an at-grade crossing of Jasper Avenue and 95 Street.
- 102A/103 Avenue Alternate Options**
- If 102A Avenue between 95 Street and 97 Street was identified as the recommended LRT alignment, there are two options to continue the route through the Downtown. One option would continue the LRT alignment on 102A Avenue onto 103 Avenue through the remaining portions of the Downtown. The other option would utilize 102A Avenue between 95 and 97 Street turning south onto 102 Avenue using 97 Street and 102 Avenue through the remaining portion of the Downtown. Using 97 Street would either impact the Winspear Centre Development plans, funding of which was recently approved by Council, or reduce lanes on 97 Street a key arterial connection into the Downtown. Also with an increase in the number of LRT turns there will be an associated increase in property requirements.
 - The 102 Avenue corridor through the Downtown offers the following advantages over 103 Avenue:
 - 103 Avenue is further from Jasper Avenue increasing the length of walking connections through to the new stations.
 - 102 Avenue can connect directly to the existing Churchill Station and is one block from the existing system on Jasper Avenue enhancing the connectivity between the two lines.
 - The LRT on 102 Avenue also will draw Sports and Entertainment patrons further south towards Jasper Avenue, rather than allowing them to depart almost immediately after leaving the arena via the 103 Avenue option and the MacEwan LRT Station.

- Merchants and businesses would also benefit from the pedestrian trips between the two lines.
- 103 Avenue is currently less developed with more limited existing catchment or destinations.
 - The 103 Avenue route runs through less developed areas of the Downtown with limited integration over the majority of its length with the existing employment and the activity centres.
 - The 102 Avenue option supports the existing density on Jasper Avenue and also provides closer connections to existing key destinations such as the theatres, library, cinema, shopping, employment, etc, over the 103 Avenue option.
 - The 102 Avenue has minimal impacts on building access, the 103 route impacts on building /parkade accesses in the Downtown core.
 - Despite the limitations offered by the 103 Avenue route, if Council directed that the LRT be moved from 102 Avenue to 102A Avenue through the Quarters, Administration would recommend that the entire route be relocated to 102A Avenue/103 Avenue. Compared to the 102A/102 Avenue option, the 103 Avenue route provides a continuous LRT alignment without additional curves resulting in less travel time, less property acquisition and lower construction/operational (life cycle) costs. Additional engineering would also be required to ensure the proposed 107 Street station can be accommodated as planned.
- However neither option using 102A Avenue performs as well as the recommended concept on 102 Avenue.
- The approved Downtown LRT plan on 102 Avenue covers 10 blocks of the Downtown and the merits offered in the 8 blocks west of 97 Street are significant.
 - Any option other than 102 Avenue will require an amendment to the Transportation System Bylaw and an amendment to the Capital City Downtown Plan. These would require a minimum of six months to prepare and require Statutory Public Hearings. Additional public consultation will also be required in advance of the Statutory Public Hearings. The Southeast LRT preliminary engineering assignment will also be delayed impacting the ability to deliver the project as scheduled.

Corporate Outcomes

- 3.1 Attractive and compact physical design with diverse neighbourhoods, amenities and public open spaces.
- 4.1 Citizens use public transit and active modes of transportation.
- 4.3 The transportation system is integrated, safe and gives citizen choice to their mode of movement.

Public Consultation

A summary of the Public Consultation completed for the Downtown LRT Concept Plan is provided in the November 15, 2011, Transportation Services report 2011TS5339rev.

Attachments

1. Existing Activity Centres and Vacant Land
2. Future Density and Employment Opportunities
3. Proposed NE LRT and Downtown Stations
4. High Level Bridge Option
5. High Level Bridge Rendering
6. Property Impacts
7. Mid Level Bridge Profile

Others Approving this Report

- R. G. Klassen, General Manager, Sustainable Development