

SUMMARY REPORT: BUS RAPID TRANSIT ROUTE AND CONFIGURATION - DOWNTOWN

south end of Downtown is dependent on both the Downtown and Nutana routing options. If an east-west connection is required, 19th Street has been identified (in mixed traffic).

The technical analysis for both BRT and the Downtown AT Network independently arrived at a technical preference for 3rd Avenue as the north-south route through Downtown. However, right-of-way and safety constraints do not permit both BRT and AT routes to be located on the same street.

Since route choice for one system affects viable alternatives for the other system, the Administration has evaluated the north-south connection options for the BRT in consideration of the potential AT network options. All options evaluated in this report are considered viable and will enable a successful BRT system, subject to appropriate, supportive implementation steps. Each option has some associated trade-offs.

OPTIONS FOR CONSIDERATION

There are two identified Bus Rapid Transit (BRT) options for the Downtown - 1st Avenue or 3rd Avenue. Given the previous direction provided by City Council for the development of a comprehensive BRT system, a status quo option - meaning no BRT in the Downtown - was considered but deemed infeasible. A status quo transit routing and infrastructure in the Downtown, combined with a BRT system outside of the area, would present insurmountable operational challenges to the transit system. BRT could not function outside of the Downtown without a reconfiguration of routes and function within the Downtown.

As a result of this direction and stakeholder input, there are two viable options for north-south routing for each of the systems – BRT and Downtown Active Transportation (AT) Network. The Downtown AT Network options are addressed in detail in a separate report but are factored into the options evaluation in this report. Before this report goes into detail about the options, some additional context is required.

For the BRT System, 3rd Avenue and 1st Avenue are considered viable north-south route options with associated trade-offs depending on which is selected. In both scenarios, College Drive and 22nd Street would remain as east-west connectors in the network. The network configuration at the



OPTION 1 - 1st Avenue BRT

This option proposes to implement a BRT route and infrastructure along 1st Avenue. It would run in dedicated transit lanes constructed in the centre of 1st Avenue with two centre median BRT stations. One station is proposed to be constructed at the intersection of 1st Avenue and 21st Street and the other at the intersection of 1st Avenue and 23rd Street. Of the 961 people who participated in an engagement event, 166 preferred this option.

The estimated capital financial implications for this option are \$3.6 million. The costs are primarily related to the construction of BRT stations along this portion of the route. The City's financial contributions to the project could be offset by potential federal and provincial infrastructure funding opportunities.

There are some negative social implications with this option as a preliminary safety review found this option may lack "natural surveillance" in the early stages to ensure the safety and security of users. This option would require the greatest degree of land use and public realm intervention in order to establish a transit-supportive environment around the station at 1st Avenue and 23rd Street, and along the corridor in general.

1st Avenue Advantages:

- Good system reliability in terms of on-time performance, from day one and in the long-term;
- Provides good geographic coverage and residents/jobs catchment generally, but reduces coverage of east and southeast portions of Downtown;
- Supports investment in corridor growth;
- Opportunity for an update of the public realm / streetscaping;
- Provides best support for potential arena/convention centre locations; and
- Preserves both potential options for Downtown north-south AT corridors – 3rd Avenue and 4th Avenue.
- No impact to parking.

1st Avenue Disadvantages:

- Current land use and development pattern along 1st Avenue is less transit-supportive, particularly north of 22nd Street.
- Ridership target may be more difficult to achieve in the short to medium term due to northern station's lack of proximity to employment and activity areas.
- Achieving safe, transit-supportive land use and built form will require significant interventions for redevelopment adjacent to the BRT line – both from the City and private landowners.
- Requires change to roadway infrastructure, trees, medians, etc. (though key segments are preserved).
- Significant construction impacts on area stakeholders.

OPTION 2 - 3rd Avenue BRT

This option proposes to implement a BRT route and infrastructure along 3rd Avenue. It would run in dedicated transit lanes constructed in the centre of 3rd Avenue with two centre median BRT stations. One station is proposed to be constructed at the intersection of 3rd Avenue and 20th Street and the other at the intersection of 3rd Avenue and 23rd Street. Of the 961 people who participated in an engagement event, 138 preferred this option.

According to previous analysis, BRT routing on 3rd Avenue provides the BRT system with the best mix of Downtown coverage in

terms of both geographic distribution and walkshed catchment of residents and jobs. A long-term build-out analysis of the Downtown showed that this could remain the case as the city grows to 500,000.

The estimated capital financial implications for this option are \$4.3 million. The costs are primarily related to the construction of BRT stations along this portion of the route.

A preliminary safety review found this option had better “natural surveillance” which can contribute in the early stages to ensure the safety and security of users.

Advantages:

- Good system reliability in terms of on-time performance, from day one and in the long-term;
- Provides best coverage and marginally better residents/jobs catchment from day one and in the long-term – to the 500,000 growth scenario;
- Supports investment in corridor growth;
- Transit-supportive land use and built form – pedestrian-oriented development pattern supports transit;
- Opportunity for an update of the public realm / streetscaping.
- Potential positive parking impacts.

Disadvantages:

- Requires change to roadway infrastructure, trees, medians, etc. (though key segments are preserved).
- Significant construction impacts on area stakeholders
- Located further from potential arena/convention centre locations (though coverage is still provided).
- Eliminates potential for AT network corridor on 3rd Avenue

RECOMMENDATION

The Administration recommends that City Council adopt Option 1: 1st Avenue BRT.

RATIONALE

When considering all modes of transportation together, a 1st Avenue BRT north-south route connection is the preferred option. Selection of this option achieves an appropriate balance of transit system function, and city-building benefits and preserves both 3rd Avenue and 4th Avenue as unencumbered potential AT corridors.

While 1st Avenue will require land use and public realm intervention to help it to become more transit supportive, there is significant growth opportunity within close proximity of this corridor as well as potential locations for a future arena/convention centre.