

# Cycling Facilities and Cycling Connections: 109 Street

## Recommendation

That the April 23, 2019, Urban Form and Corporate Strategic Development report CR\_6322, be received for information.

## Previous Council/Committee Action

At the August 14, 2018, Urban Planning Committee meeting, the following motion was passed:

That Administration provide further information on the feasibility of building separated cycling facilities, or improving cycling connections to 109 Street, including possible alignment and conflicts with Envision 109, the Bus Network redesign and Infill Roadmap 2.0, and return in second quarter 2019.

## Executive Summary

Protected bike lanes are feasible on 109 Street between Saskatchewan Drive and 76 Avenue, but are not in alignment with the 2009 Bike Transportation Plan and 2016 Main Streets Guideline. It is projected that these lanes would have significant impacts to traffic patterns affecting local communities and transit operations and would result in greater risk to cyclists.

Implementation would require a reduction in the number of motor vehicle lanes from six to four. Total costs for bike lanes and signal upgrades on 109 Street are estimated at \$2.4 Million (Strategic; -50%/+100%). For comparison, bike lanes on 110 Street are estimated at \$1.2 Million (Strategic; -50%/+100%).

Garneau neighbourhood renewal will include new bike infrastructure, including a bike lane on 110 Street, as outlined in the August 14, 2018 Urban Planning Committee report CR\_5440 Southside Bike Network. A review of potential connections to 109 Street indicates that improved bike connections could be implemented at 88 Avenue, 83 Avenue, 80 Avenue, and 76 Avenue and coordinated with the Garneau neighbourhood renewal project. The quality of the areas for pedestrians along 109 Street will be improved over time through the implementation of the Envision 109 project.

**Report**

At the August 14, 2018, Urban Planning Committee meeting, Urban Form and Corporate Strategic Development report CR\_5440 - Southside Core Neighbourhoods Bike Network was received for information. The report provided an overview of an all ages and abilities bike network in the Strathcona and Garneau neighbourhoods, including protected bike lanes on 110 Street between 90 Avenue and 76 Avenue (which is partially in the McKernan neighbourhood).

**Feasibility of 109 Street Bike Lanes**

When compared to a bike lane on 110 Street, a bike lane on 109 Street has the advantages of being more visible, more directly connected to the High Level Bridge, and closer to the commercial destinations along 109 Street.

Between Saskatchewan Drive and 76 Avenue, most of 109 Street is six-lanes with left-turn bays at select intersections. Implementing protected bike lanes along 109 Street would reduce the number of vehicle travel lanes from six to four, including elimination of the northbound shared transit, taxi and bike lane and the elimination of southbound off-peak on-street parking between 87 Avenue and 84 Avenue. Attachment 1 illustrates potential bike lane options. These options could be implemented primarily with adaptable infrastructure and signal upgrades.

Based on recommendations from recent safety audits, it is the City’s practice to introduce turning restrictions where there is significant traffic turning across bike lanes. As a result, the City would implement no right-turn-on-red restrictions as well as protected left turns at locations on 109 Street.

**Vehicle Traffic Impacts**

109 Street currently operates near capacity during peak hours, with traffic volumes along the corridor ranging from 1,250-1,500 vehicles per hour northbound in the morning peak and 1550-1900 vehicles per hour southbound in the afternoon peak. Bike lanes would reduce vehicular capacity, potentially resulting in traffic shortcutting on residential roadways.

The largest projected traffic impacts occur at the major intersections of 76 Avenue, 82 Avenue, and 87 Avenue. Impacts to motor vehicle travel times and traffic volumes on 109 Street between 76 Avenue and Saskatchewan Drive are highlighted below:

Horizon Year for Traffic Impact Modelling	Average Increase in Travel Times over Existing Conditions	Maximum Reduction in Through Traffic Volumes over Existing Conditions	
		AM Peak Direction	PM Peak Direction

2015 base	1.0 minute	300 vehicles	500 vehicles
2030 horizon	Up to 2.5 minutes	450 vehicles	500 vehicles

Compared to a bike lane on 110 Street, a 109 Street bike lane increases risks for motor vehicle/cyclist collisions as a result of more traffic turning across the bike lanes. Bike lanes on 109 Street impact fewer on-street parking stalls than a bike lane on 110 Street.

**Impacts to Transit**

109 Street is an important transit corridor and is identified as a Frequent Transit Route as part of the Bus Network Redesign. The current northbound bus lane provides modest operational advantages. The introduction of bike lanes on 109 Street would eliminate the northbound bus-only lane resulting in transit operating in mixed traffic with no priority. The loss of the bus lane may add delay and/or reduce reliability for transit.

Based on a preliminary review, bus stops along the corridor should be able to interface with bike lanes without significant negative impact to bus operations or accessibility.

**Capital Cost Estimates**

Administration completed a high-level financial assessment for separated bike lanes along 109 Street between Saskatchewan Drive and 76 Avenue. Total costs for bike lanes and signal upgrades are estimated at \$2.4 Million (Strategic; -50%/+100%). For comparison, the 110 Street bike route is estimated to be \$1.2 Million (Strategic; -50%/+100%).

**Policy Alignment**

Envision 109

In 2013, City Council approved the new 109 Street Corridor Area Redevelopment Plan. A major objective of the plan is to improve the environment for pedestrians on 109 Street, and to provide a better balance for all corridor users. Bike lanes would not significantly impact the ability to improve pedestrian areas along 109 Street.

Main Street Guideline / Bicycle Transportation Plan

The 2009 Bicycle Transportation Plan included city wide engagement which resulted in recommendations to develop bike routes parallel to main streets rather than on main streets. Edmonton’s Main Street Guideline builds on that recommendation, outlining that bike lanes should be provided on routes parallel to main streets with bicycle parking provided on the main street.

Infill Roadmap 2.0

The Infill Roadmap supports complete and walkable communities that include diverse transportation options. Adding bike lanes on 109 Street or 110 Street, with improved connections to 109 Street, will generally improve conditions necessary for infill, supporting Action 1 in the Infill Roadmap: “Prioritize infill at key nodes and corridors.”

**Improving Bike Connections to 109 Street**

A review of potential connections between 110 Street to 109 Street suggests that improvements could be made. Connecting routes were primarily selected to capitalize on existing infrastructure such as bike lanes, traffic signals and route spacing:

- 88 Avenue
- 83 Avenue
- 80 Avenue
- 76 Avenue

East/west connections to 109 Street will be confirmed in coordination with the Garneau Neighbourhood Renewal public engagement that is underway. Modifications could include bicycle racks, pavement markings and signage to allow better access to commercial destinations for cyclists. Further details of proposed improvements can be found in Attachment 2.

Total costs for the improved east-west connections are estimated at \$175,000 (Strategic; -50%/+100%). The east-west bike connections will be considered for funding within the Southside Bike Network project budget.

**Next Steps**

Administration will seek input from the community on the Southside Bike Network as part of the neighbourhood renewal process.

Year	Activity
2019	Initiation of public engagement on Garneau/McKernan portions of the Southside Bike Network in conjunction with Garneau Neighbourhood Renewal.
2021-2022	Implementation of the Garneau/McKernan portions of the bike network including potential enhanced connections to 109 Street

**Budget/Financial**

Implementation of the southside bike network through the Strathcona and Garneau neighbourhood renewals, including the CPR right-of-way shared use path was approved in the 2019-2022 Capital Budget. The total cost is approximately \$8.2 million (Concept; -30%/+50%) and is funded in capital profiles CM-40-4040 (Building Great Neighbourhoods: Planning and Design - Growth) and CM-40-9000 (Building Great

Neighbourhoods Delivery - Growth). Improved east-west connections to 109 Street will be considered for funding within the Southside Bike Network project.

### Corporate Outcomes and Performance Management

<b>Corporate Outcome(s): Edmontonians use public transit and active modes of transportation</b>			
<b>Outcome(s)</b>	<b>Measure(s)</b>	<b>Result(s)</b>	<b>Target(s)</b>
Edmontonians use public transit and active modes of transportation	Journey to work mode (percentage of survey respondents who select Auto Passenger, Transit, Walk, Cycle or Other)	26.1% (2016)	25.9%(2018)
Active transportation infrastructure is in place	New Active Transportation Infrastructure (total kilometres of protected bike lanes)	13.3 km (2017)	TBD (2020)

<b>Corporate Outcome(s): Edmontonians use facilities and services that promote healthy living</b>			
<b>Outcome(s)</b>	<b>Measure(s)</b>	<b>Result(s)</b>	<b>Target(s)</b>
Edmontonians are healthy and active	Journey to work mode (percentage of survey respondents who select active modes)	4.8% (2016)	Increase over previous year

### Attachments

1. Cross Sections for Protected Bike Lanes along 109 Street
2. Enhanced Connections between 109 Street and 110 Street

### 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
- A. Laughlin, Deputy City Manager, Integrated Infrastructure Services
- B. Andriachuk, City Solicitor