

November 14, 2019

To: Members
Public Works and Infrastructure Committee

Re: Annual Update on Cycling Infrastructure Program

RECOMMENDATION

That this report be received and filed.

CONCLUSION

In 2019, Administration conducted research into modern cycling infrastructure designs and on-site analysis to prepare for the initiation of major cycling projects in 2020 and beyond. Focus on this research allowed Administration to execute new designs through more cost-efficient and consistent processes. Administration undertook several small cycling infrastructure projects, which will act as test cases and support for larger projects. This will ensure the delivery of safe, properly designed cycling infrastructure for Regina in the future.

The 2019 program included a multi-use pathway north of 13th Avenue to the Devonian Pathway System (already constructed) and a bike path on Wascana Gate South, connecting two existing multi-use pathway systems. A third pathway will connect the Pilot Butte Creek Pathway to University Park Drive, with construction planned in 2020. The Northwest Link Pathway was also completed in June of 2019, a project which began in 2018.

BACKGROUND

In 2017, City Council approved the Transportation Master Plan (TMP), which provides high-level direction for the expansion and improvement of Regina's transportation system over the next 25 years. This document contains directions, goals, policies and recommended actions, which supports the improvement of cycling infrastructure across Regina, including priority and full cycling networks. In Q4 of 2018, Administration completed work on the Bikeways Prioritization Study, which lists all bike lanes included in these two networks.

As part of the 2019 budget, City Council dedicated funds totaling \$250,000 for cycling infrastructure in Regina. The nature of the funds does not identify specific projects, rather dedicating budget to the general improvement of cycling infrastructure across Regina. Funds for cycling infrastructure have also been identified each year in the five-year capital plan.

DISCUSSION

The 2019 cycling program focused on defining criteria for prioritization, expertise building, design standards and preparing for the future.

Defining Criteria

2019 projects were chosen based on three main criteria:

1. Scoring from the Bikeways Prioritization Study completed in 2018.
2. That new cycling infrastructure should support the following two TMP policies as guiding principles for selection:
 - 1.1 Adopt short-term and long-term mode share targets for citywide travel by the 300,000 population horizon.
 - 1.2 Identify and adopt district-specific mode share targets for trips to Downtown and to the University of Regina/Saskatchewan Polytechnic, recognizing unique transportation needs and opportunities in these districts, such as the higher potential for sustainable transportation.
3. Investment in cycling infrastructure should be supportive of a city-wide network with a primary goal of providing safe commuting options to residents, while supporting recreational cycling wherever possible.

Administration also identified the following challenges to cycling infrastructure implementation:

- The City of Regina (City) does not have a level-of-service standard or design standard for cycling infrastructure.
- Cycling design standards are advancing very rapidly and require additional knowledge building to understand best practices.

The following projects were then identified for 2019 implementation:

1. Wascana Gate South.
2. Wascana Gate North.
3. A section of multi-use pathway connecting the Pilot Butte Creek Pathway to University Park Drive along Arcola Avenue.
4. A section of multi-use pathway connecting the Devonian Pathway system to 13th Avenue at Forget Street.

Currently, Wascana Gate South has been painted and is awaiting the installation of signs and delineator posts. As the design process for the two multi-use pathways were completed late in the construction season, it was decided to tender the 13th Avenue Multi-Use Pathway Project for 2019 and the Arcola Avenue Pathway in 2020. The 13th Avenue Multi-Use Pathway Project is near complete. Wascana Gate North is still under review due to complexities with signalization and proximity to a school site. At the beginning of this process, an east-west bicycling route was contemplated but was shifted to a future construction year. Multi-use pathway construction near 13th Avenue and Forget Street will support this route in the future.

The Provincial Capital Commission, which administers Wascana Centre, completed construction of a multi-use pathway near Leibel Field adjacent to McDonald Street and Assiniboine Avenue East in the summer of 2019. This new infrastructure completes a route identified in the TMP and provides a high-quality route linking to existing cycling infrastructure on Assiniboine Avenue.

Expertise Building

As part of the creation of the Cycling Infrastructure Program, Administration has been researching best practices and modern design methods for cycling infrastructure. Part of the challenge has been keeping up with the pace of changing standards in cycling infrastructure. The Transportation Association of Canada's most recent publication of Bicycle Integrated Design was released in June of 2017, providing Canada-wide guidelines for bicycle infrastructure. Despite how recently this update was published, British Columbia has already published a new active transportation guide, Ontario is updating its Book 18 on cycling infrastructure design in 2020 and Alberta is on the cusp of releasing a new standards document. New research regarding safety standards and comfort levels of cyclists using different types of infrastructure has called into question the design of more traditional cycling infrastructure. Coupled with the above is a push for a "All Ages, All Abilities" design, intended to ensure that facilities are safe and comfortable for any resident of the city. Taking this information into account and understanding it in Regina's context has shaped Administration's approach to design and implementation of cycling infrastructure going forward.

Design Standards for Cycling Infrastructure

There are five primary types of cycling infrastructure that Administration are considering:

Table 1: Cycling Infrastructure

Type of Bike Lane	Cost	Required amount of dedicated roadway space	Level of cyclist comfort
Bike Boulevard	Low to Medium	None	Low to medium
Painted Bike Lane	Low	Low	Low to medium
Buffered Bike Lane	Medium	Medium	Medium
Protected Bike Lane	Medium	High	High
Multi-Use Pathway (off-road)	High	None	High

- Bike Boulevards
 - Bike boulevards, sometimes called neighbourhood pathways, are the least intensive type of cycling infrastructure under consideration by Administration.
 - Bike boulevards are only instituted on low-volume, low-speed roads.
 - Traffic calming, a design method which reduces vehicle speed around vulnerable areas, is used to ensure a safe cycling environment.
 - Can be the least expensive type of cycling infrastructure being considered.
 - Approximately \$20,000 to \$100,000 per linear kilometer, although cost per linear kilometre is difficult to estimate as it can vary largely depending upon the amount and type of traffic calming used.

- Painted Bike Lanes
 - Painted bike lanes of this type have already been instituted on Smith Street and Lorne Street.
 - On streets with relatively low-to-medium vehicle volumes and speeds, Painted Bike Lanes are an acceptable infrastructure type; however, many road rights-of-way are unable to accommodate a painted bike lane, while maintaining all on-street parking.
 - Approximate cost is \$30,000 to \$50,000 per linear kilometer.

Painted Buffered Bike Lanes

- These are similar to painted bike lines but are used in slightly different scenarios, especially where a bike lane is located adjacent to on-street parking.
- The primary difference is that there is additional width of painting to further separate cycle lanes from the motorists.
- Approximate cost is \$40,000 to \$60,000 per linear kilometer.

- Protected Bike Lanes
 - Protected bike lanes are physically separated from vehicular traffic by some sort of physical raised delineator. These delineators come in a variety of forms, from simple concrete curb stops to planters and other solutions. This is the most expensive type of on street cycling infrastructure being considered and dependent upon configuration, can require the largest amount of space in the road right-of-way.
 - Approximate cost is \$150,000 to \$170,000 per linear kilometer, although this cost is heavily dependent upon the type of delineator selected.
- Multi-Use Pathways
 - Where appropriate, Administration is also considering the use of off-street infrastructure, such as multi-use pathways. These facilities by their nature are usually much easier to implement but are more expensive.
 - The TMP encourages accommodating other modes without reducing road capacity in accordance with Policy 5.14.
 - Approximate cost is \$275,000 to \$375,000 per linear kilometer.

Cycling infrastructure selection is based on safety criteria established in the most up-to-date design standards in use in Canada.

Future Direction

The following are immediate priorities for 2020:

- Initiation of an east to west cycling route, which connects the neighbourhoods of Cathedral, Downtown, Transitional, Heritage and Al Ritchie. This is the top priority for 2020 as it will support commuter trips by bicycle and help to reach the mode share targets of the TMP. Routes are already being evaluated and further information will be brought forward to the public in early 2020.
- Completion of projects from the 2019.

- Cycling Infrastructure Program.
- Exploring the implementation of cycling infrastructure on roads, which are undergoing rehabilitation in 2020.
- In Q2 of 2020, Administration will bring forward a report to the Public Works and Infrastructure Committee recommending a level of service for cycling.

For calendar years beyond 2020, Administration has developed a general phasing structure for the implementation of bike infrastructure. As discussed above, there are several inputs into determining the order and phasing of these routes.

There are also three major influences on the choice, selection and speed of implementation of bike lanes which could alter the plan from year to year.

- 1) The first of these influences are synergistic projects undertaken by other departments in the organization. By coordinating with other projects, such as a Road Repaving Project, there is an opportunity to implement cycling infrastructure more efficiently than if the project was undertaken separately. The recent restructuring of Administration and the creation of the Sustainable Infrastructure Department, which is responsible for integrated planning, has already helped identify future opportunities for coordinated street designs.
- 2) The second influence is the completion of major projects, which improves connectivity across Regina. For example, projects like the construction of the new multi-use pathway by the Provincial Capital Commission near Liebel Field can lead to changes in prioritization.
- 3) The third influence is the budget assigned to the Cycling Infrastructure Program. In 2019, the City took the first step to implementing the Cycling Infrastructure Program by dedicating funding of \$250,000 to bike lane implementation. As a new program at the City, Administration is poised to implement a priority piece of bike infrastructure every one to two years.

In addition to the budget for the Cycling Infrastructure Program, the City has used project specific funding to increase cycling infrastructure as demonstrated through the CN Link Project. There will continue to be opportunities to acquire additional funding for cycling infrastructure projects, such as the 2020 Courtney Street Pathway Project and through new programs, such as the Pedestrian Connectivity Funding, which will implement multi-use pathways rather than sidewalks where it is appropriate to do so; therefore, increasing efficiency of resources.

While providing additional funding for cycling infrastructure could result in additional bike lanes being installed in any given year, Administration is not recommending an increase specific to the Cycling Infrastructure Program until it can be demonstrated that Administration have the standards and resources to implement high quality on-street cycling infrastructure at current funding levels.

Considering the potential changes, which can result from these factors, Appendix A provides a map and project list projecting likely projects over the next five to ten years. Progress on the Cycling Infrastructure Program will be provided to the Public Works and Infrastructure Committee annually with the current target being November.

RECOMMENDATION IMPLICATIONS

Financial Implications

None with respect to this report.

Environmental Implications

None with respect to this report.

Policy and/or Strategic Implications

None with respect to this report.

Other Implications

None with respect to this report.

Accessibility Implications

None with respect to this report.


COMMUNICATIONS

None with respect to this report.

DELEGATED AUTHORITY

There is no delegated authority associated with this report as it is being provided for informational purposes only.

Respectfully Submitted,



Karen Gasmo, Director, Sustainable Infrastructure

10/29/2019

Respectfully Submitted,



Diana Hawryluk, Executive Director, City Planning & Community Dev.

11/5/2019