

**Minutes – Standing Policy Committee on Infrastructure Renewal and Public Works –
May 19, 2020**

REPORTS

Item No. 23 Traffic Study – Yellow Advanced Flashing Lights

STANDING COMMITTEE DECISION:

The Standing Policy Committee on Infrastructure Renewal and Public Works concurred in the recommendation of the Winnipeg Public Service and approved the following:

1. That advance warning flashers be installed at the following locations:
 - A. Lagimodiere Boulevard & Regent Avenue Northbound
 - B. Bishop Grandin Boulevard & St. Mary's Road Eastbound
2. That the Proper Officers of the City be authorized to do all things necessary to implement the intent of the foregoing.

**Minutes – Standing Policy Committee on Infrastructure Renewal and Public Works –
May 19, 2020**

DECISION MAKING HISTORY:

Moved by Councillor Browaty,

That the recommendation of the Winnipeg Public Service be concurred in.

Carried

David Grant submitted a communication with respect to the matter.

STANDING COMMITTEE RECOMMENDATION:

On April 21, 2020, the Standing Policy Committee on Infrastructure Renewal and Public Works granted a further extension of time of 30 days for the Winnipeg Public Service to report back on the matter.

David Grant submitted a communication dated April 20, 2020, with respect to the matter.

On March 3, 2020, the Standing Policy Committee on Infrastructure Renewal and Public Works granted a further extension of time to its March 3, 2020 meeting for the Winnipeg Public Service to report back on the matter.

On January 7, 2020, the Standing Policy Committee on Infrastructure Renewal and Public Works granted a further extension of time of 60 days for the Winnipeg Public Service to report back on the matter.

On November 4, 2019, the Standing Policy Committee on Infrastructure Renewal and Public Works granted a further extension of time to its January 7, 2020 meeting for the Winnipeg Public Service to report back on the matter

On March 6, 2019, the Standing Policy Committee on Infrastructure Renewal and Public Works granted an extension of time to its October 29, 2019 meeting for the Winnipeg Public Service to report back on the matter.

**Minutes – Standing Policy Committee on Infrastructure Renewal and Public Works –
May 19, 2020**

DECISION MAKING HISTORY (continued):

STANDING COMMITTEE RECOMMENDATION (continued):

On September 7, 2018, the Standing Policy Committee on Infrastructure Renewal and Public Works directed the Winnipeg Public Service to report back on the possible installation of yellow advanced flashing lights at key high volume intersections within the City of Winnipeg, and report back to the March 2019 meeting of the Standing Policy Committee on Infrastructure Renewal and Public Works.

COMMUNITY COMMITTEE RECOMMENDATION:

On July 9, 2018, the Riel Community Committee passed the following motion:

That the Standing Policy Committee on Infrastructure Renewal and Public Works direct the Winnipeg Public Service to conduct a traffic study for the possible installation of yellow advanced flashing lights at the following intersections on Bishop Grandin Boulevard:

- West bound at River Road
- East bound at St. Mary's Road
- East bound at St. Anne's Road
- West bound at Waverley Street
- West bound at Dakota Street

ADMINISTRATIVE REPORT

Title: Advance Warning Flashers Consideration on Bishop Grandin at Several Intersections

Critical Path: The Standing Policy Committee for Infrastructure Renewal and Public Works

AUTHORIZATION

Author	Department Head	CFO	CAO
D. Patman, P. Eng.	J. Berezowsky	P. Olafson, Interim CFO	M. Ruta, Interim CAO

EXECUTIVE SUMMARY

At its September 7, 2018 meeting, the Standing Policy Committee on Infrastructure Renewal and Public Works (SPC IRPW) directed the Public Service to consider five locations along Bishop Grandin Boulevard for the installation of advance warning flashers.

At the time of this recommendation, the Public Service had already identified a number of priority intersections that meet the Transportation Association of Canada (TAC) criteria for installation of advance warning flashers and also demonstrated warrant based on engineering analysis and traffic data. The Public Service has since observed, analyzed, and ranked the additional recommended locations and integrated them into the previous list to ensure that existing work and data were not lost or overlooked in light of the newly studied locations.

A new list of the 17 most warranted and/or feasible locations is being presented for consideration; two of the five locations the Public Service was directed to study are among this priority list.

As advance warning flashers were previously identified as a recommended means of increasing safety on Winnipeg roads, and a portion of the \$2.5 million in Federal Gas Tax funding previously allocated to road safety had been earmarked for immediate engineering improvements, the Public Service is recommending advance warning flashers be installed as soon as is practicable at the two highest-ranked intersections – one of which is from the list the Public Service was directed to explore. The cost of the two locations is estimated to be \$90,000. The cost of the installation will be funded by the 2019 Traffic Engineering Improvement Program (TEIP).

The Public Service is recommending this approach, as opposed to installing devices solely at the locations included in the previous direction, as it is prudent to target the highest ranking, most impactful and warranted locations.

Additional locations will remain on the priority list for installation through the TEIP, subject to available budget and City-wide priorities.

RECOMMENDATIONS

1. That advance warning flashers be installed at the following locations:

- a) Lagimodiere Boulevard & Regent Avenue NORTHBOUND
- b) Bishop Grandin Boulevard & St. Mary's Road EASTBOUND

2. That the Proper Officers of the City be authorized to do all things necessary to fulfill the intent of the foregoing.

REASON FOR THE REPORT

On September 7, 2018, the SPC IRPW directed the Winnipeg Public Service to report back to its March 2019 meeting on the possible installation of yellow advanced flashing lights at key high volume intersections within the City of Winnipeg.

Extensions of time were subsequently provided by the SPC IRPW.

IMPLICATIONS OF THE RECOMMENDATIONS

These recommendations have an estimated financial implication of \$90,000.

In order to facilitate awareness of and compliance with the new infrastructure (and to mitigate risk upon installation), the Public Service would be required to implement public information measures.

HISTORY/DISCUSSION

History

On March 20, 2019, Council adopted the 2019 Capital Budget, which included \$1,575,000 for the 2019 Traffic Engineering Improvements – Various Locations Program.

On April 25, 2019, Council adopted that, of the estimated \$40 million in additional dollars in Federal Gas Tax funding, \$2.5 million be allocated to support capital investments in roadside safety measures in 2019, subject to confirmation and receipt of this additional funding, and the Winnipeg Public Service be directed to report back to the appropriate standing committee on what investments can be undertaken in 2019. The City was in receipt of this additional funding in 2019. This funding has been allocated to the TEIP.

On November 19, 2019 the Winnipeg Public Service presented the SPC IRPW with a Road Safety Report. The committee moved that the Public Service incorporate updates regarding the projects identified within the report, including the installation of advanced warning flashers at high-speed signalized intersections, into the ongoing quarterly verbal updates on road safety to the SPC IRPW.

Discussion



Figure 1: Advance Warning Flashers on Bishop Grandin (Source: Google Street View)

Advance warning flashers (also known as “yellow advanced flashing lights” or “advanced warning flashers” or “advanced warning beacons”) are a type of infrastructure located in advance of a traffic control signal on higher speed, higher volume roadways (see Figure 1). These amber flashing beacons alert motorists that the traffic signal ahead is about to turn red. They are accompanied by warning signage.

Advance warning flashers are considered at intersections where environmental or other factors increase the potential for serious incidents. Of particular note, advance warning flashers can help reduce the occurrence of both rear-end and right-angle collisions – two common collision types that often result in fatal and major-injury incidents.

The Transportation Association of Canada’s guidelines for application and installation indicate warrant may exist for the infrastructure if:

- The next closest signalized intersection is greater than 1.0 km away.
- The speed limit is 70 km/h or greater.
- The intersection is the first signalized intersection upon entering an urban centre.
- There is a limited sight distance to the intersection.

The above criteria are guidelines, which support and/or guide the application of engineering judgement to determine whether the treatment is suitable for a given location.

Advance Warning Flashers in Winnipeg

The City of Winnipeg currently has advance warning flashers at the following intersections:

1. Bishop Grandin & Lakewood
2. Bison & Waverley
3. Brookside & Inkster
4. Cam Fontaine-Paterson & Lagimodiere
5. De L'Eglise-Des Trappistes & Pembina
6. Fermor & Lagimodiere
7. Kenaston & McGillivray
8. Kenaston & Scurfield
9. Lagimodiere & Warde
10. McCreary-Shaftesbury & Sterling Lyon-Wilkes
11. Headmaster & Lagimodiere

A list of intersections where advance warning flashers would be beneficial was previously developed by the Public Service, using the TAC guidelines and considering Winnipeg-specific road safety data such as collision history and configuration, and analytics from the report Safety Performance Functions and Network Screening Protocols for the City of Winnipeg (Fireseeds North Infrastructure Corporation, 2016). The prioritized intersections were as follows:

1. Bishop Grandin & River EASTBOUND & WESTBOUND
2. Bishop Grandin & St. Mary's EASTBOUND
3. Kenaston SOUTHBOUND & Northtown SOUTHBOUND
4. Kenaston NORTHBOUND & Southtown NORTHBOUND
5. Kenaston & Waverley SOUTHBOUND
6. Lagimodiere & Maginot NORTHBOUND
7. Lagimodiere & Regent NORTHBOUND
8. Lagimodiere & Dugald SOUTHBOUND
9. Lagimodiere & Grassie NORTHBOUND
10. Lagimodiere & Headmaster NORTHBOUND
11. Chief Peguis & Gateway EASTBOUND & WESTBOUND
12. Chief Peguis & Henderson EASTBOUND & WESTBOUND

In 2018, the Public Service was directed to review a number of locations for advance warning flashers. The intersections identified by the Riel Community Committee at the July 9, 2018 meeting were each along Bishop Grandin Boulevard, at the following cross streets:

1. Westbound at River Road
2. Eastbound at St. Mary's Road
3. Eastbound at St. Anne's Road
4. Westbound at Waverley Street
5. Westbound at Dakota Street

The Public Service analyzed and ranked these locations according to highest warrant and priority, then merged the locations into the previous list to create a master register of priority locations to ensure that existing work and data was not lost or overlooked in light of the newly studied locations. This list is shown in Table 1 (below). The highlighted intersections indicate those requested by the Riel Community Committee.

Ranking	Intersection	Direction(s)
1	Lagimodiere Boulevard & Regent Avenue	NORTHBOUND
2	Bishop Grandin Boulevard & St. Mary's Road	EASTBOUND
3	Lagimodiere Boulevard & Grassie Boulevard	NORTHBOUND
4	Lagimodiere Boulevard & Dugald Road	SOUTHBOUND
5	Bishop Grandin Boulevard & River Road	EASTBOUND/WESTBOUND
6	Kenaston Boulevard & Waverley Street	NORTHBOUND/SOUTHBOUND
7	Kenaston Boulevard SOUTHBOUND & North Town Road	SOUTHBOUND
8	Kenaston Boulevard NORTHBOUND & South Town Road	NORTHBOUND
9	Chief Peguis T & Henderson Highway	EASTBOUND
10	Lagimodiere Boulevard & Maginot Street	NORTHBOUND
11	Lagimodiere Boulevard & Headmaster Row	NORTHBOUND
12	Chief Peguis Trail & Gateway Road	EASTBOUND/WESTBOUND

Table 1: Prioritized List of Locations for Advance Warning Flashers

The Public Service is recommending advance warning flashers be installed as soon as is practicable at the two highest-ranked intersections – one of which is from the list the Public Service was directed to explore. The Public Service is recommending this approach, as opposed to installing devices solely at the locations included in the previous direction, as it is prudent to target the highest ranking, most impactful and warranted locations first and funding is available for just two installations.

Financial considerations

The estimated cost to install a single advance warning flasher is \$45,000 in one direction. This includes the cost of installing wiring for the flashers, which is a major contributor to the cost; the technical indication is to install hard-wired devices rather than solar to mitigate the failure rate, as failure would result in motorists not expecting to stop. (Please note that \$45,000 per direction is a conservative estimate; if multiple directions were to be installed at one intersection there would be some anticipated cost savings.)

In 2019 \$2.5 million of Federal Gas Tax funding was allocated towards enhancing road safety. This funding was split between a long-term Road Safety Strategic Action Plan and a list of potential more immediate engineering improvements; advance warning flashers were among the treatments recommended on the short-term list (as indicated in the November 19, 2019 SPC IRPW report). Budget from this funding exists to install the device at two locations in 2020; if advance warning flashers continue to be recommended as viable solutions in the Road Safety Strategic Action Plan, additional locations could be funded in future years through the Traffic Engineering Improvement Program.

Other considerations

While there appears to have been some past resistance to install advance warning flashers at only some warranted locations (as opposed to all) due to the risk that the inconsistency could catch drivers off-guard, research indicates that advance warning flashers are a useful treatment

and can contribute to preventing rear-end and right-angle collisions – two major causes of severe injury and death incidents.

Because of this, the Public Service recommends moving forward with the two locations for which funding is available at this time, and prioritizing further installation in future years. To mitigate the risk and ensure drivers are aware of the new infrastructure, the Public Service would – prior to installation – publicize the upcoming change via advanced signage at the locations, social media and website updates, earned media, and partnered distribution channels such as the area Councillor, residents' group, and business association. (Such small-scale information campaigns have been useful in publicizing other recent infrastructure changes and appear to have increased public awareness in advance of on-the-ground change.)

FINANCIAL IMPACT**Financial Impact Statement**Date: **April 6, 2020****Project Name:** **First Year of Program** **2020****Advance Warning Flashers Consideration on Bishop Grandin at Several Intersections**

	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>
Capital					
Capital Expenditures Required	\$ 92,475	\$ -	\$ -	\$ -	\$ -
Less: Existing Budgeted Costs	92,475	-	-	-	-
Additional Capital Budget Required	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
Funding Sources:					
Debt - Internal	\$ -	\$ -	\$ -	\$ -	\$ -
Debt - External	-	-	-	-	-
Grants	-	-	-	-	-
Reserves, Equity, Surplus	-	-	-	-	-
Other	-	-	-	-	-
Total Funding	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
Total Additional Capital Budget Required	<u>\$ -</u>				
Total Additional Debt Required	<u>\$ -</u>				
Current Expenditures/Revenues					
Direct Costs	\$ -	\$ -	\$ -	\$ -	\$ -
Less: Incremental Revenue/Recovery	2,475	-	-	-	-
Net Cost/(Benefit)	<u>\$ (2,475)</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
Less: Existing Budget Amounts	(2,475)	-	-	-	-
Net Budget Adjustment Required	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
Additional Comments: The total estimated cost of \$92,475.00 will be funded by the 2019 Traffic Engineering Improvement Program (Public Works Capital Project # 1831001019 - Road Safety Improvements). Incremental Revenue/Recovery represents the Departmental administration overhead.					

"Original signed by J. Peters, CPA, CGA"
 J. Peters, CPA, CGA
 Acting Manager of Finance & Administration

CONSULTATION

This Report has been prepared in consultation with:

N/A

OURWINNIPEG POLICY ALIGNMENT

The recommendation of this report is aligned with the key strategic goal of a safe, efficient and equitable transportation system for people, goods and services in the Sustainable Transportation Direction Strategy that supports OurWinnipeg.

WINNIPEG CLIMATE ACTION PLAN ALIGNMENT

Measures taken to address road safety for users of the transportation network align with the Climate Action Plan in a number of ways. There is a linkage between making Winnipeg's transportation network safer and Key Directions 3.1 "Increase Use and Efficiency of Public Transit Systems", 3.4 "Increase Active Transportation Rates", and 3.5 "Reduce Traffic Congestion".

A safer transportation network for all users will encourage active mode use and transit use, and through reducing unsafe activity and incidents which create delay to users, make the network operate more efficiently.

SUBMITTED BY

Department: Public Works
Division: Transportation
Prepared by: C. Flather, M.Sc., P.Eng.
D.Patman, P.Eng.
Date: April 6, 2020