

**Minutes – Standing Policy Committee on Infrastructure Renewal and Public Works –
June 9, 2022**

REPORTS

**Item No. 28 Traffic Control Signal for Waverley Street and Lee Boulevard
(Waverley West Ward)**

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. The installation of new traffic control signals at the intersection of Waverley Street and Lee Boulevard.
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 –
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DECISION MAKING HISTORY:

Moved by Councillor Chambers,

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

Carried

ADMINISTRATIVE REPORT

Title: Traffic Control Signal for Waverley Street and Lee Boulevard

Critical Path: Standing Policy Committee on Infrastructure Renewal and Public Works

AUTHORIZATION

Author	Department Head	CFO	CAO
D. Patman, P.Eng.	J. Berezowsky	C. Kloefer	M. Jack

EXECUTIVE SUMMARY

Traffic control signals are recommended for the intersection of Waverley Street and Lee Boulevard based on the on-going progress of the Bison Run Development in Waverley West and the construction of two new schools which the intersection connects to the Regional Street network. Based on the traffic projections and analysis submitted as part of the *Waverley West Area B Trip Generation Update and Phase 1 Traffic Assignment* (Stantec 2019) the signal warrant analysis shows that the intersection will greatly exceed the required 100 warrant priority points and also meet the minimum cross street volume threshold of 75 vehicles per hour.

The estimated capital cost of the traffic signal at Waverley Street and Lee Boulevard is \$300,000 (class 2 estimate) and is 100% developer-funded through agreement under file AG 43/19. The combined estimated annual maintenance and operating cost associated with this signal is \$5,000.

RECOMMENDATIONS

1. That the installation of new traffic control signals at the intersection of Waverley Street and Lee Boulevard be approved.
2. That the proper officers of the City be authorized to do all things necessary to implement the intent of the foregoing.

REASON FOR THE REPORT

As the City's Traffic Authority, the Standing Policy Committee on Infrastructure Renewal and Public Works must approve installation of traffic control signals.

IMPLICATIONS OF THE RECOMMENDATIONS

The estimated capital cost of the traffic signal at Waverley Street and Lee Boulevard is \$300,000 (class 2 estimate). The capital cost of the signal is 100% developer-funded through agreement under file AG 43/19. The combined estimated annual maintenance and operating

cost associated with this signal is \$5,000 and will be funded by the Public Works Department Transportation Division Operating Budget.

HISTORY/DISCUSSION

BACKGROUND INFORMATION

On June 26, 2020, Council concurred in the recommendation of the Executive Policy Committee and adopted File DASZ 43/2019. The developer was required to enter into a Development Agreement with the City (AG 43/19); which specifies the following clause:

Traffic Control Signals

The Developer shall pay to the City, in cash, on demand, their share of the costs associated with the installation of traffic control signals and all related works including, but not necessarily limited to, pedestrian and vehicular actuation and connection to adjacent traffic-control signals, countdown and audible pedestrian signals at the intersection of Lee Boulevard and Waverley Street, as determined by and to the satisfaction of the Director of Public Works.

Figure 1, below, illustrates the location of the intersection and the surrounding roadway network. Waverley Street is a north-south Regional Street with a four-lane divided rural cross-section and is part of the Full-time Truck Route Network. The Average Weekday Daily Traffic (AWDT) volume on this section of Waverley Street is 12,800 vehicles (based on the 2019 Traffic Flow Map) but is expected to increase in future years as the Waverley West area continues to develop. The posted speed limit is 70 km/h. There are signalized intersections on Waverley Street approximately 850 metres to the north at Bison Drive and approximately 750 metres to the south at John Angus Drive/Sandusky Drive.

The Waverley Street and Lee Boulevard intersection will help accommodate traffic destined for the Bison Run community and two new schools. The anticipated development for Bison Run Phase 1 submitted as part of the *Waverley West Area B Trip Generation Update and Phase 1 Traffic Assignment* (Stantec 2019) includes 185 single family houses, 524 multi-family units, and approximately 25,000 square feet of commercial space. The two-storey elementary school will have an overall capacity of 800 students with a target completion date of December 2022. The three-storey high school has capacity for 1,200 students and is scheduled for completion in June 2023.

In addition to the new traffic signals, the intersection is being completely reconstructed to provide improved access to the Bison Run development. There are significant efficiencies in reconstructing the intersection and installing the new traffic signals at the same time.

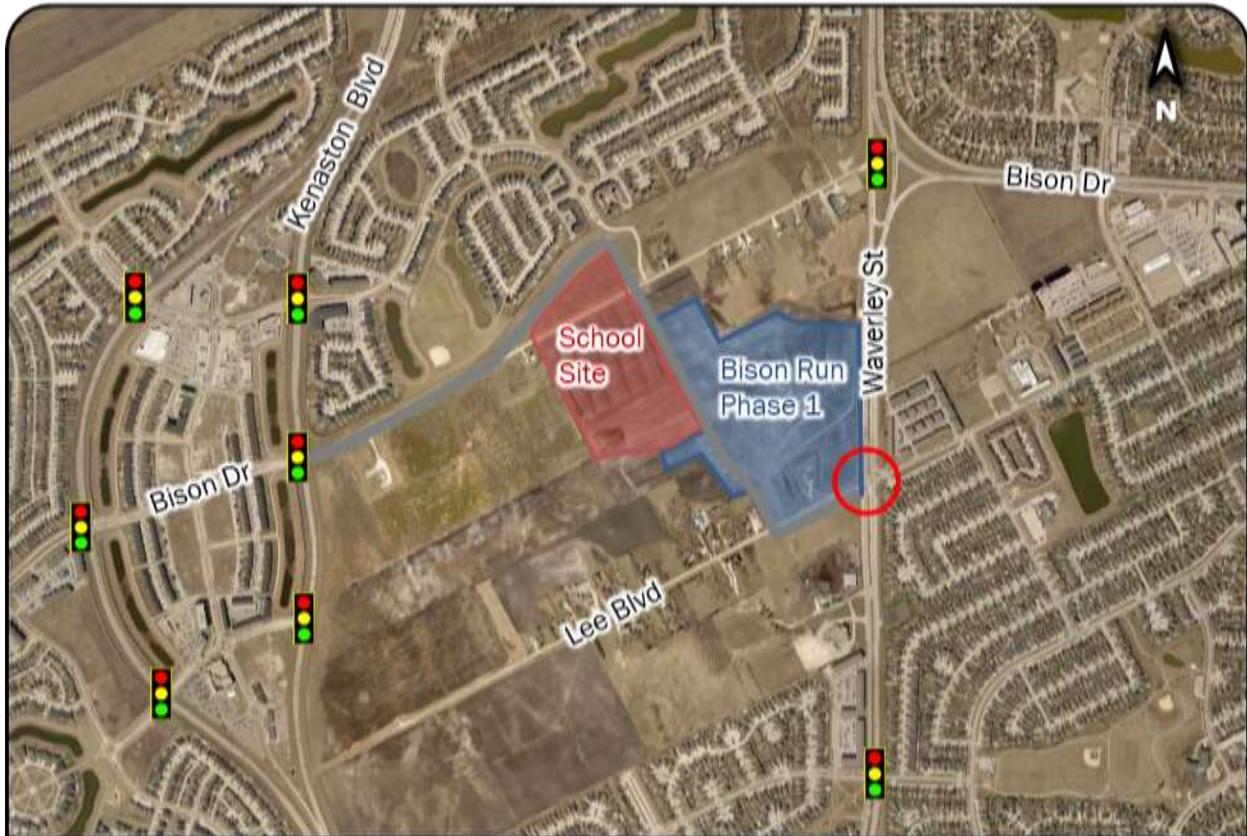


Figure 1: Intersection of Waverley Street and Lee Boulevard (iView 2021 airphoto)

TRAFFIC CONTROL SIGNALS WARRANT

In recommending the installation of new traffic control signals, the Winnipeg Public Service follows the installation warrant criteria provided in the Transportation Association of Canada (TAC) *Manual of Uniform Traffic Control Devices for Canada*, a national standard which is based upon the conflicting pedestrian and vehicular volumes for the busiest six hours during a typical weekday. The minimum cross street volume threshold for consideration of traffic control signals is 75 vehicles per hour (excluding right turns) for at least six hours of the day. Generally, traffic control signals are recommended when the conflicting traffic volumes for the busiest six hours of a typical weekday produce a signal warrant of 100 points and fulfill the minimum cross street volume criterion to ensure that traffic signal control is an appropriate consideration throughout the day.

In most circumstances, the warrant calculations are completed using traffic volumes from a recent intersection turning movement count reflective of current and expected conditions. However, these signals are being evaluated to serve the rapidly ongoing development (including the construction of two new schools) and traffic volumes are expected to significantly increase from the existing volumes. Based on the traffic projections and analysis completed as part of the *Waverley West Area B Trip Generation Update and Phase 1 Traffic Assignment* (Stantec 2019), traffic signals are required at this intersection to provide a safe access point to the development with acceptable traffic delays. The development and construction of the two new schools is progressing and the signals are now recommended to be installed.

ADVANCE WARNING FLASHERS WARRANT

In recommending the installation of advance warning flashers at signalized intersections, the Winnipeg Public Service follows the installation warrant criteria provided in the TAC (2005) *Advance Warning Flashers: Guidelines for Application and Installation*, which is a national standard. The warrant criteria consider sight distance, minimum posted speed limit, gateway from rural to urban environment, approach grade, truck traffic percentage, collision history, and minor road traffic volume. Advance warning flashers in advance of a traffic control signal may be considered when one or more of the warrant conditions exist on the approach to a signalized intersection. Generally, a location where two or more of the above-noted conditions exist would strongly indicate the justification for advance warning flashers.

Based on an evaluation of all the conditions, advance warning flashers are not recommended on any approaches to the intersection.

FINANCIAL IMPACT**Financial Impact Statement**

Date:

May 9, 2022

Project Name:**First Year of Program****2022**

Traffic Control Signal for Waverley Street and Lee Boulevard

	<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>
Capital					
Capital Expenditures Required	\$ -	\$ -	\$ -	\$ -	\$ -
Less: Existing Budgeted Costs	-	-	-	-	-
Additional Capital Budget Required	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
Funding Sources:					
Debt - Internal	\$ -	\$ -	\$ -	\$ -	\$ -
Debt - External	-	-	-	-	-
Grants (Enter Description Here)	-	-	-	-	-
Reserves, Equity, Surplus	-	-	-	-	-
Other - Enter Description Here	-	-	-	-	-
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	\$ 300,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000
Less: Incremental Revenue/Recovery	300,000	-	-	-	-
Net Cost/(Benefit)	<u>\$ -</u>	<u>\$ 5,000</u>	<u>\$ 5,000</u>	<u>\$ 5,000</u>	<u>\$ 5,000</u>
Less: Existing Budget Amounts	-	5,000	5,000	5,000	5,000
Net Budget Adjustment Required	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
Additional Comments: Direct costs of \$300,000 are the estimated traffic signal costs to be paid by the developer under agreement AG 43/19, and \$5,000 are the annual estimated maintenance costs. Incremental Revenue/Recovery represents amounts to be recovered from the developer.					

J. Ruby, 2022-05-06

J. Ruby CPA, CA

Manager of Finance and Administration

CONSULTATION

This Report has been prepared in consultation with: N/A

OURWINNIPEG POLICY ALIGNMENT

The Sustainable Transportation Direction Strategy developed as part of OurWinnipeg forms the policy framework for the Transportation Master Plan (TMP). Sustainable Transportation identified a vision and five Key Strategic Goals which are critical to achieving a balanced and sustainable transportation system for Winnipeg. These goals form the basis for the TMP and the directions and strategies contained within it:

1. A transportation system that is dynamically integrated with land use;
2. A transportation system that supports active, accessible and healthy lifestyle options;
3. A safe, efficient and equitable transportation system for people, goods and services;
4. Transportation infrastructure that is well maintained; and
5. A transportation system that is financially sustainable.

The recommendations within this report are consistent with the Key Strategic Goals.

WINNIPEG CLIMATE ACTION PLAN ALIGNMENT

There is a linkage between making Winnipeg's transportation network safer and more efficient with Key Direction 3.5 "Reduce Traffic Congestion".

WINNIPEG POVERTY REDUCTION STRATEGY ALIGNMENT

N/A

SUBMITTED BY

Department: Public Works
Division: Transportation
Prepared by: K. Patmore, M.Sc., P.Eng., Regional Traffic Engineer
Date: May 9, 2022