Agenda – Standing Policy Committee on Public Works – January 8, 2026

REPORTS

Item No. 4 Expanding Leading Pedestrian Intervals across Winnipeg

WINNIPEG PUBLIC SERVICE RECOMMENDATION:

1. That this report be received as information.

Agenda – Standing Policy Committee on Public Works – January 8, 2026

DECISION MAKING HISTORY:

STANDING COMMITTEE RECOMMENDATION:

On September 11, 2025, the Standing Policy Committee on Public Works concurred in the recommendation of the Winnipeg Public Service, and granted an extension of time of 120 days to report back on the following:

1. An update on the progress of installing leading pedestrian intervals in Downtown Winnipeg and installation of similar infrastructure across the city at appropriate intersections.

STANDING COMMITTEE DECISION:

On February 14, 2025, the Standing Policy Committee on Public Works concurred in the recommendation of the Winnipeg Public Service, as amended, and approved the following:

2. That the Winnipeg Public Service be directed to report back in 180 days with an update on progress of installing leading pedestrian intervals in Downtown Winnipeg and that the Winnipeg Public Service be directed to install similar infrastructure across the City at appropriate intersections within the year.

David Grant submitted a communication in opposition to the matter.

ADMINISTRATIVE REPORT

Title: Expanding Leading Pedestrian Intervals across Winnipeg

Critical Path: Standing Policy Committee on Public Works

AUTHORIZATION

Author	Department Head	CFO	CAO
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EXECUTIVE SUMMARY

This report outlines a plan to install Leading Pedestrian Intervals (LPIs) across Winnipeg. It also shares outcomes from the LPIs installed Downtown in 2025.

LPIs give pedestrians a head-start to cross the street before cars get a green light. This makes pedestrians more visible to drivers and lowers the risk of a crash.

The Road Safety Strategic Action Plan identifies LPIs as a tool to improve pedestrian safety. In early 2025, LPIs were installed at almost 100 Downtown intersections. A review of these LPIs indicates they improve safety for pedestrians and motorists (other cities have noted this as well). There was also little impact on traffic flow.

The Public Service has developed a plan to expand LPIs throughout the city, using these lessons learned. New locations will be chosen based on:

- Safety risks
- Signal compatibility
- Number of pedestrians
- Vehicle volumes

The installation across all neighbourhoods will take place over the next five years. This will happen in two ways:

1. Through standard pre-planned signal reviews along a street; or
2. At priority locations with high pedestrian safety risk.

Intersections that already have an LPI installed will not be impacted by this project and Downtown intersections that were previously studied will not be re-evaluated.

RECOMMENDATIONS

That this report be received as information

REASON FOR THE REPORT

On February 14, 2025, the Standing Policy Committee on Public Works concurred in the recommendation of the report titled *Installing Leading Pedestrian Intervals in Downtown Winnipeg* that presented an implementation approach for identifying candidate locations and installing Leading Pedestrian Intervals at intersections downtown.

The Committee directed the Winnipeg Public Service to report back in 180 days with an update on the progress of the Downtown Leading Pedestrian Interval installation, and the installation of similar infrastructure across the city at appropriate intersections within the year.

An extension of time was granted on September 11, 2025.

IMPLICATIONS OF THE RECOMMENDATIONS

As this report is for information purposes only, there are no implications.

Implementing LPI adds approximately 90 minutes to the review of a signal. This is an operational responsibility, and the department plans to implement this over the next 5 years using existing staff. No incremental operating budget will be required.

HISTORY/DISCUSSION

BACKGROUND

Leading Pedestrian Intervals (LPIs) are a proven safety treatment that provides a head start for pedestrians to begin crossing the intersection before the signal turns green for vehicles in the same direction of travel. LPIs enhance the visibility of pedestrians in the intersection and reinforce pedestrian right-of-way over right and left turning vehicles.

The council-approved Winnipeg Road Safety Strategic Action Plan (RSSAP) provides strategic direction for road safety investments in Winnipeg. One of the pedestrian-related actions is to '*Develop an LPI policy and implement LPIs at selected locations.'*

In early March 2025, LPIs were installed on a widespread basis at intersections in Downtown Winnipeg. This installation coincided with a large signal optimization effort by the Traffic Signals Branch to improve the operational efficiency and movement of people and vehicles through downtown given the upcoming opening of Portage and Main.

The LPI implementation approach prioritized pedestrian safety while managing vehicle delays at the most congested intersections. The following four criteria were used to determine candidate LPI installation locations, using a decision support tool:

1. General applicability criteria to assess if an LPI would provide any safety benefit.
2. Intersection operational delay based on Level of Service modelling.
3. Pedestrian historic collision risk over the past 10 years
4. Pedestrian volumes (exposure) on each crossing.

UPDATE ON DOWNTOWN LPI INSTALLATION PROGRESS

Based on the input criteria and the decision support tool, 82 percent of downtown intersections (91 of 111 intersections), received LPIs. Sixty-five percent of the intersections included an LPI on all four crossings, and 35 percent included an LPI on two crossings only.

The roll-out of LPIs downtown also included stakeholder education and public communications. Informational postcards and posters were provided to organizations and residents, and informational signs were installed at intersections to advise pedestrians of the five second 'Head Start'. A news release also helped to spread the word amongst Winnipeg residents. Following this implementation, the Public Service has evaluated the downtown LPI deployment and developed a plan for continued installation of LPIs at candidate locations across the rest of the city.

EVALUATION OF DOWNTOWN LPIS

A monitoring and evaluation plan was identified following the implementation of Downtown LPIs, which focused on assessing the safety performance and the impact on vehicle delay/ congestion.

Downtown LPI safety evaluation

To evaluate the safety performance of the LPIs installed in downtown Winnipeg in March 2025, before-after video conflict analysis (VCA) studies were completed at selected locations. VCA was used to identify conflicts or "near-misses" between vehicles and pedestrians or cyclists. These safety risks are calculated using a combination of vehicle speed and trajectories to determine the nearness and potential severity of an interaction.

In total, 10 locations were selected for VCA. Each study consisted of a pre-installation period (before LPI implementation) in November 2024, as well as a post-installation period in April 2025. Video was typically collected from 7:00-19:00 over a four-day period.

The VCA data resulted in the following safety observations:

- There was a reduction in conflict rate across most sites following LPI implementation.
- LPIs allowed pedestrians to advance approximately 2 lanes into the intersection before conflicting vehicles received their green light.
- This lead time allowed pedestrians to establish themselves in the intersection and become more visible to drivers. It resulted in an increased time gap between conflicting vehicles and crossing pedestrians.
- LPIs help pedestrians clear the intersection before turning vehicles enter. In the pre-LPI footage, situations were observed where the turning vehicle rushed to make their turn

before the pedestrian could enter. These situations were less commonly observed in the post-LPI footage.
- Evidence of vehicles creeping up towards the crosswalk while the crosswalk was occupied with pedestrians was observed in both pre- and post-LPI footage.

Overall, the VCA results identified safety benefits following the implementation of LPIs, much like studies conducted in other cities across Canada and internationally.

Downtown vehicle delay evaluation

Limiting vehicle congestion downtown was an important consideration for the LPI implementation project. This was evaluated using manual observations of vehicle movements at peak periods before and after the signal timing changes.

Each weekday during the AM and PM rush hours, Transportation Management Centre (TMC) staff observe traffic using Winnipeg's network of permanent traffic cameras to identify and respond to incidents and congestion. Overall, no significant changes in downtown congestion were observed by TMC staff after the implementation of the LPIs. This can be attributed to two factors:

1. The downtown LPI installations coincided with an overall signal re-timing effort in the downtown.
2. LPIs were only installed at intersections that could reasonably accommodate associated delay.

Summary

The implementation of LPIs throughout downtown has resulted in safety benefits for pedestrians with limited change in vehicle delay. The decision support tool that was developed for identifying candidate downtown LPI locations helped enable the Public Service to make consistent and data-based decisions of where LPIs should or should not be installed.

The remainder of this report outlines an approach for installing LPIs at other intersections citywide. Note that all downtown intersections have already been assessed for LPI applicability and will not be reviewed again with this procedure.

CONSIDERATIONS FOR CITYWIDE IMPLEMENTATION

Outside of the downtown, the Public Service has installed LPIs on an ad hoc basis at approximately 30 isolated locations over the past several years. As outlined above, LPIs are a proven, low-cost safety intervention that can help to improve pedestrian safety at candidate locations throughout the city. Consistently prioritizing pedestrian movements will yield greater improvements in overall driver and pedestrian expectancy than implementing isolated treatments at various intersections. However, candidate locations should be carefully selected to ensure that safety benefits can be achieved without adding unnecessary delay to high-volume Winnipeg roads.

The decision support tool that was developed for the downtown LPI project involved a detailed review of signal level of service modelling and historic safety collision data that would not be

easily repeatable across the city's approximately 670 signals. As such, a simplified decision support tool has been developed to ensure uniformity in identifying where LPIs should be installed in Winnipeg.

A typical signalized intersection in Winnipeg (outside downtown) will have a major approach and a minor approach. The minor approach is usually fitted with pedestrian pushbuttons, meaning when an LPI is installed, it will only occur when pedestrians are present and delay to the minor street will not occur every cycle.

The major approach is usually *not* fitted with pedestrian pushbuttons and therefore when LPIs are installed, they will occur consistently, adding a 5 second delay, whether or not there are pedestrians waiting at the intersection.

CITYWIDE IMPLEMENTATION APPROACH

The citywide implementation approach and decision support tool will consider the following four key criteria in determining candidate LPI locations: general applicability, pedestrian pushbuttons, risk level of turning vehicles, and pedestrian demand.

1. General applicability

General applicability criteria consider whether implementing an LPI will improve pedestrian safety and whether the traffic signal phasing is compatible. For example, LPIs will not improve pedestrian safety where turn movements are restricted (e.g., no left or right turns permitted), right and left turn movements are already controlled by protected phasing (i.e., separated from the pedestrian crossing phase), where the pedestrian crossing is separated from the vehicle turning movement by means of a right-turn channel, or where there is no pedestrian crossing.

In these cases, an LPI will not be installed.

2. Pedestrian pushbutton

LPIs will be installed at crosswalks where there is a pedestrian pushbutton (i.e., an actuated pedestrian phase), when the criteria is met. LPIs at these crossings will only be activated if a pedestrian is present and the push button is pressed, thus preventing unnecessary vehicle delay when no pedestrians are crossing. LPIs at actuated crossings are a "win-win", since they improve pedestrian safety with minimal impact on vehicle delay.

3. Risk level of turning vehicles

LPIs are used to increase the visibility of crossing pedestrians to right and left turning vehicles at an intersection. If there are high volumes (i.e., exposure) of vehicles that are crossing the pedestrian's path, there is also increased safety risk.

This criterion considers pedestrian exposure risk to right and left turning vehicles and will promote LPI installation at locations with higher exposure risk. Examples of crosswalks with higher exposure risk include:

- Intersection approaches where a significant proportion of curb-lane traffic is turning right. In this case, there is a higher likelihood of a right-turning vehicle near the start of the green signal, and an LPI will be beneficial to pedestrian safety.
- Crosswalks with a high volume of conflicting left-turning traffic, without sufficient levels of oncoming traffic. An example of this situation would be a T-intersection, where left-turning vehicles at the start of green can proceed immediately without yielding to oncoming traffic. Drivers may fail to notice crossing pedestrians and an LPI will be beneficial to pedestrian safety.

LPIs will not be installed on high volume roadways if the turning vehicle risk level is assessed to be low.

4. Pedestrian and vulnerable road user activity

Pedestrian volume is a proactive way to identify intersections that may have increased safety risk. Crosswalks with high pedestrian crossing volumes will have an LPI installed. Likewise, crosswalks in the vicinity of facilities known to generate significant pedestrian crossing volumes are also strong candidates for LPIs. Such facilities may include major transit stops, schools, senior facilities and hospitals.

The four key criteria are input into the citywide decision support tool to identify which intersections are candidates for an LPI. The tool aims to prioritize pedestrian safety in the locations that need it most, while limiting installation at locations where LPIs would not yield significant safety benefits and could potentially cause other issues related to driver frustration and vehicle capacity.

INSTALLATION PLAN

There are approximately 560 signalized intersections outside of downtown. The process of identifying which locations should receive an LPI using the decision support tool is currently underway. The decision support tool will be used to ensure uniformity and consistency in LPI installations. Once complete, the signal timing changes must be reviewed, prepared and installed by the Traffic Signals Branch.

LPI implementation is a resource-intensive process. Therefore, a multi-year phased approach will be adopted to effectively manage existing staff capacity. LPI installation is anticipated to begin in 2026 and continue over a five-year period, with 60-75 LPIs expected to be installed each year. Candidate intersections will be prioritized over the five-year period based on the following:

1. Intersections included in annual planned corridor signal timing reviews

The Traffic Signals Branch undertakes planned corridor reviews on a regular basis. A corridor review is a comprehensive review of a stretch of road where signal timings are redesigned including the allocation of green time, traffic signal coordination, and consideration for active transportation users. Efforts will be made to leverage already-planned work by implementing candidate LPIs during these corridor reviews.

There are planned upcoming corridor reviews on Goulet Street and Marion Street. These streets are expected to see some of the first LPI installations outside downtown.

2. Intersections with the highest pedestrian safety benefit

The Road Safety Branch will prioritize additional locations for LPI installation based on the greatest safety benefit to pedestrians. Priority locations will be identified by considering existing pedestrian volume. Additional locations may also be flagged for priority installation based on safety studies and collision reviews as well as in geographic areas of higher poverty.

FINANCIAL IMPACT

Financial Impact Statement **Date:** November 13, 2025

Project Name:

Expanding Leading Pedestrian Intervals across Winnipeg

COMMENTS:

As this report is for information purposes, there are no financial impacts.

Leading Pedestrian Interval (LPI) changes how a signal operates by changing the timing of the signal. The department plans to integrate this change into its regular ongoing work to keep signals optimized. Implementing LPI adds approximately 90 minutes to the review of a signal. The department plans to implement this over the next 5 years using existing staff and no incremental operating budget will be required.

November 17, 2025
J. Ruby CPA,CA
Manager of Finance & Administration

CONSULTATION

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

OURWINNIPEG POLICY ALIGNMENT

The recommendations within this report are consistent with policies that fit within several of the goals in OurWinnipeg2045, specifically:

Leadership and Good Governance Goal

- Policy 1.5 Evidence-Informed Decisions

  Invest in data and technology in order to support objective, evidence-informed decision-making; support open government and open data principles for collection and sharing; help coordinate records and information management; and improve process efficiency, results-based service delivery and accountability.

Environmental Resilience Goal

- Policy 2.9 Reduce Road Congestion

  Increase the efficiency, convenience and usage of the active and public transportation system, to improve air quality, provide a viable alternative to the automobile, and reduce current and future road congestion.

Economic Prosperity Goal

- Policy 3.17 Sustainable Transportation Connectivity

  Prioritize enhancement to the integrated and sustainable transportation system that improve its viability and access to places such as educational institutions, employment opportunities, recreation and library facilities, providers of essential goods and services and health providers, especially for children, and for neighbourhoods most impacted by poverty.

Good Health and Well-Being Goal

- Policy 4.10 Transportation Safety

  Design, construct, maintain, and regulate an integrated and sustainable transportation system and related infrastructure that optimizes safe, connected and reliable mobility, and minimize severe injuries and fatalities for all road users.

City Building Goal

- Policy 6.22 Complete Streets

Apply complete streets principles in the design, reconstruction, construction and operation of designated Urban Mixed-Use Corridors, and other areas of the city where appropriate, to enhance the safety and usability of an integrated and sustainable transportation system based on a hierarchy of users which safeguards those most at risk of fatality and injury.

WINNIPEG CLIMATE ACTION PLAN ALIGNMENT

LPIs will improve pedestrian safety, making walking a safer mobility option in Winnipeg. This supports the Winnipeg Climate Action Plan's goal to advance sustainable transportation, aligning with Key Direction 3.4 to "Increase Active Transportation Rates".

WINNIPEG POVERTY REDUCTION STRATEGY ALIGNMENT

This report is in alignment with the Winnipeg Poverty Reduction Strategy as per *Goal 5: Transportation System Equity is Enhanced* – the affordability and accessibility of transportation and transit service is increased through the implementation of pedestrian and cycling improvements.

This report also delivers on Action 5.4 in the PRS Implementation Plan 2024-2027 on road safety, to "Prioritize actions in the Road Safety Strategic Action Plan in areas of higher poverty"

SUBMITTED BY

Department: Public Works
Division: Transportation
Prepared by: S. Wood, M.Sc., P.Eng., RSP_1, Road Safety Engineer
Date: November 18, 2025