

Agenda – Council – September 30, 2020

Report – Standing Policy Committee on Infrastructure Renewal and Public Works – September 16, 2020

Item No. 6 Speed Study – Pipeline Road from Ambergate Drive to 170 Metres North of Templeton Avenue (Old Kildonan Ward)

STANDING COMMITTEE RECOMMENDATION:

On September 21, 2020, the Executive Policy Committee concurred in the recommendation of the Standing Policy Committee on Infrastructure Renewal and Public Works and submitted the following to Council:

1. That the speed limit on Pipeline Road between the northern boundary of Ambergate Drive/Court Avenue and a point 170 m north of the northern boundary of Templeton Avenue be reduced from 70 km/h to 50 km/h.
2. That the Speed Limit By-law No. 63/2019 be amended as per the attached draft amending By-law (Appendix A).
3. That the Proper Officers of the City be authorized to do all things necessary to implement the intent of the foregoing.

Agenda – Council – September 30, 2020

Report – Standing Policy Committee on Infrastructure Renewal and Public Works – September 16, 2020

DECISION MAKING HISTORY:

EXECUTIVE POLICY COMMITTEE RECOMMENDATION:

On September 21, 2020, the Executive Policy Committee concurred in the recommendation of the Standing Policy Committee on Infrastructure Renewal and Public Works and submitted the matter to Council.

STANDING COMMITTEE RECOMMENDATION:

On September 16, 2020, the Standing Policy Committee on Infrastructure Renewal and Public Works concurred in the recommendation of the Winnipeg Public Service and submitted the matter to the Executive Policy Committee and Council.

ADMINISTRATIVE REPORT

Title: Speed Study – Pipeline Road from Ambergate Drive to 170 metres North of Templeton Avenue

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

AUTHORIZATION

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

EXECUTIVE SUMMARY

The Seven Oaks School Division requested a review of the 70 km/h speed limit on Pipeline Road between Ambergate Drive and the limits of the new housing development north of Templeton Avenue (approximately 170 m north of Templeton Avenue) due to safety concerns with student travel to the École Templeton School. The École Templeton School is scheduled to open in fall 2020 and is expected to serve approximately 450 Kindergarten to Grade 5 students. The school is located on Templeton Avenue just east of Pipeline Road and the catchment area for the school includes residences to the west of Pipeline Road.

In recommending appropriate speed limits, the Winnipeg Public Service follows the guidance in the Public Work's Department Transportation Division's *Technical Guideline A-2b Speed Limit Reviews*. This report recommends that the speed limit on Pipeline Road between the northern boundary of Ambergate Drive/Court Avenue and a point 170 m north of the northern boundary of Templeton Avenue be reduced from 70 km/h to 50 km/h.

RECOMMENDATIONS

1. That the speed limit on Pipeline Road between the northern boundary of Ambergate Drive/Court Avenue and a point 170 m north of the northern boundary of Templeton Avenue be reduced from 70 km/h to 50 km/h.
2. That the Speed Limit By-law No. 63/2019 be amended as per the attached draft amending By-law (Appendix A).
3. 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

The Seven Oaks School Division requested a review of the 70 km/h speed limit on Pipeline Road between Ambergate Drive and the limits of the new housing development north of Templeton Avenue (approximately 170 m north of Templeton Avenue) due to safety concerns with student travel to the École Templeton School.

The Highway Traffic Act provides that the default speed limit within the City is 50 km/h but that a traffic authority may fix, by by-law, a different speed limit for any geographic area, highway, or portion of a highway for which it is the responsible traffic authority. The City is the traffic authority within City boundaries under s. 138 of The City of Winnipeg Charter. Because the Speed Limit By-law currently sets the speed limit for this portion of Pipeline Road, reducing the speed limit requires an amendment to Schedule A of the Speed Limit By-law No. 63/2019 (draft attached as Appendix A) which must be approved by Council.

IMPLICATIONS OF THE RECOMMENDATIONS

Adoption of the recommendations in this Report will result in speed limits that are more appropriate for this section of Pipeline Road, with the result that safety of motorists and pedestrians will be enhanced.

Schedule A to the Speed Limit By-law 63/2019 will need to be amended (see draft amending By-law attached as Appendix A to this Report).

Appropriate speed limit signage will need to be changed. The estimated costs are \$900 and will be funded by the Public Works Department operating budget.

HISTORY/DISCUSSION

BACKGROUND INFORMATION

The Seven Oaks School Division requested a review of the 70 km/h speed limit on Pipeline Road between Ambergate Drive and the limits of the new housing development north of Templeton Avenue (approximately 170 m north of Templeton Avenue) due to safety concerns with student travel to the École Templeton School. The École Templeton School is scheduled to open in fall 2020 and is expected to serve approximately 450 Kindergarten to Grade 5 students. The school is located on Templeton Avenue just east of Pipeline Road and the catchment area for the school includes residences to the west of Pipeline Road.

This report summarizes the Public Service analysis and recommendations for speed limits on Pipeline Road. In recommending appropriate speed limits, the Winnipeg Public Service follows the guidance in the Public Work's Department Transportation Division's *Technical Guideline A-2b Speed Limit Reviews*.

The Highway Traffic Act provides that the default speed limit within the City is 50 km/h but that a traffic authority may fix, by by-law, a different speed limit for any geographic area, highway, or portion of a highway for which it is the responsible traffic authority. The City is the traffic authority within City boundaries under s. 138 of The City of Winnipeg Charter. Because the Speed Limit By-law currently sets the speed limit for this portion of Pipeline Road, reducing the speed limit requires an amendment to Schedule A of the Speed Limit By-law No. 63/2019 (draft attached as Appendix A) which must be approved by Council.

STUDY AREA

The study area and existing speed limits are illustrated in Figure 1. The Speed Limit By-law 63/2019 currently sets the speed limit on Pipeline Road as 70 km/h between the northern

boundaries of Ambergate Drive / Court Avenue and Provincial Trunk Highway 101. The speed limit is 50 km/h south of the Ambergate Drive / Court Avenue intersection.

This approximately 630 metre segment of Pipeline Road between Ambergate Drive / Court Avenue and a point 170 m north of Templeton Avenue is a two-lane undivided, Non-Regional Collector street with a paved surface and urban cross-section. At a point approximately 170 m north of Templeton Avenue the roadway transitions to a chip seal surface roadway with a rural cross-section. South of Templeton Avenue there is an estimated volume of 5,850 vehicles per day (based on a 2020 tube count). North of Templeton Avenue there is an estimated volume of 3,455 vehicles per day (based on a 2020 tube count).

There is a 1.5 metre concrete sidewalk on the west side of Pipeline Road separated from the roadway by a grass boulevard. There are no cyclist facilities.

The study area includes all-way stop controlled intersections at Pipeline Road / Templeton Avenue and also at Pipeline Road / Court Avenue. The Pipeline Road / Templeton Avenue intersection was converted to all-way stop in 2015, prior to that time it was 2-way stop controlled with Pipeline Road uncontrolled.

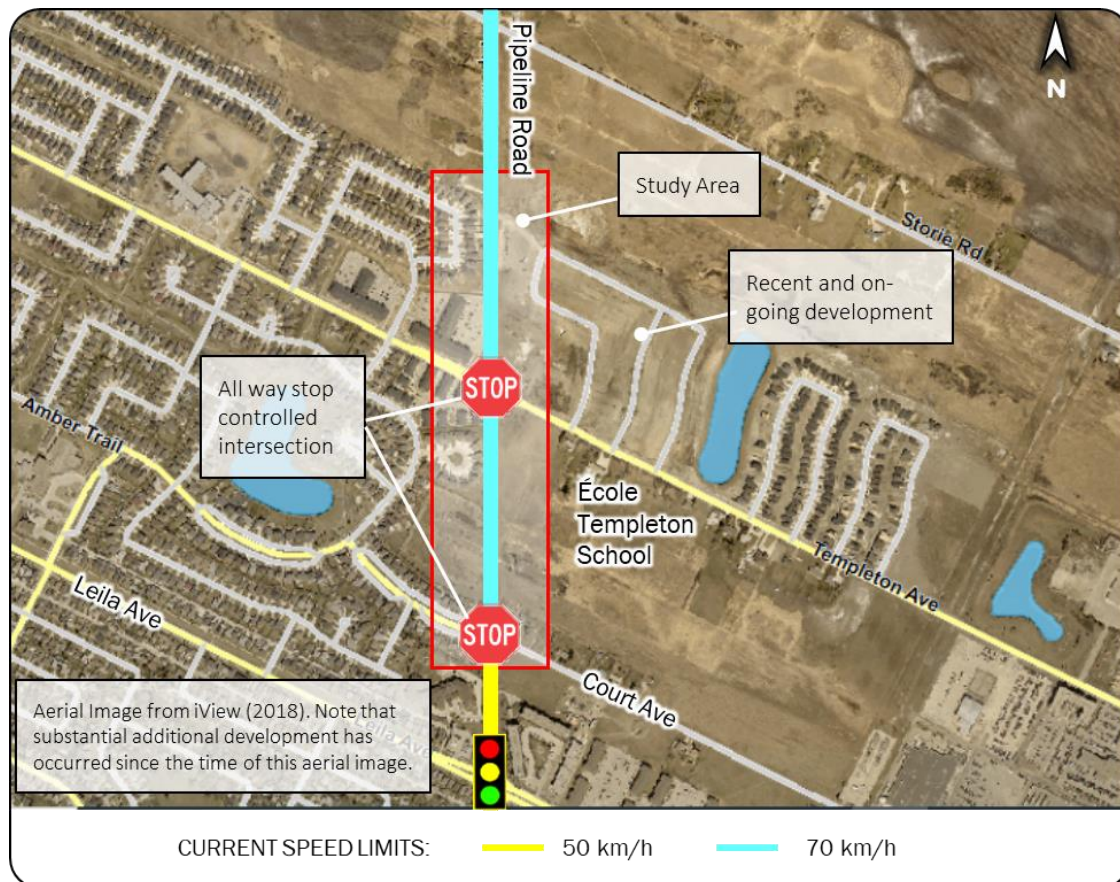


Figure 1: Study Area Speed Limits

VEHICLE OPERATING SPEED CHARACTERISTICS

The operating speed is the speed at which motorists choose to travel on a given roadway. Speed choice by drivers is based on a variety of factors, including roadway and roadside characteristics, weather, traffic characteristics, vehicle characteristics and the purpose of the trip. The operating speed for a particular road section can be estimated by measuring individual speeds through a spot speed study. The following describes operating speed characteristics:

- **85th Percentile Speed.** The 85th percentile speed is the speed at or below 85 percent of the measured speeds in a spot speed study.
- **15 km/h pace.** The 15 km/h pace is the 15 km/h range of speeds that encompasses the greatest percentage of measured speeds in a spot speed study.
- **Percent in pace.** The percent in pace is the percentage of measured speeds that fall within the 15 km/h pace.

Three vehicle operating speed studies were completed between Wednesday, May 20 and Monday, May 25 2020.

Table 1 provides a summary of the observed vehicle speeds.

Table 1: Vehicle Operating Speed Data

Speed study location	Posted speed limit (km/h)	85th percentile speed (km/h)	15 km/h pace	Percent in pace (%)
240 m south of Templeton Ave	70	60	46 - 60	69
100 m north of Templeton Ave	70	62	46 - 60	64
400 m north of Templeton Ave	70	73	60 - 74	60

At the two data collection locations closest to Templeton Avenue the 85th percentile speeds are 60/62 km/h and the 15 km/h pace is 46-60 km/h. These speed characteristics support a speed limit lower than 70 km/h.

At the data collection location 400 m north of Templeton Avenue the 85th percentile speed is 73 km/h and the 15 km/h pace is 60-74 km/h. These speed characteristics support the current 70 km/h posted speed limit.

TARGET SPEED

The target speed is the speed at which vehicles should operate on a facility in order to promote the safety and appropriate level of mobility for all road users. The target speed is determined using two approaches, (1) the Transportation Association of Canada Guidelines for Establishing Posted Speed Limits, and (2) comparison with similar classification roadways to promote city-wide consistency and driver expectation.

Based on the TAC methodology, the appropriate target speed for this section of Pipeline Road is 60 km/h. Nearby roadways that could be used as comparators based on similar classification and function are summarized in the table below.

Table 2: Comparator Roadways and Posted Speed Limits

Roadway	Section	Posted speed limit
Leila Avenue	Richie Street – Pipeline Road	50 km/h
Sheppard Street	Inkster Blvd – Jefferson Ave	50 km/h
Watson Street	Jefferson Ave – Leila Ave	50 km/h
King Edward St	Inkster Blvd – Jefferson Ave	50/60 km/h

COLLISION HISTORY

A collision history review can identify sections of roadway that are performing more poorly from a road safety perspective. A high collision frequency or rate at a location may indicate any number of operational or geometric issues and does not necessarily indicate speed as a primary contributing factor. A closer analysis of the collision types, locations, time of day, weather conditions and other factors is useful for understanding the role of speed, if any, in the collisions. NCHRP Report 613 describes the following collision patterns where inappropriate speed is more likely to be a contributing factor:

- rear-end collisions – drivers not anticipating the location of the back of a queue
- run-off-road collisions – drivers avoiding conflicts in the roadway proper
- angle collisions – drivers accepting gaps that are too small

Analysis of the collision data is necessary to determine if these patterns could also be attributed to other factors, such as driver inattention or impairment, geometric conditions (alignment or sight distance) or other conditions that do not meet a driver's expectations.

Table 3 provides a summary of the most recent 5-years of available collision data.

Table 3: Collision Summary (2014-2018)

Collision Type	Collision Severity (2014-2018) ¹		
	Property damage	Injury	Fatal
All collision types	28	8	0
Collisions where speed may have been a factor ²	14	2	0
Collisions with pedestrians / cyclists	0	0	0

1 Based on reported collisions to MPI.

2 NCHRP Report 613 describes the following collision patterns that may be associated with inappropriate speeds:

- Rear-end collisions – drivers not anticipating the location of the back of a queue,
- Run-off-road collisions – drivers avoiding conflicts in the roadway proper, or
- Angle collisions – drivers accepting gaps that are too small.

The following describes the injury collisions where speed may have been a contributing factor:

- A rear-end collision occurred between two northbound vehicles at the Pipeline Road / Templeton Avenue intersection. There was icy road conditions.
- A rear-end collision occurred between two southbound vehicles at the Pipeline Road / Templeton Avenue intersection. There was icy road conditions.

DISCUSSION AND SUMMARY

This approximately 630 metre segment of Pipeline Road between Ambergate Drive / Court Avenue and a point 170 m north of Templeton Avenue is a two-lane undivided, Non-Regional Collector street with a paved surface and urban cross-section. There is a 1.5 metre concrete sidewalk on the west side of Pipeline Road separated from the roadway by a grass boulevard. There are no cyclist facilities.

At the two data collection locations closest to Templeton Avenue the 85th percentile speeds are 60/62 km/h and the 15 km/h pace is 46-60 km/h. These speed characteristics support a speed limit lower than 70 km/h.

Based on the TAC methodology, the appropriate target speed for this section of Pipeline Road is 60 km/h. Based on nearby comparator roadways 50 km/h or 60 km/h would be an appropriate target speed.

The collision analysis identified two injury collisions where speed may have been a factor over a 5-year period. This does not identify a strong pattern of collision related to inappropriate speeds. However, it should be noted that the historic collision data may not be representative of future conditions. Significant changes in expected travel patterns and traffic volumes are likely due to the École Templeton School and recent residential developments east of Pipeline Road. Based on the operating speed and the target speed, the current 70 km/h speed limit for this section of Pipeline Road is no longer appropriate. It is recommended that the speed limit from the northern boundary of Ambergate Drive/Court Avenue to 170 m north of the northern boundary of Templeton Avenue be reduced from 70 km/h to 50 km/h. This is supported by the following:

- Generally, modifying the speed limit has only a minor impact on operating speeds. However, in this instance the operating speeds are much lower than the posted speed. This suggests that most motorists are interpreting the roadway very differently from the posted speed. Modifying the speed limit to 50 km/h will likely result in a reduction of the 85th percentile speeds in the range of mid to high 50's, this would be an acceptable operating speed and would not require roadway modifications.
- Based on the speed limit setting guiding principle of "minimize changes in speed limits" a speed limit of 50 km/h is recommended which will provide continuity with the existing 50 km/h speed limit south of Church Avenue. A short segment of 60 km/h would not be as ideal as it would require motorists to adjust to three different regulatory speed limits (70, 60, and 50 km/h) in a short driving distance.

FINANCIAL IMPACT**Financial Impact Statement****Date:** August 18, 2020**Project Name:****First Year of Program** 2020

Speed Study – Pipeline Road from Ambergate Drive to 170 metres North of Templeton Avenue

	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</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	\$ 900	\$ -	\$ -	\$ -	\$ -
Less: Incremental Revenue/Recovery	-	-	-	-	-
Net Cost/(Benefit)	<u>\$ 900</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
Less: Existing Budget Amounts	900	-	-	-	-
Net Budget Adjustment Required	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
Additional Comments: Direct costs represent the estimated costs to replace existing speed limit signs for the location identified in this report, and will be charged to the 2020 Public Works Department operating budget.					

"Original signed by J. Peters, CPA, CGA"

J. Peters CPA, CGA

Acting Manager Finance and Administration

CONSULTATION

This Report has been prepared in consultation with: Legal Services

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
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 Directions 3.1 "Increase Use and Efficiency of Public Transit Systems", 3.4 "Increase Active Transportation Rates", and 3.5 "Reduce Traffic Congestion".

SUBMITTED BY

Department: Public Works
Division: Transportation
Prepared by: K. Patmore, M.Sc., P.Eng., Regional Traffic Engineer
Date: August 19, 2020

Attachments: Appendix A: Draft By-law Amendment

Appendix A: Draft By-law Amendment

THE CITY OF WINNIPEG

BY-LAW NO. /2020

A By-law of THE CITY OF WINNIPEG to amend the
Speed Limit By-law to change the speed limit on a
portion of Pipeline Road

THE CITY OF WINNIPEG, in Council assembled, enacts as follows:

Speed limit on part of Pipeline Road amended

1 Schedule A of the Speed Limit By-law No. 63/2019 is amended by replacing the following row:

<i>Pipeline Road</i>	<i>Northern boundaries of Ambergate Drive and Court Avenue</i>	<i>P.T.H. No. 101</i>	<i>70</i>
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with the following row:

<i>Pipeline Road</i>	<i>170 m north of the northern boundary of Templeton Avenue</i>	<i>P.T.H. No. 101</i>	<i>70</i>
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DONE AND PASSED this day of , 2020.

Mayor

City Clerk

Approved as to content:

Director of Public Works

Legally reviewed and certified as to form:

for Director of Legal Services
and City Solicitor