

**Agenda – Standing Policy Committee on Infrastructure Renewal and Public Works –
January 30, 2018**

REPORTS

Item No. 10 Speed Limit on Pembina Highway South of the La Salle River Bridge

WINNIPEG PUBLIC SERVICE RECOMMENDATION:
(PUBLIC WORKS DEPARTMENT)

1. That the Winnipeg Public Service be authorized to apply to the Highway Traffic Board (HTB) of Manitoba to establish the following speed limits:
 - A. 70km/h on Pembina Highway from 76 metres south of the south end of the La Salle River Bridge and a point 305 metres south of Turnbull Drive.

WINNIPEG PUBLIC SERVICE RECOMMENDATION:
(OFFICE OF PUBLIC ENGAGEMENT)

That this report be received as information.

**Agenda – Standing Policy Committee on Infrastructure Renewal and Public Works –
January 30, 2018**

DECISION MAKING HISTORY:

STANDING COMMITTEE RECOMMENDATION:

On October 31, 2017, the Standing Policy Committee on Infrastructure Renewal and Public Works laid over the matter for 120 days.

Further on October 31, 2017, Lydia Dyck submitted a presentation with respect to the matter.

On September 11, 2017, the Standing Policy Committee on Infrastructure Renewal and Public Works laid over the matter to its meeting on October 31, 2017 to provide the Winnipeg Public Service time to consult with the Ward Councillor and figure out a plan to gather feedback from the public.

ADMINISTRATIVE REPORT

Title: Speed Limit on Pembina Highway South of the La Salle River Bridge

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

AUTHORIZATION

Author	Department Head	CFO	CAO
L. Escobar, P.Eng., PTOE	J. Berezowsky Acting Director of Public Works	B. D'Avignon A/CFO	D. McNeil

EXECUTIVE SUMMARY

The Public Service seeks authorization from the Standing Committee to apply to the Highway Traffic Board (HTB) of Manitoba in order to increase the speed limit on Pembina Highway south of the La Salle River Bridge. The recommended speed limit will change the existing 60km/h section to 70km/h. There are no changes recommended to the 50km/h speed limit north of the La Salle River Bridge.

RECOMMENDATIONS

1. That the Winnipeg Public Service be authorized to apply to the Highway Traffic Board (HTB) of Manitoba to establish the following speed limits:
 - A. 70km/h on Pembina Highway from 76 metres south of the south end of the La Salle River Bridge and a point 305 metres south of Turnbull Drive.

REASON FOR THE REPORT

An application to the Highway Traffic Board of Manitoba to change a speed limit on a roadway under the jurisdiction of the City of Winnipeg requires the prior approval of the Standing Policy Committee on Infrastructure Renewal and Public Works, being the City's Traffic Authority pursuant to Section 13. (d) of *the City Organization By-law 7100/97*.

IMPLICATIONS OF THE RECOMMENDATIONS

The recommendation is consistent with the accepted practices used to establish speed limits (refer to Appendix 'A': Speed Limit Setting Criteria for information).

The estimated costs of manufacturing and installing the replacement speed limit signs is \$1,500. This cost would be expected to be covered by the operating budget for sign installation.

HISTORY/DISCUSSION

BACKGROUND INFORMATION

On December 4, 2007; the Riel Community Committee laid over consideration of the matter (Minute No. 12: Speed Limit on Pembina Highway between the Perimeter Highway and the South City Limit) sine die pending approval of a Secondary Plan for the South St. Norbert area.

On July 6, 2010; Council concurred in the recommendations of the Standing Policy Committee on Property and Development with respect to Item No. 8: *“Text Amendment – The City of Winnipeg Zoning By-law No. 200/2006 – St. Norbert Neighbourhood Main Street Planned Development Overlay-1”*. The PDO includes area specific land use/development standards for the properties in St. Norbert abutting Pembina Highway between the Perimeter Highway and the La Salle River Bridge, but not south of the La Salle River bridge and south City Limit.

In the Fall of 2012, the Provincial Highway Traffic Board undertook an independent review of some multi-lane divided roadways within the City of Winnipeg, with a view to increase the speed limits. This section of Pembina Highway was included in the review; however, no decisions were made and no changes were approved as a result of the review.

In the Spring of 2017, the Transportation Division received a 311 request from an area resident requesting a review of the speed limit on Pembina Highway with a view to increase it from 60km/h.

CURRENT TRAFFIC CHARACTERISTICS

Pembina Highway south of the La Salle River Bridge is a four-lane divided highway, a Regional Street, a Full-Time Truck Route, and a Transit Route; with an Average Weekday Daily Traffic (AWDT) volume in the range of 15,900 vehicles (depending on the adjacent cross streets). Stopping is prohibited at all times on both sides of Pembina Highway south of the La Salle River.

The speed limit on Pembina Highway is as follows:

- 50km/h between a point 152m north of Ducharme Avenue and a point 76m south of the south end of the La Salle River Bridge,
- 60km/h between a point 76m south of the south end of the La Salle River Bridge and a point 305m south of Turnbull Drive,
- 90km/h between a point 305m south of Turnbull Drive and the south City limit, and
- 100km/h south of the south City Limit.

The cross-section south of the La Salle River Bridge is that of a four-lane divided highway; however, it changes from an urban cross-section (with barrier curb in the median and gutter) to a rural cross-section (with paved shoulders) approximately 160m south of Turnbull Drive. This transition occurs within the 60km/h speed zone but is within close proximity (~150m) to the 90km/h speed zone.

SPEED LIMIT REVIEW

The Public Works Department’s recommendation for speed limits is based on a number of elements including the adjacent land use; access to the roadway; reported collision history; roadway design; and the measured 85th percentile speed of traffic on the street, being the speed at or below which 85% of motorists operate their vehicle, provided that the collision rate is within acceptable limits. Such a criterion recognizes that the majority of motorists operate

their vehicle in a reasonable and prudent manner with due consideration for conditions encountered. Establishing speed limits in this manner has proven to be effective in that it accommodates traffic in a safe and orderly way and enables the Police to focus their enforcement resources toward the 15% of drivers who operate at excessive speeds (refer to Appendix 'A': Speed Limit Setting Criteria for information).

The 15km/h pace is a measure of speed dispersion (the spread in vehicle speeds). Generally, the speed distribution contains approximately 70% of the vehicles within the pace and with approximately 15% of vehicles below or above the limits of the pace speed. In most cases, the upper limit of the pace speed is approximately the 85th percentile speed. These general attributes were reflected in the studied locations north of Turnbull Drive; however, south of Turnbull Drive a much broader spread was observed, which is likely a reflection of some drivers observing the speed reduction while others are traveling at highway speeds in this rural environment.

A speed study on Pembina Highway south of the La Salle River Bridge was undertaken in April 2017 resulting in the 85th percentile speeds and 15km/h pace shown below:

Location on Pembina Highway (Description)	April 2017 Pneumatic Tube Study	
	85 th Percentile Speed (Combined)	15km/h Pace
700m N. of Turnbull Drive (in 60km/h zone with full urban X-section near SB "511" sign)	69km/h NB 79km/h SB (77km/h)	56-70km/h NB 66-80km/h SB (61-75km/h)
300m N. of Turnbull Drive (in 60km/h zone with full urban X-section near NB "firewood" signs)	84km/h NB 77km/h SB (79km/h)	66-80km/h NB 61-75km/h SB (66-80km/h)
200m S. of Turnbull Drive (in 60km/h zone with full rural X-section near NB "Engine Retarder Brakes" sign)	106km/h NB 113km/h SB (110km/h)	71-85km/h NB 76-90km/h SB (71-85km/h)
400m S. of Perreault Avenue (in 90km/h zone with full rural X-section near SB "Rural Speed Area" sign)	108km/h NB 121km/h SB (116km/h)	91-105km/h NB 101-115km/h SB (91-105km/h)

Based on this data, an increase in the speed limit is justifiable. At the two study locations North of Turnbull Drive within the current 60km/h speed zone, only the lower 15% of vehicular speeds are encompassed by the 60km/h speed limit.

Further evaluation of the existing posted speed limit was completed using the Transportation Association of Canada's (TAC) Canadian Guidelines for Establishing Posted Speed Limits (December 2009) which is a risk-based assessment that considers elements such as, roadway geometry, pedestrian & cyclist exposure, roadside hazards, and number of intersections (public roads and private approaches) to assess the appropriate posted speed limit.

The adjacent lands between the La Salle River Bridge and Perreault Avenue are zoned R1-E: "Residential – Single-Family" and A: "Agricultural", and exclusively A: "Agricultural" between the Perreault Avenue and the City Limit. These land use districts are intended to accommodate primarily single-family residential development in lower-density neighbourhoods, and for general agricultural activities. There are a limited number of private approaches to access these

properties with a relatively low density for the length of the roadway, which is typical of a rural environment. A review of reported collisions within the most recent three-year reporting period indicated that there was one reported collision at Pembina Highway and Turnbull Drive and one reported collision at Pembina Highway and Minerva Avenue. There were no reported collisions on the segments (between intersections) of Pembina Highway between the La Salle River Bridge and the City Limit.

The TAC evaluation indicates that the section of Pembina Highway from south of the La Salle River Bridge to 160m south of Turnbull Drive has a recommended speed limit of 80km/h as determined by road characteristics; and the section of Pembina Highway from 160m south of Turnbull Drive to the South City Limit has a recommended speed limit of 100km/h as determined by road characteristics. These recommended speed limits are consistent with 85th percentile speeds from the speed studies.

The existing urban cross-section on Pembina Highway is a concern relative to increasing the speed limit to 80km/h from south of the La Salle River Bridge to 160m south of Turnbull Drive. The cross-section consists of 150mm – 200mm (6 to 8 inch) barrier (straight faced) curb. From an engineering design standpoint, both the Transportation Association of Canada (TAC) and American Association of State Highway and Transportation Officials (AASHTO) indicate that barrier curb should be used in urban conditions with design speeds of 70km/h or less. In urban areas where design speed is greater than 70km/h, mountable curbs (not barrier curbs) are recommended. The reason for this advice in the design references is that errant vehicles at speeds in excess of 70km/h are at risk of launching when crossing barrier curbs which can result in reduced control as the driver attempts to recover control. For this reason, it is recommended that the posted speed not be raised above 70km/h where barrier curb is in place along Pembina Highway.

Furthermore, it is undesirable to have a speed limit reduction greater than 20km/h at one point (i.e. from 80km/h to 50km/h), and having multiple shorter speed zones should be avoided. This would also result if speed limit were increased to 100km/h from 305m south of Turnbull Drive to the South City Limit (i.e. from 100km/h to 70 km/h). The recommended sequence of speed limits from south to north in this report reflects a stepping down from 100 km/h to 90 km/h to 70 km/h to 50 km/h.

CONCLUSIONS

In consideration of the foregoing, it is recommended that the Winnipeg Public Service be authorized to apply to the Highway Traffic Board (HTB) of Manitoba to establish the following speed limits:

- A. 70km/h on Pembina Highway from 76 metres south of the south end of the La Salle River Bridge and a point 305 metres south of Turnbull Drive.

The recommended speed limit will change the 60km/h section to 70km/h. There are no changes recommended to the 50km/h speed limit north of the La Salle River Bridge.

FINANCIAL IMPACT

Financial Impact Statement

Date: **June 15, 2017**

Project Name: **Speed Limit on Pembina Highway South of the La Salle River Bridge**
First Year of Program **2017**

	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</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	\$ 1,500	\$ -	\$ -	\$ -	\$ -
Less: Incremental Revenue/Recovery	-	-	-	-	-
Net Cost/(Benefit)	<u>\$ 1,500</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
Less: Existing Budget Amounts	1,500	-	-	-	-
Net Budget Adjustment Required	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
Additional Comments: The estimated direct costs represent the cost of manufacturing and installing the replacement speed limit signs and will be covered by the existing operating budget.					

"Original signed by J. Ruby, CPA, CA"
 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
5. A transportation system that is financially sustainable

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

SUBMITTED BY

Department: Public Works

Division: Transportation

Prepared by: T. Jangula, C.E.T., Traffic Analyst
S. Chapman, P.Eng., Traffic Management Engineer

Date: June 9, 2017

File No: R-12

Attachments: Appendix 'A': Speed Limit Setting Criteria
Appendix 'B': Pembina Highway between La Salle River and South City Limit

APPENDIX 'A': SPEED LIMIT SETTING CRITERIA

SPEED LIMIT SETTING

Speed limits on the highways of Manitoba, including in the City of Winnipeg, are set by The Highway Traffic Board of Manitoba which is appointed by the Provincial Government.

When a speed limit change on a City street has been requested or a speed limit is proposed on a newly constructed street, it is the practice of the Public Works Department to provide the Standing Policy Committee on Infrastructure Renewal and Public Works, being the City's Traffic Authority, comprised of a Committee of elected officials appointed by Council, with an evaluation of such a request/proposal, including the results of a speed study on the street and a comparison of the collision rate thereon with other streets of similar characteristics, and an assessment of the traffic operating conditions on a newly constructed street. With such information, the Committee is better informed to decide whether the Public Works Department should be authorized to apply to The Highway Traffic Board of Manitoba for the requested speed limit change or for a proposed speed limit on a newly constructed street.

The Public Works Department's recommendation to the Standing Policy Committee on Infrastructure Renewal and Public Works for speed limits is based primarily on the measured 85th percentile speed of traffic on the street, being the speed at or below which 85% of motorists operate their vehicle, provided that the collision rate is within acceptable limits. Such a criterion recognizes that the majority of motorists operate their vehicle in a reasonable and prudent manner with due consideration for conditions encountered, including activity into and out of intersecting public streets and approaches, as well as the presence of pedestrians and bicyclists on or near the roadway. The methodology is described below.

BACKGROUND INFORMATION ON SETTING SPEED LIMITS¹

Generally, traffic laws that reflect the behaviour of the majority of motorists are found to be successful, while laws that arbitrarily restrict the majority of motorists encourage violations, lack public support and usually fail to bring about desirable changes in driving behaviour. This is particularly true when it comes to establishing speed limits.

Speed limits are based on several fundamental concepts deeply rooted within the system of government and law:

- a. driving behaviour is an extension of social attitude and the majority of drivers respond in a safe and reasonable manner as demonstrated by consistently favourable driving records;
- b. the normally careful and competent actions of a reasonable person should be considered appropriate;
- c. laws are established for the protection of the public and the regulation of unreasonable behaviour on the part of individuals; and
- d. laws cannot be effectively enforced without the consent and voluntary compliance of the public majority.

One important objective in setting a speed limit is to inform drivers of a reasonable and safe maximum speed under normal driving conditions. When less than ideal conditions exist, a driver must adjust vehicle speed accordingly as required by provisions of the Manitoba Highway Traffic Act.

¹ (Excerpt from "Speed Zoning Information A Case of Majority Rule (within the United States)". Institute of Transportation Engineers)

It is a long accepted North American practice to recommend and establish speed limits based on the 85th percentile speed, being the speed at or below which 85% of motorists travel, in conjunction with a detailed engineering analysis of other factors such as collision information. Circumstances such as curves on the road, visibility restrictions, pedestrian and parking activity, and adjacent land uses (e.g., schools, shopping centres, etc.) are factors that determine the speed at which the vast majority of motorists elect to operate their vehicle. A speed limit established on such a basis is also referred to as a "credible speed limit" in that the speed limit matches the image that is inspired by the roadway environment and the traffic operating circumstances encountered. Features of the driving environment that are relevant to a "credible speed limit" include the roadway width, the number of lanes, lane lining and marking, the presence of adjacent buildings, as well as trees, utility poles and furniture in the boulevard. Long, straight, wide sections of roadways with a smooth surface in an open clear road environment tend to lend themselves to a higher operating speed than is the case where such features are not present.

Establishing speed limits in this manner has proven to be effective in that it accommodates traffic in a safe and orderly way and enables the Police to focus their enforcement resources toward the 15% of drivers who operate at excessive speeds. Such a criterion recognizes that the majority of motorists operate their vehicle in a reasonable and prudent manner with due consideration for conditions encountered, including activity into and out of intersecting public streets and approaches as well as the presence of pedestrians and bicyclists on or near the roadway. By setting speed limits using the 85th percentile speed, the range of speeds is lessened, providing a more uniform flow of traffic. Studies have shown that:

- more collisions occur when the speeds of vehicles are varied with extremely high or low speeds encountered²;
- setting speed limits lower than that considered reasonable to the majority of drivers encourages disrespect of speed limits in general;
- posted speed limits which are set higher or lower than that dictated by roadway and traffic conditions are ignored by the majority of motorists; and that
- when speed limits are raised or lowered, there is very little impact on motorists' actual speeds.

Safe, "credible speed limits" can be expected to enhance motorists' compliance to the speed limit, which in turn can result in a reduction in collisions than would otherwise be the case. If a speed limit is not credible, motorists will be inclined to elect to drive at a speed that they perceive to be realistic. If speed limits are perceived as being incredible too frequently, it will challenge the public's trust in the speed limit system generally. A speed limit can be incredible because the speed limit is either perceived as being too low or as being too high.

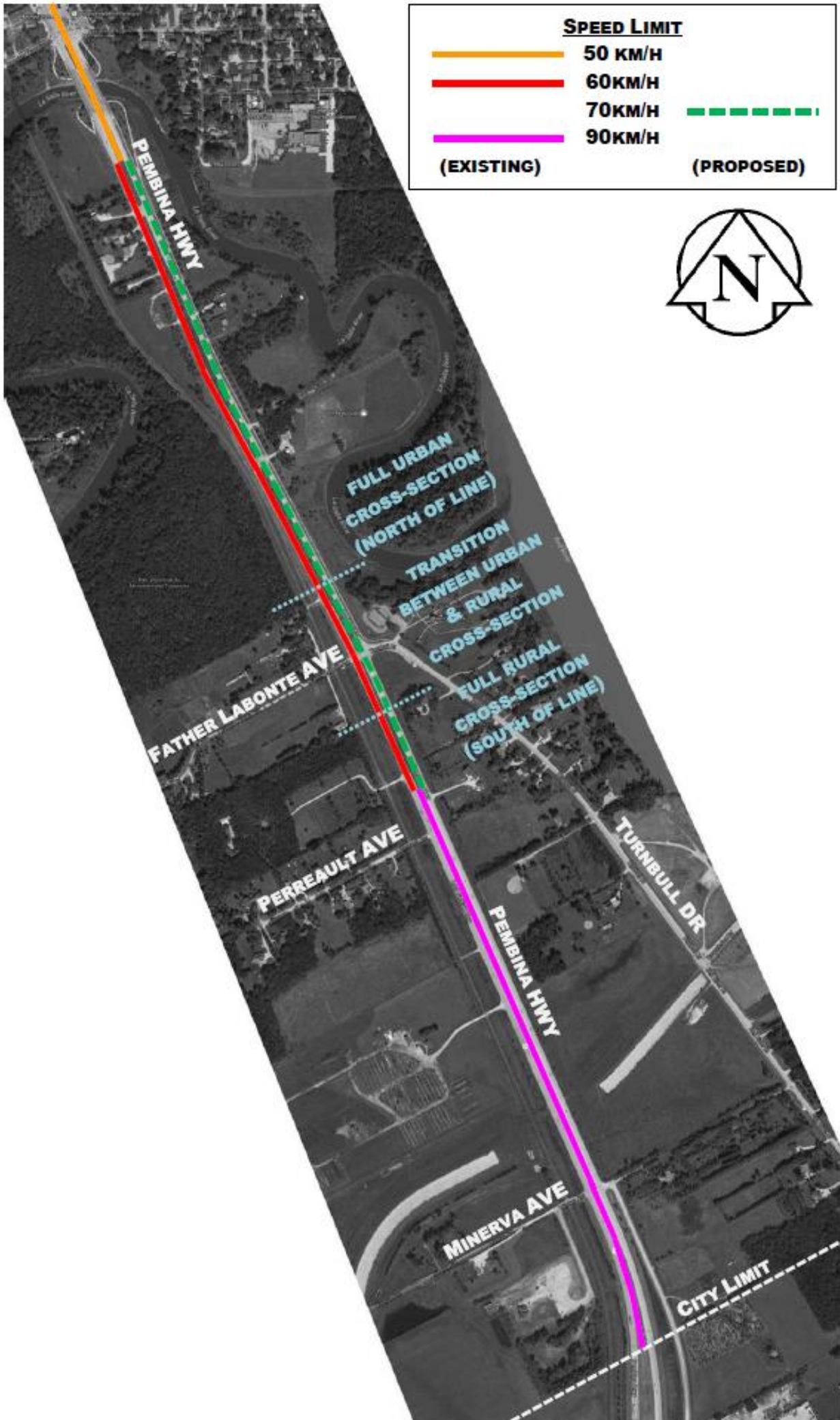
HIGHWAY TRAFFIC BOARD APPROVAL

The Highway Traffic Board considers an application for a speed limit change at a public meeting, the place, date and time of which is advertised in the newspaper. The Board considers the evidence submitted by the applicant; which, in the case of The City of Winnipeg, is the Public Works Department, as well as any public submission either in person or in writing. The applicant is informed of the Board's decision in due course.

The methodology and the process that the Public Works Department follows as described above ensures that, to the greatest extent feasible, consistency is attained in establishing speed limits on our streets.

² "U.S. DOT Publication No. FHWA-RD-98-154", 1998

APPENDIX 'B': PEMBINA HIGHWAY BETWEEN LA SALLE RIVER AND SOUTH CITY LIMIT



ADMINISTRATIVE REPORT

Title: Pembina Highway Speed Limit Review Public Engagement Results

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

AUTHORIZATION

Author	Department Head	CFO	CAO
M. Vespa	F. Wiltshire	n/a	D. McNeil

EXECUTIVE SUMMARY

The City of Winnipeg conducted a speed limit review of Pembina Highway south of the La Salle River Bridge in 2017. Following the review, the Public Service recommended increasing the speed limit from a 60 km/h zone to a 70 km/h zone. The City then held an information session and gathered input from the public through an online survey to determine the level of support for the speed limit change before a decision is made.

A public information session was held on November 30, 2017 at St. Norbert Community Centre, and an online survey was available for those who were unable to attend. The survey was not scientific and did not provide statistically significant data, but did provide insight into levels of support and respondent rationale.

There were 617 surveys completed, and the majority of survey respondents (74%) were very supportive of the proposed speed limit change. Of those who identified as a resident of the area (81 of 617), 63% were very supportive and 23% were very unsupportive of the proposed speed limit change.

RECOMMENDATIONS

That this report be received as information.

REASON FOR THE REPORT

On September 11, 2017, the Standing Policy Committee on Infrastructure Renewal laid over the a decision on the Speed Limit on Pembina Highway South of the La Salle River Bridge to its meeting on October 31, 2017 to provide the Winnipeg Public Service time to consult with the Ward Councillor and figure out a plan to gather feedback from the public.

On October 31, 2017, the Standing Policy Committee on Infrastructure Renewal and Public Works laid over the matter for 120 days. See Appendix B for October 31, 2017 minutes.

IMPLICATIONS OF THE RECOMMENDATIONS

There are no costs associated with the recommendation.

HISTORY/DISCUSSION

Survey results and feedback:

- 617 surveys completed (online and in person).
- 45% heard about the survey through Facebook.
- 52% strongly agreed that they understand the reason for the review.
- 74% were very supportive of the proposed speed limit change.
- 14% identified as a resident and 56% travel through the area.
- 81 of 561 (14%) of respondents identified as a resident of the area.
- 64 of 520 (12%) who provided their postal code identified a postal code with characters R3V.

What We Heard

- Information session attendees' concerns included: pedestrian and cyclist safety, speed traps, farmers market conflicts, school area safety, and driver protection.
- Both those who were opposed and those who were supportive expressed concerns regarding safety.
- Several of those who live on the stretch of Pembina Highway where the speed limit increase is proposed expressed concerns about the lack of shoulder and concerns over slowing down to access their property.
- Information session attendees in support of the speed limit increase cited other similar city roads where the speed limit is currently higher than 60 km/h.
- 65% (53 of 81) of those who identified as a resident of the area were very supportive or somewhat supportive of the proposed speed limit increase.
- 32% (26 of 81) of those who identified as a resident of the area were very unsupportive or somewhat unsupportive of the proposed speed limit increase.
- There were concerns with the time of year and area covered by the speed limit review.
- Bike Winnipeg submitted a position paper stating their reasons for opposing the recommended speed limit increase.

See Appendix A for the public engagement summary and full response information.

See Appendix B for the Speed Limit on Pembina Highway South of the La Salle River Bridge report.

FINANCIAL IMPACT

Financial Impact Statement

Date: January 11, 2018

Project Name: Pembina Highway Speed Limit Review Public Engagement Results

COMMENTS:

There are no financial implications to the recommendations of this report.

(Original signed by T. Yanchishyn)

Tanis Yanchishyn
Manager of Finance (Campus)
Corporate Finance Department

CONSULTATION

This Report has been prepared in consultation with:

Public Works

OURWINNIPEG POLICY ALIGNMENT

Not applicable.

SUBMITTED BY

Department: Office of the Chief Administrative Officer
Division: Customer Service and Communications
Prepared by: M. Vespa, Manager, Office of Public Engagement
Date: January 10, 2018
File No: NA

Attachments: Appendix 'A': Public Engagement Summary
Appendix 'B': SPC-IRPW October 31, 2017 Minutes