Agenda – Council – April 28, 2022

Report – Standing Policy Committee on Infrastructure Renewal and Public Works – April 6, 2022

Item No. 6 Traffic Study – St. Anne's Road south of Aldgate Road (St. Norbert-Seine River Ward)

STANDING COMMITTEE RECOMMENDATION:

On April 20, 2022, 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 St. Anne's Road between the point 350 metres south of the southern boundary of Aldgate Road and the centerline of PTH 100 be reduced from 70 km/h to 60 km/h.

2. That the City Solicitor and Director of Legal Services be instructed to prepare an amendment to Speed Limit By-law No. 63/2019 in accordance with this report and bring same directly to Council for enactment.

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

Report – Standing Policy Committee on Infrastructure Renewal and Public Works – April 6, 2022

DECISION MAKING HISTORY:

EXECUTIVE POLICY COMMITTEE RECOMMENDATION:

On April 20, 2022, 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 April 6, 2022, 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.

On March 11, 2021, the Standing Policy Committee on Infrastructure Renewal and Public Works concurred in the recommendation of the Riel Community Committee, with the following amendment:

- Replace the words “180 days” with “360 days”

COMMUNITY COMMITTEE RECOMMENDATION:

On March 1, 2021, the Riel Community Committee passed the following motion:

WHEREAS development along St. Anne’s Road south of Aldgate Road up to and including the perimeter highway has increased with multi-family dwellings creating density in the area known as Creek Bend;

AND WHEREAS north and southbound traffic on St. Anne’s Road is reduced to a single lane south of Aldgate Road;

AND WHEREAS St. Anne’s Road and the Perimeter Highway continue to see increased traffic volumes with densification that has occurred within the subject area, but has also experienced additional traffic volumes from bedroom communities such as Ile des Chenes, Niverville and other communities in the south-east quadrant known as Precinct K;

Report – Standing Policy Committee on Infrastructure Renewal and Public Works – April 6, 2022

DECISION MAKING HISTORY (continued):

COMMUNITY COMMITTEE RECOMMENDATION (continued):

AND WHEREAS the Provincial Ministry of Infrastructure has a long-term vision to grade separate the intersection of St. Anne's and the Perimeter through the South Perimeter Highway Design Study and will be initiating construction of grade separation at St. Mary's Road and the Perimeter Highway in 2021, potentially increasing traffic flows onto St. Anne's Road;

AND WHEREAS the Provincial Ministry of Infrastructure has commenced construction of a bridge to connect the provincial service roads of Melnick Road and Aimes Road as part of their South Perimeter Highway Design Study that will see additional residential and commercial traffic flows from the new neighbourhood of Bonavista south of Island Lakes;

THEREFORE BE IT RESOLVED that the Standing Policy Committee on Infrastructure Renewal and Public Works be requested to direct the Winnipeg Public Service to conduct a traffic study on St. Anne's Road between Aldgate Road and Highway 101 (the Perimeter Highway), and report back to the Standing Committee within 180 days on methods to mitigate the increased traffic flows this area has experienced in the last ten years, including possible new safety measures.

ADMINISTRATIVE REPORT

Title: Traffic Study – St. Anne's Road south of Aldgate Road

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.	J. Berezowsky	C. Kloepfer	M. Jack

EXECUTIVE SUMMARY

A traffic study, including identification of possible safety measures, was completed for St. Anne's Road between Aldgate Road and the Perimeter Highway (PTH 100). The only major intersection on this segment (and primary focus of the study) is the intersection of St. Anne's Road and Creek Bend Road. The assessment included the impacts of future traffic from proposed developments at 120 and 180 Creek Bend Road and modifications that Manitoba Infrastructure (MI) has planned to connect Creek Bend Road across the Seine River to Aimes Road.

The analysis for the intersection shows that the westbound movement will experience high levels of delay. When delays are higher, drivers become impatient while waiting for a safe gap to turn and more often accept substandard gaps, thereby increasing collision risk. Two scenarios were assessed:

- **Near-term mitigation.** This includes the anticipated modifications to be constructed by MI as part of the South Perimeter Highway improvements with the extension of the Aimes Service Road connection to Creek Bend Road. These proposed modifications include a new westbound right-turn storage lane from Creek Bend Road onto St. Anne's Road and also a 2.5 metre paved shoulder along southbound St. Anne's Road for a distance of 120 metres centered on the Creek Bend Road intersection. This design is not yet finalized and is still subject to change.

- **Long-term mitigation.** In order to address the high levels of delay and safety concerns at the Creek Bend Road intersection, the median on St. Anne's Road could be extended and a southbound left-turn lane from St. Anne's Road to Creek Bend Road be constructed. The left-turn lane will allow southbound traffic on St. Anne's to flow freely around left-turning vehicles and the median will allow westbound motorists to complete a left-turn maneuver in two-stages which provides more frequent safe gap opportunities.

  In addition, MI has longer-term plans to construct a grade-separated interchange at St. Anne's Road and PTH 100 and twin St. Anne's Road north of PTH 100. Without this mitigation measure, this would then leave a short, undivided segment of St. Anne's Road between Creek Bend Road and Aldgate Road, which would be undesirable. The proposed mitigation is to divide this short segment of St. Anne's Road, which would

address both the existing and long-term safety concerns at Creek Bend Road by providing a consistent divided cross-section.

The attached Preliminary Drawing *Ref-04* shows the southbound left-turn storage lane and median. The estimated capital cost of the longer-term roadway improvements for the extension of the median and construction of a southbound left-turn lane at the intersection of St. Anne's Road and Creek Bend Road is $3,000,000. A Business Case submission will be prepared for this work so that this project can be ranked against other capital projects and city-wide priorities in future years capital project programming.

The speed limit on St. Anne's Road between Aldgate Road and PTH 100 was also assessed. This report recommends that the speed limit on St. Anne's Road between the point 350 metres south of Aldgate Road and PTH 100 be reduced from 70 km/h to 60 km/h to provide a consistent speed limit on St. Anne's Road north of PTH 100.

RECOMMENDATIONS

1. That the speed limit on St. Anne's Road between the point 350 metres south of the southern boundary of Aldgate Road and the centerline of PTH 100 be reduced from 70 km/h to 60 km/h.

2. That the City Solicitor and Director of Legal Services be instructed to prepare an amendment to Speed Limit By-law No. 63/2019 in accordance with this report and bring same directly to Council for enactment.

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

On March 11, 2021; the Standing Policy Committee on Infrastructure Renewal and Public Works concurred in the recommendation of the Riel Community Committee and directed the Winnipeg Public Service to conduct a traffic study on St. Anne's Road between Aldgate Road and Highway 100 (the Perimeter Highway), and report back within 360 days on methods to mitigate the increased traffic flows this area has experienced in the last ten years, including possible new safety measures.

The recommendations require a By-law amendment to the Speed Limit By-law No. 63/2019 and must be approved by Council.

Note that, on March 11, 2021, the Standing Committee also directed the Public Service to conduct a traffic study on Creek Bend Road and report back within 360 days on the following:

1. Methods to mitigate the increased traffic flows this area has experienced in the past 10 years.

2. Consideration of parking restrictions on the east side of Creek Bend Road near the exit to St. Anne's Road, allowing an area for vehicles to safely turn north on Creek Bend Road while southbound traffic exits.

This report discusses intersection improvements at St. Anne's Road and Creek Bend Road. A separate report has been produced to focus on improvements to just Creek Bend Road.

IMPLICATIONS OF THE RECOMMENDATIONS

Adoption of the recommendation for the speed limit change will provide a more appropriate, consistent speed limit for St. Anne's Road and the surrounding developments. Schedule A to the Speed Limit By-law 63/2019 will be amended. Subsequently, appropriate speed limit signage would need to be changed. The estimated total signage-related costs are $700 and will be funded by the Traffic Services operating budget.

HISTORY/DISCUSSION

BACKGROUND INFORMATION

At the January 9, 2018 meeting of the Standing Policy Committee on Infrastructure Renewal and Public Works, the Public Service presented the results of a traffic study at the intersection of
St. Anne's Road and Creek Bend Road. Results of the analysis indicated that the existing stop control at the intersection of St. Anne's Road and Creek Bend Road provided an acceptable delay and level of service. The analysis of the traffic volumes for the intersection of St. Anne's Road and Creek Bend Road did not meet the warrant criteria for the installation of traffic control signals at the time. The report also recommended that the intersection should continue to be monitored as development continues and traffic volumes increase.

On July 16, 2018, The Riel Community Committee approved plans for 120 Creek Bend Road to allow for the construction of a multi-family development. The development proposal includes 59 residential units in a 4-storey apartment building. Trip volume estimates from this building are considered with the trips from 180 Creek Bend Road and are incorporated into this study analysis.

On November 25, 2021, Council concurred in the recommendation of the Standing Policy Committee on Property and Development, Heritage and Downtown Development and adopted Subdivision and Rezoning – 180 Creek Bend Road (File no. DASZ 12/2021) to allow for the construction of a multi-family development. The developer is required to enter into a Servicing Agreement with the City including the below clause:

> "The Developer shall pay to the City, in cash, prior to the release of subdivision mylars for registration in the Winnipeg Land Titles Office, $100,000.00 towards a westbound right turn lane on Creek Bend Road at St. Anne's Road, a southbound by-pass lane or southbound left turn lane (including transitions) on St. Anne's Road at Creek Bend Road, and a 1.5 m Portland cement concrete sidewalk on Creek Bend Road from the Planned Area to the terminus of the existing sidewalk, all to the satisfaction of the Director of Public Works".

Note that, separate from this report, the Public Service has produced a report titled *Traffic Study – Creek Bend Road*. The report will discuss that a portion of the $100,000.00 developer funding from 180 Creek Bend Road be used for sidewalk improvements on Creek Bend Road.

In 2021, a Transportation Impact Study (Dillon Consulting Limited) was prepared for the 180 Creek Bend Road development to assess the impacts of the proposed multi-family development. The study assessed a proposed development that included 204 residential units in a 6-storey apartment building built in five phases and fully completed by 2026. The development was subsequently approved for 152 units and 5-storeys. The original trip volume estimates (for 204 residential units) are approximately equal to the subsequently approved trip estimates plus the 120 Creek Bend Road development (152 units + 59 units) and therefore the original trip volume estimates from the Transportation Impact Study are incorporated into this study analysis with no modifications.

The Public Service has been informed about a proposal for a potential commercial development for the lands at 1269 St. Anne's Road. The proponent hosted a stakeholder meeting with area residents on December 15, 2021. The potential commercial development would occupy the 2.0 acre parcel which is currently zoned C2 Commercial Community.

The study area and development changes are shown in Figure 1. The intersection of St. Anne's Road and PTH 100 is under the road authority of Manitoba Infrastructure (MI), not the City of Winnipeg.



Figure 1: Study Area and Developments

MI has several improvements planned for the South Perimeter Highway (PTH 100) in the vicinity of the study area.

- In 2022, MI is planning to construct an extension of Aimes Road westerly from its current extents across the Seine River to connect with the southern end of Creek Bend Road. At

that time, the right-in-right-out access from Aimes Road to the South Perimeter Highway will be permanently closed and the only access to Aimes Road, Sioux Road W, Milne Drive, and Creek Bend Road will be via Creek Bend Road to St. Anne's Road. MI has provided expected trips that will be diverted to the St. Anne's Road / Creek Bend Road intersection as a result of this change. As part of this work, it is anticipated that MI will also be constructing a new westbound right-turn storage lane from Creek Bend Road onto St. Anne's Road and also a 2.5 metre paved shoulder along southbound St. Anne's Road for a distance of 120 metres centered on the Creek Bend Road intersection. This design is not yet finalized and is still subject to change. These proposed traffic changes are incorporated into this study analysis.

- In the medium term, Aimes Road is planned to also be extended easterly across the Canadian Pacific Railway - Emerson Subdivision tracks to connect with Melnick Road and provide continuous "service road" access along PTH 100 between St. Anne's Road and Lagimodiere Boulevard. There is not yet a timeline for the construction of this improvement and the traffic impacts from this are not incorporated into this study.

- In the longer term, MI has plans to construct a grade-separated interchange at St. Anne's Road and PTH 100 and twin St. Anne's Road north of PTH 100 (see Figure 2). There is not yet a timeline or funding in place for the construction of these improvements and the traffic impacts from this are not incorporated into this study.

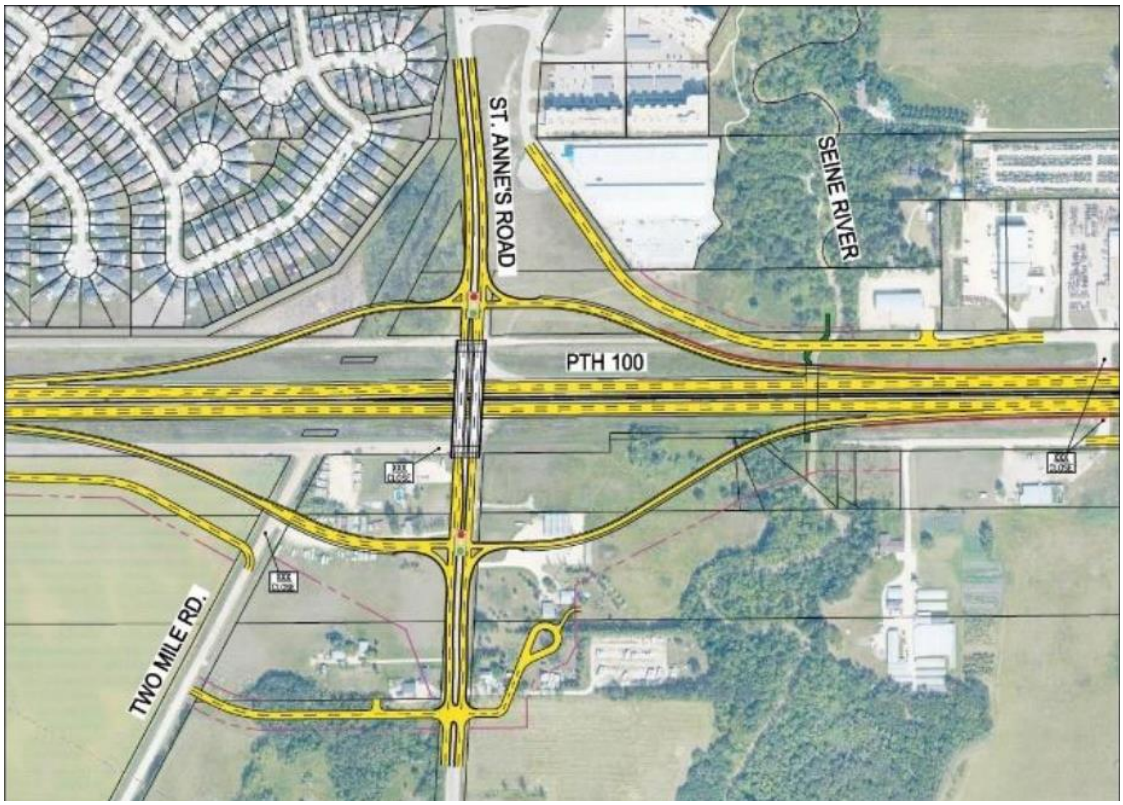

Figure 2: Manitoba Infrastructure Interchange for St. Anne's Road and PTH 100
Image Source: South Perimeter Design Study (WSP, 2020)

CURRENT TRAFFIC CHARACTERISTICS

St. Anne's Road is a Regional Street, Full Time Truck Route and Snow Route. St. Anne's Road, from PTH 100 to a point 215 metres north of Creek Bend Road, is a two-lane undivided graveled shoulder roadway with a posted speed limit of 70 km/h and experiences an average daily traffic (ADT) volume of approximately 13,100 vehicles. St. Anne's Road, from a point 215 metres north of Creek Bend Road to St. Mary's Road, is a four-lane divided roadway with a posted speed limit of 60 km/h. Pedestrian facilities include a sidewalk on the east side of St. Anne's Road that extends north from Creek Bend Road.

Creek Bend Road is a two-lane undivided non-Regional local street with a 50 km/h speed limit and provides access to rural and multi-family residential properties. Pedestrian facilities include a sidewalk on the north side of Creek Bend Road to a point approximately 63 metres east of St. Anne's Road. The intersection of St. Anne's Road and Creek Bend Road is a three-legged intersection that operates with stop control on the minor approach and free flow traffic on St. Anne's Road.

COLLISION ANALYSIS

In the five-year period between 2015 - 2019, three collisions occurred at the intersection of St. Anne's Road and Creek Bend Road. There was one injury collision that occurred when a southbound vehicle rear-ended another southbound vehicle that was waiting to turn left.

Due to the upcoming changes described previously (increased development and extension of the service road), the historical collision data may not be predictive of future safety performance.

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. This traffic signal warrant was assessed using a recent count (October 2021) and also incorporating the estimated impacts of the development at 180 Creek Bend Road as well as the modification to the Aimes Road access to PTH 100. The conflicting intersection volumes produced a signal warrant of 86, which is below the 100 point threshold. The average cross street volume on Creek Bend Road is 38 vehicles per hour (excluding right turns) over a six hour period, which is well below the 75 vehicles per hour threshold. Traffic signals are not warranted at this intersection.

TRAFFIC ANALYSIS

The purpose of this traffic study is to review possible new safety measures and methods to mitigate increased traffic flows on St. Anne's Road between Aldgate Road and PTH 100. The only major intersection on this segment and primary focus of the study is the intersection of St. Anne's Road and Creek Bend Road. The intersection of St. Anne's Road and PTH 100 is under the road authority of MI, not the City of Winnipeg.

A traffic operations analysis was completed for the intersection using the traffic analysis program Synchro 10 during the AM and PM peak periods. The traffic analysis results report the volume to capacity (v/c) ratio, amount of delay (in seconds), and level of service (LOS) based on average delay per vehicle. Two scenarios were assessed:

- **Near-term mitigation.** This includes the anticipated modifications as part of the South Perimeter Highway improvements with the extension of the Aimes Service Road connection to Creek Bend Road. These proposed modifications are a new westbound right-turn storage lane from Creek Bend Road onto St. Anne's Road and also a 2.5 metre paved shoulder along southbound St. Anne's Road for a distance of 120 metres centered on the Creek Bend Road intersection. This design is not yet finalized and is still subject to change.

  Long-term mitigation. MI has longer-term plans to construct a grade-separated interchange at St. Anne's Road and PTH 100 and twin St. Anne's Road from PTH 100 to Creek Bend Road. This would then leave a short, undivided segment of St. Anne's Road between Creek Bend Road and Aldgate Road, which would be undesirable. The proposed countermeasure to divide this short segment of St. Anne's Road would address both the existing and long-term safety concerns at Creek Bend Road by providing a consistent divided cross-section. This allows southbound traffic on St. Anne's Road to flow freely around left-turning vehicles and the median allows motorists to complete a westbound left-turn maneuver in two-stages which provides more safe gap opportunities.

The results for each scenario in terms of the volume to capacity ratio (v/c), delay, and level of service (LOS, rated from A - F) are provided in Table 1. The modelling was completed using the October 2021 traffic count and adding the expected traffic from the 180 Creek Bend Road development and the effect of diverted trips from the Aimes Road extension.

Table 1: Intersection Operation Analysis Results

Scenario	Evaluation Measure	Intersection Movement				
		Overall	WBL	SBT	SBL	NBT/NBR
AM Peak Period						
Traffic Volumes			40	497	497	633
Near-term mitigation	v/c Delay (s) LOS	- 3.2 A	0.28 38 E	0.08 2.1 A	- - -	0.40 0 A
Long-term mitigation	v/c Delay (s) LOS	- 2.3 A	0.15 20 C	0.32 0 A	0.08 9 A	0.40 0 A
PM Peak Period						
Traffic Volumes			44	685	99	936
Near-term mitigation	v/c Delay (s) LOS	- 7.1 A	0.81 178 F	0.16 4.2 A	- - -	0.6 0 A

Long-term mitigation	v/c Delay (s) LOS	- 2.4 A	0.27 32 D	0.44 0 A	0.16 11 B	0.60 0 A

The addition of the southbound left-turn storage lane and median provides notable improvements and is the desirable long-term solution. The attached Preliminary Drawing *Ref-04* shows the southbound left-turn storage lane and median. For the longer-term roadway improvements, a Class 5 cost to construct the extension of the median and a southbound left-turn lane at the intersection of St. Anne's Road and Creek Bend Road is $3,000,000. A Class 5 cost estimate is a conceptual-level, rough order of magnitude estimate. A higher-order cost estimate will be developed as the sidewalk design is finalized. A Business Case submission will be prepared for this work so that this project can be ranked against other capital projects and city-wide priorities in future years capital project programming. The recommended timeline for the construction of the longer-term improvements depends on the pace of development in the area.

SPEED LIMIT REVIEW

Speed Limit By-law 63/2019 currently defines the speed limit on St. Anne's Road as 60 km/h between the southern boundary of St. Mary's Road and 350 metres south of the southern boundary of Aldgate Road (which is just north of Creek Bend Road). The portion of St. Anne's Road beyond that to the south is posted as 70 km/h.

The Winnipeg Public Service has adopted the *Manitoba Infrastructure Guide for Setting Posted Speed Limits on Manitoba Roadways* (2019) engineering speed limit study as the framework, with minor modifications, to evaluate and recommend posted speed limits. Guidance states that unexpected changes in speed limit should be avoided and that the length of any particular individual speed limit zone should typically be set as long as possible.

The majority of traffic on St. Anne's Road turns onto PTH 100 and is not through traffic on St. Anne's Road south of the PTH 100. It is not desirable to have a short segment (400 metres) of St. Anne's Road north of PTH 100 have a unique speed limit. It is recommended that the speed limit on St. Anne's Road north of PTH 100 be consistently regulated at 60 km/h. These limits are illustrated in Figure 3, below.

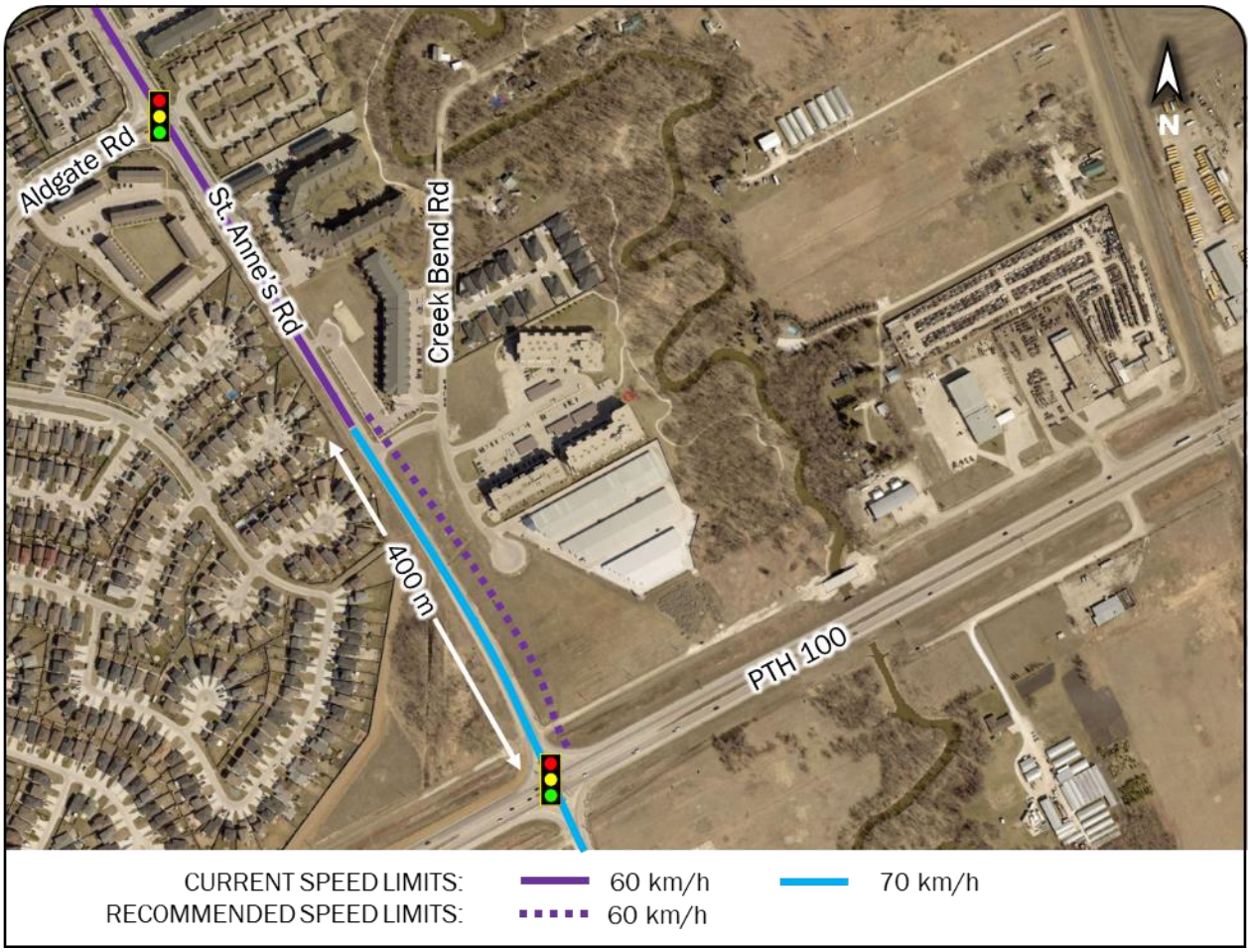

Figure 3: St. Anne's Road Speed Limits

It is recommended that Schedule A of Speed Limit By-Law 63/2019 be amended. If approved, the following will be deleted from the table in the schedule:

Street	From	To	Speed Limit (km/h)
St. Anne's Road also known as Route 150	Southern boundary of St. Mary's Road	350 m South of the southern boundary of Aldgate Road	60

The following will then be added to the table in the schedule:

Street	From	To	Speed Limit (km/h)
St. Anne's Road also known as Route 150	Southern boundary of St. Mary's Road	Centre line of P.T.H. No. 100	60
St. Anne's Road also known as Route 150	Centre line of P.T.H. No. 100	Southern boundary of Four Mile Road	70

FINANCIAL IMPACT

Financial Impact Statement

Date: February 16, 2022

Project Name:

Traffic Study – St. Anne's Road south of Aldgate Road

First Year of Program

2022

	2022	2023	2024	2025	2026
Capital					
Capital Expenditures Required					
Less: Existing Budgeted Costs					
Additional Capital Budget Required	$ -	$ -	$ -	$ -	$ -
Funding Sources:					
Debt - Internal					
Debt - External					
Grants (Enter Description Here)					
Reserves, Equity, Surplus					
Other - Enter Description Here					
Total Funding	$ -	$ -	$ -	$ -	$ -
Total Additional Capital Budget Required	$ -				
Total Additional Debt Required	$ -				
Current Expenditures/Revenues					
Direct Costs	$ 700				
Less: Incremental Revenue/Recovery					
Net Cost/(Benefit)	$ 700	$ -	$ -	$ -	$ -
Less: Existing Budget Amounts	700				
Net Budget Adjustment Required	$ -	$ -	$ -	$ -	$ -

Additional Comments: Direct costs represent the cost to update signage to reflect the change in speed limit. The existing Public Works Traffic Services operating budget will facilitate these costs.

"signed by J. Ruby, CPA, CA"
J. Ruby CPA, CA
Manager of Finance & Administration

CONSULTATION

This Report has been prepared in consultation with:

- Legal Services, as to Speed Limit By-law issues

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: February 16, 2022

Attachments: Ref-04 St. Anne's Road Proposed 4 Lanes with Left Turn Lane