Minute No. 492
Report – Standing Policy Committee on Infrastructure Renewal and Public Works – July 7, 2020

Item No. 2 Speed Limit Review: Process and Residential Speed Limits

COUNCIL DECISION:

Council concurred in the recommendation of the Executive Policy Committee, as amended, and adopted the following:

1. That the new Technical Guideline Practice for Speed Limit Reviews (Appendix B) be received as information.

2. That the updated Technical Guideline Practice for Speed Limit Signing (Appendix C) be received as information.

3. That Council request the Province of Manitoba to amend Regulation 30/2019 to reduce the amount of signage necessary to designate reduced speed zones or areas within Winnipeg.

4. That the funding to assign a consultant to report on lowering the default speed limit on residential streets, be referred to the 2021 Budget Review Process, and that the Winnipeg Public Service be authorized to assign the consultant if funding is approved.

5. That the Winnipeg Public Service conduct a trial of 30 km/h speed limits on a limited number of existing neighbourhood greenways proposed in the report, and in addition, consult with Councillors to determine one street in each ward to conduct a trial of either 30km/h or 40km/h speed limits, using surplus funds from the 2017 local street renewal budget and that a new capital budget page be created for this project.

6. That the Winnipeg Public Service and the Office of Public Engagement work with Councillors to prepare information for the Speed Limit Review consultation process.

7. That in the event that provincial regulations allow for gateway signage, the Winnipeg Public Service be directed to report back to the Standing Committee on local area pilots in addition to specific streets.

8. That prior to the implementation of the neighbourhood greenways, the Winnipeg Public Service be directed to conduct public consultation on the proposed greenways, and any traffic calming measures that are planned for the greenways, in the neighbourhoods where the greenway is proposed.

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COUNCIL DECISION (continued):

9. That prior to the implementation of the greenway the area Councillor approval is required.

10. That the Winnipeg Public Service be directed to provide quarterly written reports on the matter to the Standing Policy Committee on Infrastructure Renewal and Public Works.

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

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DECISION MAKING HISTORY:

Moved by Councillor Allard,
That the recommendation of the Executive Policy Committee be adopted.

In amendment,
Moved by Councillor Allard,
Seconded by Councillor Rollins,

BE IT RESOLVED THAT Recommendation 5 of Item 2 of the Report of the Standing Policy Committee on Infrastructure Renewal and Public Works dated July 7, 2020, be amended by deleting "funding from within existing resources", and replacing with "surplus funds from the 2017 local street renewal budget".

In amendment,
Moved by Councillor Allard,
Seconded by Councillor Gillingham,

BE IT RESOLVED that Motion 9 be amend by adding the following to the end of the resolve "and that a new capital budget page be created for this project"

The motion moved by Councillor Allard and Seconded by Councillor Gillingham was put and declared carried.

Councillors Nason asked to be recorded as having voted against the item in accordance with Rule 47(7) of the Procedure By-law.

The motion moved by Councillor Allard and Seconded by Councillor Rollins was put and declared carried.

Councillors Klein and Nason asked to be recorded as having voted against the item in accordance with Rule 47(7) of the Procedure By-law.

The motion for the adoption of the item as amended by the above motions was put.

Councillor Allard called for the yeas and nays, which were as follows:

Report – Standing Policy Committee on Infrastructure Renewal and Public Works – July 7, 2020

DECISION MAKING HISTORY:

Yea: His Worship Mayor Bowman, Councillors Allard, Chambers, Eadie, Gillingham, Gilroy, Lukes, Mayes, Orlikow, Rollins, Santos, Schreyer and Sharma. 13

Nay: Councillors Browaty, Klein and Nason. 3

and the motion for adoption of the item as amended was declared carried.

EXECUTIVE POLICY COMMITTEE RECOMMENDATION:

On July 15, 2020, the Executive Policy Committee concurred in the recommendation of the Standing Policy Committee on Infrastructure Renewal and Public Works, with the following amendment:

- In Recommendation 5, delete "the 2019 Public Works Closed Capital Projects" and replace with "within existing resources"

and submitted the matter to Council.

STANDING COMMITTEE RECOMMENDATION:

On July 7, 2020, the Standing Policy Committee on Infrastructure Renewal and Public Works concurred in the recommendation of the Winnipeg Public Service, with the following amendments:

- Delete Recommendations 4 and 5 in their entirety and replace with the following:

  "4. That the funding to assign a consultant to report on lowering the default speed limit on residential streets, be referred to the 2021 Budget Review Process, and that the Winnipeg Public Service be authorized to assign the consultant if funding is approved.

  5. That the Winnipeg Public Service conduct a trial of 30 km/h speed limits on a limited number of existing neighbourhood greenways proposed in the report, and in addition, consult with Councillors to determine one street in each ward to conduct a trial of either 30km/h or 40km/h speed limits, using funding from the 2019 Public Works Closed Capital Projects."

- Add the following new recommendations, and renumber the remaining accordingly:

Report – Standing Policy Committee on Infrastructure Renewal and Public Works – July 7, 2020

DECISION MAKING HISTORY (continued):

STANDING COMMITTEE RECOMMENDATION (continued):

6. That the Winnipeg Public Service and the Office of Public Engagement work with Councillors to prepare information for the Speed Limit Review consultation process.

7. That in the event that provincial regulations allow for gateway signage, the Winnipeg Public Service be directed to report back to the Standing Committee on local area pilots in addition to specific streets.

8. That prior to the implementation of the neighbourhood greenways, the Winnipeg Public Service be directed to conduct public consultation on the proposed greenways, and any traffic calming measures that are planned for the greenways, in the neighbourhoods where the greenway is proposed.

9. That prior to the implementation of the greenway the area Councillor approval is required.

10. That the Winnipeg Public Service be directed to provide quarterly written reports on the matter to the Standing Policy Committee on Infrastructure Renewal and Public Works."

and submitted the matter to the Executive Policy Committee and Council.

The following persons submitted communications:

- John Anderson submitted a communication dated July 6, 2020 with respect to the matter
- David Grant submitted a communication dated July 6, 2020, in opposition to the matter
- Councillor Lukes, Waverley West Ward, submitted a communication with respect to the matter
- Michel Durand-Wood submitted a communication in support of the matter
- Sarah Phillips submitted a communication in support of the matter
- Anders Swanson submitted a communication in support of the matter

On June 9, 2020, the Standing Policy Committee on Infrastructure Renewal and Public Works granted a further extension of time of 30 days for the Winnipeg Public Service to report back on the matter.

Report – Standing Policy Committee on Infrastructure Renewal and Public Works – July 7, 2020

DECISION MAKING HISTORY (continued):

STANDING COMMITTEE RECOMMENDATION (continued):
On March 3, 2020, the Standing Policy Committee on Infrastructure Renewal and Public Works granted a further extension of time to its June 2, 2020 meeting for the Winnipeg Public Service to report back on the matter.

On January 7, 2020, the Standing Policy Committee on Infrastructure Renewal and Public Works granted a further extension of time of 60 days for the Winnipeg Public Service to report back on the matter.

On November 4, 2019, the Standing Policy Committee on Infrastructure Renewal and Public Works granted an extension of time to its January 7, 2020 meeting for the Winnipeg Public Service to report back on the matter

COUNCIL DECISION:

On June 25, 2019, Council concurred in the recommendation of the Standing Policy Committee on Infrastructure Renewal and Public Works, as amended by the Executive Policy Committee, and adopted the following:

1. That a Speed Limit By-law (draft By-law attached), which also replaces the Back Lane Speed By-law No. 2118/78, be enacted with an effective date of September 1, 2019.

2. That the Director of Legal Services and City Solicitor be authorized to submit directly to Council for enactment proposed Speed Limit By-law amendments that will have the effect of maintaining the speed limits that were posted or otherwise existed on March 1, 2019 within the City.

3. That the Winnipeg Public Service be directed to report back to the Standing Policy Committee on Infrastructure Renewal and Public Works within 90 days with a procedure for implementing speed limit reviews and requests, including an analysis of a city-wide speed limit reduction on residential streets.

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

ADMINISTRATIVE REPORT

Title: Speed Limit Review: Process and Residential Speed Limits

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	L. Pablo, Acting Interim CFO	M. Ruta, Interim CAO

EXECUTIVE SUMMARY

According to the Highway Traffic Act, the speed limits on residential streets within the City of Winnipeg are fixed at 50 km/h. This limit does not always reflect a reasonable safe maximum speed; however, Winnipeg has previously not been able to recommend a reduced posted speed.

When the Traffic and Transportation Modernization Act took effect on March 1, 2019, Winnipeg was granted the authority to modify both individual streets' speed limits as well as the default speed limits within city limits.

A new Speed Limit By-Law (63/2019) was approved by Council in late 2019 to ensure continuity of modified speed limits already in effect (with some minor changes); it describes all portions of highway within the City of Winnipeg where the speed limit had previously been modified from 50 km/h. A separate process for requesting, responding to, and implementing additional speed limit modifications is required and was noted in the literature surrounding the bylaw as forthcoming.

This report recommends such a process, as well as a number of ancillary processes and required documentation to ensure any and all future speed limit changes are made based on best practices and analytical engineering data, and with the best interests of the public in mind. It also acknowledges the trend among other major cities and desire among numerous members of Council to implement speeds of less than 50 km/h on all residential streets in the city, and examines the challenges with implementing such a change in current conditions.

Most notable of these challenges is that, while the City has authority to implement a blanket speed limit reduction, the Traffic Authority Speed Limits Regulation 30/2019 of the Highway Traffic Act clearly requires a fixed speed limit of less than 50 km/h to be signed on every affected street at each of the following locations: (a) the point where the speed limit begins; (b) after each intersection with a roadway other than a back lane, as close as practicable to that intersection.

The Public Service is recommending that Council request the Province to amend this regulation; without an amendment, reducing residential speeds city-wide would result in thousands of signs

being added to the residential streetscape – an undertaking which presents both financial and esthetic concerns.

As a result, the Public Service is also recommending that a consultant be engaged to conduct a thorough review of the overall impacts of such a change. The study, which could take place concurrently to discussions with the Province, would include: a jurisdictional scan; confirming potential speed limit scenarios (looking at the impacts of both 30 km/h and 40 km/h); reviewing the existing street classification system; and undertaking public engagement to involve the public in decision-making.

This study would run concurrent to a proposed trial of 30 km/h zones along five existing neighbourhood greenways; a future recommendation on a residential speed limit change would be formed as a combination of the results of discussions with the Province, the consultant study, and the pilot project.

There is no approved budget identified to complete the consultant report per Recommendation 4. The consultant report is currently estimated to cost hundreds of thousands of dollars, which would be funded through an increase to the Traffic Engineering Improvement Program, which will be referred to the 2021 budget process. The Public Service will not proceed with this study until a revised cost estimate is obtained and an approved budget source is allocated to this study.

The trial of 30 km/h speed limits is estimated to cost between $250,000 and $300,000. This work will be completed in phases based on the available approved budget within the Pedestrian Cycling Program annual budget. The approved 2020 Capital Budget includes $150,000 allocated to Neighbourhood Greenways. Costs incurred in 2020 will be managed within the approved 2020 program budget.

RECOMMENDATIONS

1. That the new Technical Guideline Practice for Speed Limit Reviews (Appendix B) be received as information.

2. That the updated Technical Guideline Practice for Speed Limit Signing (Appendix C) be received as information.

3. That Council request the Province of Manitoba to amend Regulation 30/2019 to reduce the amount of signage necessary to designate reduced speed zones or areas within Winnipeg.

4. That, the Public Service be authorized to assign a consultant to report on lowering the default speed limit on residential streets, and approved funding for the assignment be referred to the 2021 budget process.

5. That the Public Service conduct a trial of 30 km/h speed limits on a limited number of existing neighbourhood greenways using approved budget within the Pedestrian Cycling Program.

6. 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 July 18, 2019, Council directed *the Winnipeg Public Service to report back to the Standing Policy Committee on Infrastructure Renewal and Public Works within 90 days with a procedure for implementing speed limit reviews and requests, including an analysis of a city-wide speed limit reduction on residential streets.*

Subsequent extensions to report back were granted.

IMPLICATIONS OF THE RECOMMENDATIONS

The following implications are noted:

1. The Public Service would be required to find a funding source (in the hundreds of thousands of dollars) for the consulting assignment to explore reducing residential speed limits; funding for this assignment does not exist in Public Works' existing budget. The Public Service will not proceed with this study until a revised cost estimate is obtained and an approved budget source is allocated to this work. If an alternate funding source is not identified in the 2021 budget process, the department would reallocate existing funding from the Traffic Engineering Improvements Program.
2. A trial of 30 km/h speed limits would be conducted on five neighbourhood greenway streets. The estimated costs are $250,000-$300,000 which would be funded by the Pedestrian Cycling Program capital budget. The approved 2020 Capital Budget includes $150,000 allocated to Neighbourhood Greenways. Costs incurred in 2020 will be managed within the approved 2020 program budget. 2021 to 2025 approved Capital Forecast for the Pedestrian and Cycling Program totalled $980,000.

HISTORY/DISCUSSION

BACKGROUND

Speed limits on all roadways within Manitoba have historically been universally defined (without room for local interpretation or adjustment) by the Highway Traffic Act, which lists Winnipeg as a restricted speed zone wherein the speed for residential areas is fixed at 50 km/h regardless of whether the default reflects the reasonable safe maximum speed.

Even where road conditions, physical characteristics, traffic mix, or land use conditions indicate a lower speed limit would be more appropriate, the Public Service has not been able to recommend a reduced posted speed limit.

This limitation was removed in early 2019 with the enactment of the Traffic and Transportation Modernization Act (TTMA), which replaced various acts and regulations and significantly changed how traffic and transportation are regulated in Manitoba. Perhaps most notably, the TTMA shifted the responsibility for approving recommendations to change speed limits from the Highway Traffic Board to an authority delegated by individual municipalities. Winnipeg's City

Organization By-Law 7111/97 grants this authority to the Standing Policy Committee on Infrastructure Renewal and Public Works (SPCIRPW).

A new Speed Limit By-Law (63/2019) was approved by Council in late 2019 to ensure continuity of modified speed limits already in effect (with some minor changes); it describes all portions of highway within the City of Winnipeg where the speed limit had previously been modified from 50 km/h. A separate process for requesting, responding to, and implementing additional speed limit modifications is required and was noted in the literature surrounding the bylaw as forthcoming.

This report recommends such a process, as well as a number of ancillary processes and required documentation to ensure any and all future speed limit changes are made based on best practices and analytical engineering data, and with the best interests of the public in mind. It also acknowledges the trend among other major cities and desire among numerous members of Council to implement speeds of less than 50 km/h on all residential streets in the city, and examines the challenges with implementing such a change in current conditions.

As such, the report addresses four main topics:

1. An updated speed limit change request and review procedure.
2. An updated Technical Guideline Practice for speed limit signage.
3. The required review and associated tasks to evaluate a city-wide speed limit reduction on residential streets.
4. A trial of 30 km/h speed limits on five residential neighbourhood greenway streets.

1. SPEED LIMIT CHANGE REQUEST AND REVIEW PROCEDURE:

Traffic authorities undertake the critical task of speed management in order to balance the safety and mobility needs of all road users. While 50 km/h is the default speed for all roadways within Winnipeg, the default may not always reflect the reasonable safe maximum speed of a specific roadway section; roadway function and conditions, physical characteristics, traffic mix, and land use conditions may make a higher or lower speed limit more appropriate.

The following outlines the recommended process, as well as the projected study output under the new process and known challenges/risks.

Current Speed Limit Request and Review Process:

Winnipeg's current practice handles speed limit change requests and speed limit setting proposals as follows: a request comes in to the Public Service (primarily via 311, as part of development agreements or land use applications, or through an area Councillor or community committee disposition); the Public Service conducts a review and makes a recommendation for an appropriate speed limit based on set criteria (included as Appendix A); the report is presented to SPC-IRPW for approval.

The current criterion recommends a speed limit primarily based on the 85th percentile speed of traffic on the street. This is the speed, identified through a speed study, at which or below 85% of drivers travel. This criterion assumes 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.

While the Public Service has also taken into account the Transportation Association of Canada's *Canadian Guidelines for Establishing Posted Speed Limits* (TAC), the former Highway Traffic Board more heavily weighted the results of the 85th percentile observations. In light of the City now acting as its own authority on speed limit setting requirements, the Public Service would like to see it focus more on the TAC document, which is a risk-based assessment that considers elements such as roadway geometry, pedestrian and cyclist exposure, roadside hazards, and number of intersections (public roads and private approaches).

Proposed Speed Limit Change Request and Review Process:

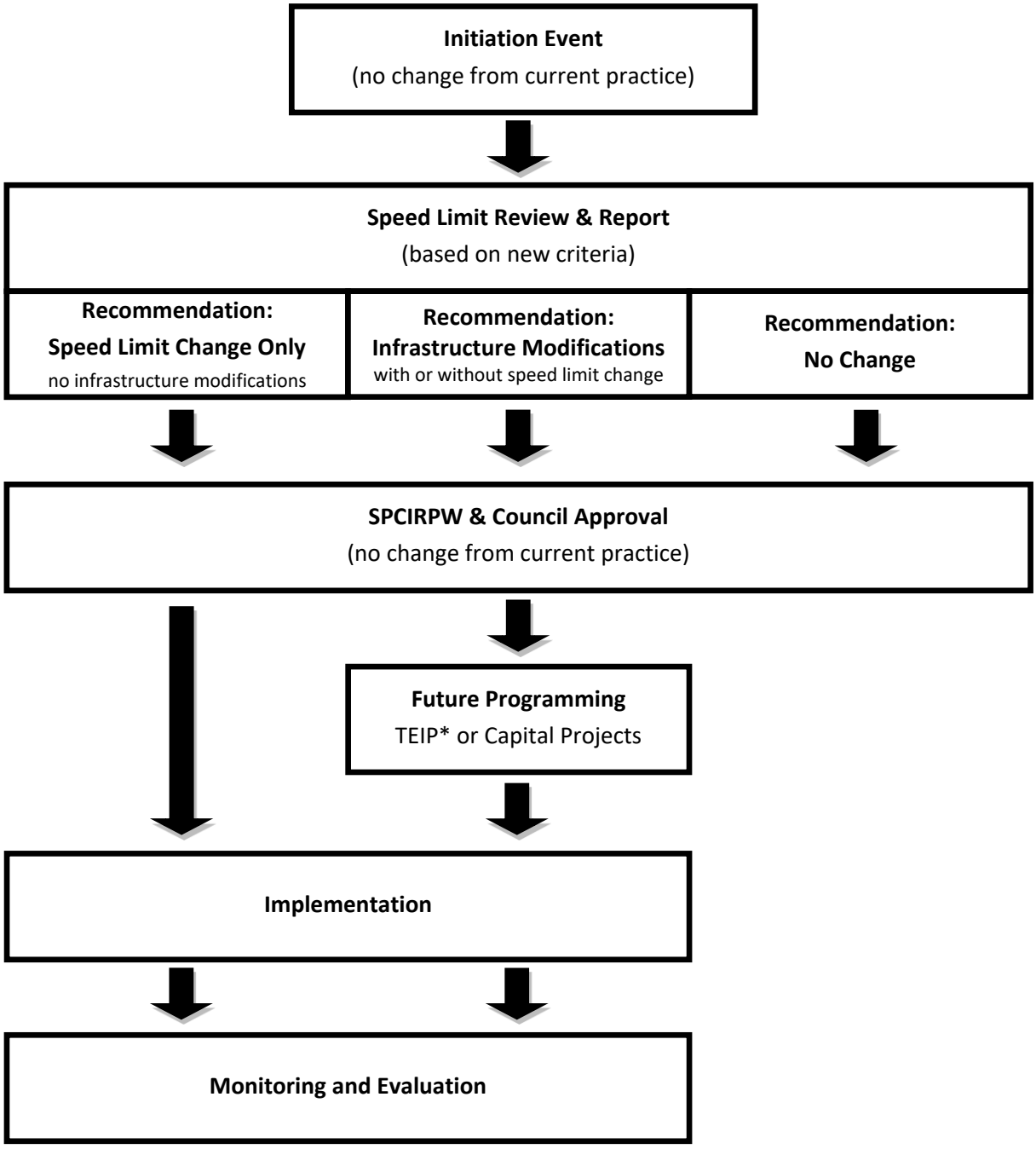
Recognizing that vehicle speeds have considerable influence on road safety and mobility for all road users, it is important to make speed limit recommendations based on a systematic, consistent, and scalable framework that is rooted in data and best practice.

While the 85th percentile speed has historically be used to set speed limits, transportation professionals have begun to rely more on additional environmental factors to recommend speed limits that consider the safety all road users. In keeping with this, the Public Service has created a new proposed Technical Guideline Practice for Speed Limit Reviews (included as Appendix B) that is based on two key guiding documents:

- **Transportation Association of Canada - *Canadian Guidelines for Establishing Posted Speed Limits* (2009).** This provides a risk-based evaluation tool that considers elements such as roadway geometry, pedestrian & cyclist exposure, roadside hazards, and number of intersections with public roads and private approaches to determine the appropriate speed limit (called target speed) for a roadway.
- **Government of Manitoba - *Manitoba Infrastructure Guide for Setting Posted Speed Limits on Manitoba Roadways* (2019).** The guide provides a step-by-step procedure for conducting an engineering speed limit study that considers vehicle operating speeds, the appropriate target speed of the roadway, collision history, and traffic calming countermeasures which should be considered.

The new Technical Guideline Practice for Speed Limit Reviews (Appendix B) forms a primary component of the proposed speed limit review process. The steps included in the speed limit request and review process are illustrated in Figure 1 and described on the following pages.

Figure 1: Proposed Speed Limit Request and Review Process



- TEIP – Traffic Engineering Improvements Program

Initiation Event: The speed limit review process may be initiated by the following:

- Requests from 311 submissions, Committee directives, or Council inquiries.
- Roadway sections identified by the Public Service as a result of new roadways, substantial changes to the roadside environment (signals timing, construction projects, development projects), or safety concerns identified as part of the annual monitoring program.
- Roadway sections for which speeding infractions are routinely identified by law enforcement personnel.

Speed Limit Review and Report: The speed limit review will follow the procedure outlined in *Technical Guideline Practice A-2b Speed Limit Reviews*, attached as Appendix B. The speed limit review will result in one of the following recommendations:

- ***Speed limit change with no infrastructure modifications***. The review recommends that the speed limit be changed; the recommended speed limit can be implemented by installing new signage with no other infrastructure enhancements or modifications.
- ***Infrastructure modifications.*** The review recommends that infrastructure modifications are necessary. This may result from instances where either: 1) the current speed limit is appropriate but infrastructure modifications are necessary to increase motorist compliance; or 2) a change in speed limit would be beneficial but infrastructure modifications would be required to support the new speed limit.
- ***No speed limit change.*** The review recommends that there are no changes necessary to the current speed limit or infrastructure.

SPCIRPW & Council Approval: The Standing Policy Committee on Infrastructure Renewal and Public Works (SPCIRPW) is the City's Traffic Authority and is responsible for authorizing changes to speed limits. Speed limit changes are enacted by amendments to Speed Limit By-law 63/2019 and require approval of Council.

Infrastructure Enhancements: Infrastructure enhancements would require t-drawings, construction estimates, and budgeting within a future capital project or program.

Implementation: Once the bylaw has been amended, signage would be installed by the Public Service according to appropriate placement guidelines.

Monitoring and Evaluation: It is recommended that a review of traffic operations and a spot speed study be conducted approximately 2 to 12 months after the new speed limit is posted. This will help evaluate the effectiveness of the new speed limit and identify if any additional actions are necessary.

Anticipated Level of Effort:
Based on current staffing, the projected number of person hours required to complete a review according to the recommended new process (Table 1), and equipment availability (Table 2), it is anticipated the Public Service could complete approximately 150 speed studies per year[1]. Most traffic calming requests by SPCIRPW result in more than one speed study conducted; greatly escalating the total number of speed studies conducted.

Table 1: Staffing Hours for a Short Roadway Segment Review

Speed Limit Review Process	Public Works Staffing Hours		
	Speed Limit Change (No infrastructure improvements)	Infrastructure improvements required	No Speed Limit Change
Speed Limit Analysis (speed data collection, site visits, collision analysis, target speed analysis)	16	16	16
Infrastructure Modifications	---	Highly variable based on location specific needs	---
Report to SPCIRPW	13	13	13
Implementation (work orders, installation)	5	5	---
Monitoring and Evaluation	12	12	---
Totals	46 person hours	46 person hours	29 person hours

Table 2: Available Study Equipment

Sensor Type	Model	Quantity	Collection Requirements	Typical Collection Months
Pneumatic Road Tube	Jamar TRAX Mite	18	Clear pavement conditions	May, June, September, October
	Jamar TRAX Apollyon Plus II	7	Clear pavement conditions	May, June, September, October
	Total Pneumatic Tubes	**25**		***one tube needed to collect volume data, two tubes needed to collect speed data**
Microwave Radar	Jamar Black CAT II	2	None	May, June, September, October

[1] The Transportation Systems Planning (TSP) Branch currently has the capacity to conduct approximately 600 traffic studies per year. The four main types of studies are mid-block vehicle counts, intersection counts, speed studies, and active transportation counts. Approximately 25% of the traffic studies completed by the TSP Branch in 2019 were speed studies.

These tables and the projected number of studies possible to complete should be considered with four known risks/challenges:

1. Traffic studies that result from requests increase the workload on the Public Service without increasing capacity; undertaking these studies takes time away from the normal monitoring program, which was initially intended to make up a significant portion of the Traffic Management branch's workload.
2. A key component of the speed limit review is the analysis of vehicle operating speed data. The current practice of the City is to collect this data using pneumatic road tubes. Using this method, the data is typically only collected during non-winter months between May and September. This equipment is not always available as it is also needed for various other annual monitoring programs conducted by the City.
3. It is estimated that speed limit reviews could be reported on within 180 days of the completion of data collection. Based on the limitations of suitable timing for data collection, previously committed-to projects and studies, available technical staff, and the scope and complexity of the required study, the full speed limit review process could take upwards of one year.
4. The number of study requests is increasing each year, creating challenges such as:

    - The average time to fulfill requests increases and low priority requests face extreme delay;
    - Requests with upcoming deadlines compete for priority, often requiring extensions;
    - Some studies have to be outsourced, which increases program costs;
    - There is pressure to reduce the scope and size of internal studies, which could result in decisions being made with less supporting data; and
    - The size of the annual monitoring program is constrained and not expanding to meet the needs of a growing city.
5. One speed limit review request can result in the need to conduct multiple speed studies. Factors that impact the number of speed studies and amount of resources required to complete one speed limit review include:

    - **Number of lanes and directions of travel**
        - The devices used to collect speed data are generally limited to collecting data on two lanes at a time. Therefore, studying a two-lane, local road requires fewer resources than a four-lane, divided collector. The needed equipment expands greatly as the number of lanes per direction increases. For wide roadways with more than 4 lanes per direction, it becomes difficult to capture speed data for middle lanes, as speed data equipment must have one side against a curb, therefore collecting speed data for the two lanes closest to the curb, or the two lanes closest to the median.
    - **Traffic volume**
        - The accuracy of the devices used to collect speed data decreases as traffic volume increases. Consequently, additional road tubes and counting devices are required to collect accurate measurements on higher volume roads.

- **Changes to road geometry, adjacent land use, and road function**
    - Geometry, adjacent land use, and roadway function impact the operational characteristics of a roadway. As these characteristics change along a roadway, collection sites must be added to get an accurate representation of how the road operates at each point. More than a dozen collection sites may be required to make recommendations for a longer segment or corridor review of a regional roadway.
- **Ongoing monitoring requirements**
    - Findings from a speed limit review can result in speed limit changes or implementation of local improvements. These changes can necessitate another round of studies to measure the effect of the changes and this process can repeat if multiple iterations of improvements are required.

2. UPDATED TECHNICAL GUIDELINE PRACTICE FOR SPEED LIMIT SIGNAGE

The Traffic and Transportation Modernization Act (TTMA) resulted in numerous changes to the Highway Traffic Act and directly impacted *TPG A-2 Speed Limit Signage* (Appendix A). As a result, it is necessary to update this technical practice guideline (TPG) to reflect these changes. The TPG can be updated under the approval authority of the Manager of Transportation but is presented here as information and attached as Appendix C.

In addition to minor changes that reflect the new Highway Traffic Act, the following stipulations have been added to the updated TPG:

- The Maximum Speed sign must be installed on the right side of the road on undivided roadways. Additionally, signs should be dual mounted (left side and right side of the road) for divided multi-lane roadways and multi-lane one-way roadways.
- Confirmatory Maximum Speed signs could be installed downstream of major cross street intersections where the speed limit is 50 km/h but the roadway environment is often interpreted by motorists as having a higher speed limit.

3. SPEED LIMIT REDUCTION ON RESIDENTIAL STREETS

As per the TTMA, the City of Winnipeg now has the ability to modify speed limits within the city to less than 50 km/h. Numerous jurisdictions across Canada (and internationally) have been implementing 30 km/h or 40 km/h speed limits on individual roadway segments or regulating these reduced speeds as default speed limits for specific roadway classifications city-wide, and/or by neighbourhood.

At this time, the TTMA only allows for changes to be made on a street-by-street basis, rather than as a whole neighbourhood, area, or road type.

There is a strong interest from both Council and the public to investigate a city-wide speed limit reduction for Winnipeg's residential streets, as reducing speeds is proven to make streets calmer, quieter, and safer for people walking, biking, driving, and enjoying their neighbourhood. At this time, however, there are barriers to the effective implementation of such a program in Winnipeg.

Regulatory and Legal Issues

While the authority to implement a city-wide residential street speed limit reduction is given in the Highway Traffic Act, current regulations would require a highly undesirable level of signage to legally enforce the specified speed limit.

The Traffic Authority Speed Limits Regulation 30/2019 outlines the following requirements for signage for speed limits below 50 km/h.

> *"5. If a traffic authority fixes a speed limit of less than 50 km/h for a portion of highway, it must, in addition to meeting the requirements of the Act, erect a maximum speed sign on that portion of highway at each of the following locations:*
> *(a) the point where the speed limit begins;*
> *(b) after each intersection with a roadway other than a back lane, as close as practicable to that intersection."*

Due to the number of intersections in the typical residential neighbourhood, adhering to this regulation would result in an overwhelming signage requirement throughout the city. The required signage would be detrimental due to:

(1) The cost of sign installation and maintenance;
(2) Secondary road safety concerns introduced by increasing the signage drivers must pay attention to and sightline obstruction caused by the signs; and
(3) Decreased neighbourhood livability due to the visual clutter.

Figure 2 illustrates an example of signage that would be required to implement a reduced speed limit on local residential streets in a small hypothetical neighbourhood. The example has a grid network of local streets similar to many older neighbourhoods in Winnipeg. The following is a quick summary of the example:

- The hypothetical neighbourhood is approximately 0.53 km^2 (~40% the size of Wolseley).
- There are 31 intersections within/bordering the neighbourhood.
- There are 15 local/collector roads within the neighbourhood.
- It would require 66 signs to have a reduced speed limit in this neighbourhood. At a cost of approximately $370 per sign for materials and installation, this could result in a cost $24,420 for this example, not taking into account the cost of any public information and/or communications that would be required to publicize the change.



Figure 2: Example of Reduced Residential Speed Limit Signage Requirements

Extrapolating this requirement over the approximately 10,000 non-regional intersections within the City at a rate of 2.12 signs per intersection, would result in a cost of **$7.8 million** to implement across the City.

The Highway Traffic Act currently allows signage to be posted at city limits indicating the speed limit is 50 km/h and 30 km/h in back lanes unless otherwise posted. There is not currently an allowance to indicate a blanket *residential* speed limit in the same manner, nor to sign at city limits a speed limit at 30 or 40 km/h unless otherwise posted.

The Public Service instead recommends that Council request that the Province alter the regulations to allow the City to determine the speed at which the restricted speed area is posted. While this mitigates the problem of having to sign all residential roadways as 30 or 40 km/h after each intersection, it would result in the requirement to sign 50 km/h corridors (which are currently unsigned) on many arterial and commercial roadways where a new reduced default speed limit would not be desirable.

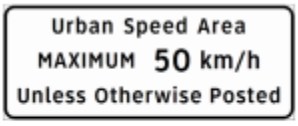
While the additional 50 km/h signs would result in a cost, it would be significantly lower than signing the reduced speed limits as per the current regulations.
The following amendments to modify the Provincial Regulations are recommended:

Speed Limits Regulation 30/2019

Current Text:
"5. If a traffic authority fixes a speed limit of less than 50 km/h for a portion of highway, it must, in addition to meeting the requirements of the Act, erect a maximum speed sign on that portion of highway at each of the following locations:
(a) the point where the speed limit begins;
(b) after each intersection with a roadway other than a back lane, as close as practicable to that intersection."

Proposed Text to Replace 5. (b):
(b) where in a geographic area that is wholly defined with a fixed speed limit of less than 50 km/h it is a sufficient compliance with subsection (a) if there are erected at each point where a highway to which clause (a) applies crosses the boundary of the defined geographic area,
(i) a sign facing traffic entering the geographic boundary, and indicating the speed limit in the geographic area is as indicated unless other posted; and
(ii) a sign facing traffic leaving the geographic boundary, and indicating that the traffic is at that point leaving the geographic area.

Traffic Control Devices Regulation 13/2019

Traffic Control Device	Description and Use
 **MR-10 (U)** 2400 mm x 900 mm	**Current Text:** This sign may be used to indicate to drivers that they are entering a restricted speed area in which the speed limit is 50 km/h unless otherwise posted. **Proposed Text:** This sign may be used to indicate to drivers they are entering a restricted speed area in which the speed limit is 50 km/h or a geographic area that a traffic authority has fixed, by by-law, as having a speed limit of less than 50 km/h. The speed limit is as indicated on the sign unless otherwise posted. The number indicating the speed limit may be varied to indicate actual fixed speed limit.

 **MR-10A (U)** 600 mm x 900 mm	**Current Text:** This sign may be used to indicate to drivers that they are entering a restricted speed area in which the speed limit is 50 km/h unless otherwise posted. **Proposed Addition:** This sign may be used to indicate to drivers they are entering a restricted speed area in which the speed limit is 50 km/h or a geographic area that a traffic authority has fixed, by by-law, as having a speed limit of less than 50 km/h. The speed limit is as indicated on the sign unless otherwise posted. The number indicating the speed limit may be varied to indicate actual fixed speed limit.

In addition to working with the Province as described above, the Public Service would review potential speed limit reduction as follows:

Residential Street Speed Limit Review

A thorough review is required to examine the impacts a residential street speed limit reduction would have throughout the City. Tasks that would be required to complete this work include:

- **Jurisdictional scan**: Jurisdictional review of how other cities both in Canada and internationally have approached a speed reduction on residential streets.
- **Confirm potential scenarios**: Confirm potential scenarios for applying reduced speed limits. Examples of potential scenarios may include:
    - Residential local streets 30 km/h; Collector Streets 50 km/h.
    - Residential local streets 30 km/h; Collector Streets 40 km/h.
    - Residential local streets 30 km/h; Collector Streets 30 km/h.
    - Residential local streets 40 km/h; Collector Streets 40 km/h.
- **Review the street classification system:** The current street classification system only defines streets as “regional” or “non-regional”. An unofficial classification of local, collector, and arterial also exists; however, there is no context classification to define roadways as residential collector versus industrial collector. A need for a new street classification system has already been identified as part of the Transportation Master Plan; this work is planned for completion in October 2020. At that time, all roadways in Winnipeg will have undergone a review and will be reclassified into the new system.
- **Analyze impacts of potential scenarios.** Analysis of potential scenarios which may include the following:
    - Expected reduction in collisions, injuries, and fatalities;
    - Anticipated actual reduction in travel speeds;
    - Impact to travel times;
    - Cost of implementation (due to necessary signage and geometric improvements);
    - Impact of consistent speeds (or lack of consistent speeds) across various roadway classifications;
    - Necessary geometric improvements or traffic calming tools to attain acceptable driver compliance;
    - Prominence of current 30 km/h school zones;
    - Traffic signal timing and coordination improvements; and
    - Increased enforcement requirements.

- **Public Engagement.** Speed limits are a contentious issue with strong opinions and beliefs from many on both sides of the issue. A comprehensive public engagement program would be required as a key input to any recommended city-wide reductions in speed limits.

It is important to note that the above tasks have been simplified to be outlined in this report; this is not a minor undertaking and would require a large human resource effort. Therefore, it is recommended that a consulting assignment be pursued. The Public Service would need to identify a funding source to support this assignment. The Public Service will not proceed with this study until a revised cost estimate is obtained and an approved budget source is allocated to this study.

4. NEIGHBOURHOOD GREENWAY 30 KM/H TRIAL

Concurrent to the Residential Street Speed Limit Review, the Public Service recommends a pilot project to trial a 30 km/h speed limit on five streets currently designated in the Pedestrian and Cycling Strategies (PCS) as neighbourhood greenways, which are ideal for trial due to their low volume, low speed and calm traffic patterns.

The trial would include the following five sections of neighbourhood greenways:

- Roch St from Poplar Ave to Arby Bay
- Eugenie Ave from St. Mary's Rd to Youville St
- Warsaw Ave / Fleet Ave from Nassau Ave to Lindsay Ave
- Machray Ave from Fife St to Main St
- Flora Ave from Sinclair St to King St

These are depicted in Appendix D, as Figures D1-D4. Note the numerous signs that would be required on each corridor as a condition of the current speed limit signage regulations. These routes were chosen to cover all four quadrants of the City while maintaining a manageable and cost effective trial process, which would be funded by the Pedestrian Cycling Program. There is $150,000 of budget allocated to Neighbourhood Greenways in the adopted 2020 Pedestrian and Cycling Program budget and a forecast amount of $180,000 in 2021. Total costs are estimated at $250,000 - $300,000 including signage, public education, surveys, geometric improvements/traffic calming, maintenance of trials. Costs incurred in 2020 will be managed within the approved 2020 program budget.

The trial process would include:

- Signing the trial routes based on requirements outlined in the TTMA as discussed above;
- Implementing physical traffic calming measures (ex. speed humps, bump outs, raised crosswalks etc.) deemed appropriate based on further study by Transportation Division;
- Traffic control adjustments, as needed;
- Pre-trial process to communicate with the public and gather baseline data;
- An ongoing monitoring program and public engagement process; and
- Reporting back to SPCIRPW.

Signage costs for each route are estimated in Table 3.

Traffic calming costs would be estimated once designs are complete and would require prioritization based upon available funding.

Table 3: Signage Cost Estimate for Trial Process

Street (Limits)	Number of Signs	Cost of Signage ($370/sign)
Roch Street (Poplar Avenue to Arby Bay)	80	$29,600
Eugenie Avenue (St. Mary's Road to Youville Street)	14	$5,180
Warsaw Avenue / Fleet Avenue (Nassau Avenue to Lindsay Avenue)	60	$22,200
Machray Avenue[2] (Fife Street to Main Street)	48	$17,760
Flora Avenue[3] (Sinclair Street to King Street)	22	$8,140
	Total Cost	$82,880

Additional Details

Additional details regarding the implementation of the modified speed limits would include, but not be limited, to the following:

Pre-Trial Study/Investigation

Prior to implementing the trial, the Public Service would study the routes to design traffic calming measures and collect baseline data including vehicular and bicycle traffic volumes and vehicular speed. The pre-trial process would also include a public communication process to inform and educate the public. This would build excitement to showcase 30 km/h and best practice neighbourhood greenways. Costs associated with the pre-trial process would be related to public communication.

Traffic control adjustments

Many intersections along these routes have stop traffic control, either two-way or four-way. These may be adjusted to best accommodate 30 km/h and promote convenient flow for bicycles.

Trial Monitoring Program

The length of the trial would be one year from the implementation date. During that time the City would monitor the operation of the neighbourhood greenway, including measuring vehicular, pedestrian, and bicycle traffic volumes, vehicular speed studies and anecdotal observation. The trial process would also include ongoing communication and public engagement (see Appendix E) to provide education and collect feedback.

[2,3] These routes include the use other streets to create complete connections. The streets that make up the gap connections will not be signed at 30 km/h to ensure clarity.

Should the monitoring process reveal average daily traffic volumes that are well beyond the 1,500 threshold, the Public Service would develop a solution, which may include traffic diversion. Costs associated with the monitoring program would be related to public communication and engagement.

Report Back
The findings of the trial process would be reported back to SPCIRPW, allowing for adequate time after the installation of the 30 km/h signage and traffic calming measures to allow for conditions to stabilize and for data to be gathered and analyzed. This could be expected to take a minimum of 365 days from the installation date.

FINANCIAL IMPACT

Financial Impact Statement **Date:** June 22, 2020

Project Name: **First Year of Program** **2020**

Speed Limit Review: Process and Residential Speed Limits

	2020	2021	2022	2023	2024
Capital					
Capital Expenditures Required	$ 150,000	$ 150,000	$ -	$ -	$ -
Less: Existing Budgeted Costs	150,000	150,000	-	-	-
Additional Capital Budget Required	$ -	$ -	$ -	$ -	$ -
Funding Sources:					
Debt - Internal	$ -	$ -	$ -	$ -	$ -
Debt - External	-	-	-	-	-
Grants (Enter Description Here)	-	-	-	-	-
Reserves, Equity, Surplus	-	-	-	-	-
Other - Cash to Capital	-		-	-	-
Total Funding	$ -	$ -	$ -	$ -	$ -
Total Additional Capital Budget Required	$ -				
Total Additional Debt Required	$ -				
Current Expenditures/Revenues					
Direct Costs	$ -	$ -	$ -	$ -	$ -
Less: Incremental Revenue/Recovery	8,500	8,500	-	-	-
Net Cost/(Benefit)	$ (8,500)	$ (8,500)	$ -	$ -	$ -
Less: Existing Budget Amounts	(8,500)	(8,500)	-	-	-
Net Budget Adjustment Required	$ -	$ -	$ -	$ -	$ -

Additional Comments: Total estimated costs of $300,000 to conduct a trial of 30 km/h speed limits on existing neighbourhood greenways will be incurred in 2020 and 2021. Existing budgeted costs represent the adopted 2020 and approved capital forecast in Pedestrian and Cycling Program (Neighbourhood Greenways). The 2020 Pedestrian and Cycling Program (Neighbourhood Greenways) includes a forecast amount of $180,000 in 2021 which will be subject to the appproval of the 2021 capital budget. Incremental Revenue/Recovery represents the estimated Departmental and Corporate overheads.

There is no approved budget identified to complete the consultant report per Recommendation 4. The consultant report is currently estimated to cost hundreds of thousands of dollars, which would be funded through an increase to the Traffic Engineering Improvement Program, which will be referred to the 2021 budget process. The Public Service will not proceed with this study until a revised cost estimate is obtained and an approved budget source is allocated to this study.

"Original signed by J. Peters, CPA, CGA"
J. Peters, CPA, CGA
Acting Manager of Finance and Administration

CONSULTATION

This Report has been prepared in consultation with: n/a

OURWINNIPEG POLICY ALIGNMENT

The recommendations of this report are aligned with the key strategic goal of a safe, efficient and equitable transportation system for people, goods and services in the Sustainable Transportation Direction Strategy that supports OurWinnipeg.

WINNIPEG CLIMATE ACTION PLAN ALIGNMENT

The recommendations of this report are intended to result in a safer pedestrian realm, which contributes to the encouragement of sustainable transportation options, as noted in Key Direction 1.4 Encourage Sustainable Transportation Options.

SUBMITTED BY

Department: Public Works
Division: Transportation
Prepared by: C. Flather, P. Eng., Traffic Management Engineer
C. Baker, RPP, Senior Active Transportation Planner
T. George, P. Eng., Transportation Planning Engineer
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K. Patmore, P. Eng., Regional Traffic Engineer
T. Jangula, CET, Traffic Analyst
Date: June 22, 2020

Attachments:
APPENDIX A: Current Speed Limit Setting Criteria

APPENDIX B: Proposed Technical Guideline Practice A-2b Speed Limit Reviews

APPENDIX C: New Technical Guideline Practice A-2a Speed Limit Signage

APPENDIX D: Neighbourhood Greenway 30 km/h Trial Locations

APPENDIX E: Communications & Engagement Brief

APPENDIX D: NEIGHBOURHOOD GREENWAY 30 KM/H TRIAL LOCATIONS

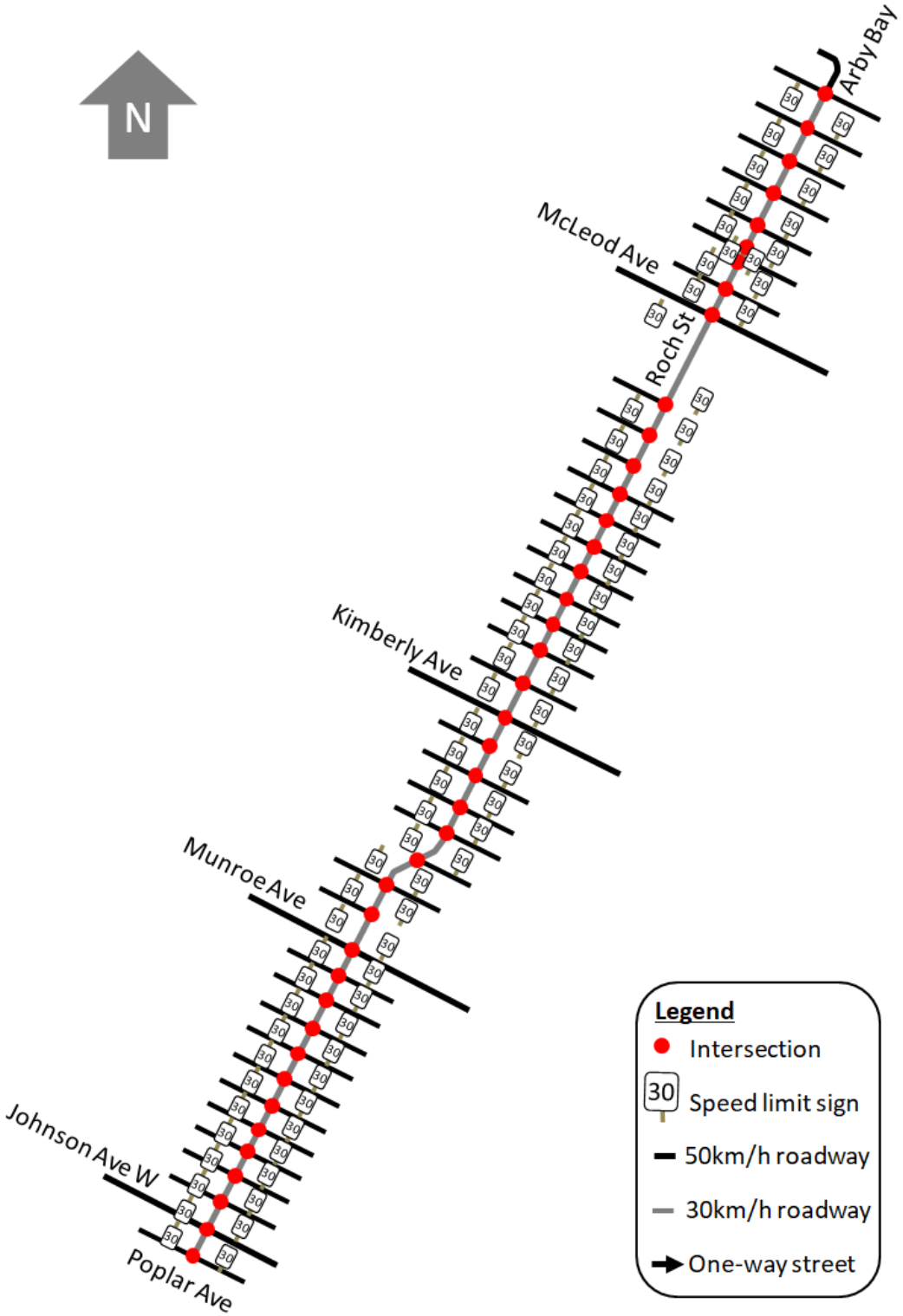

Figure D1: Proposed Signage for Roch Street Greenway Speed Trial

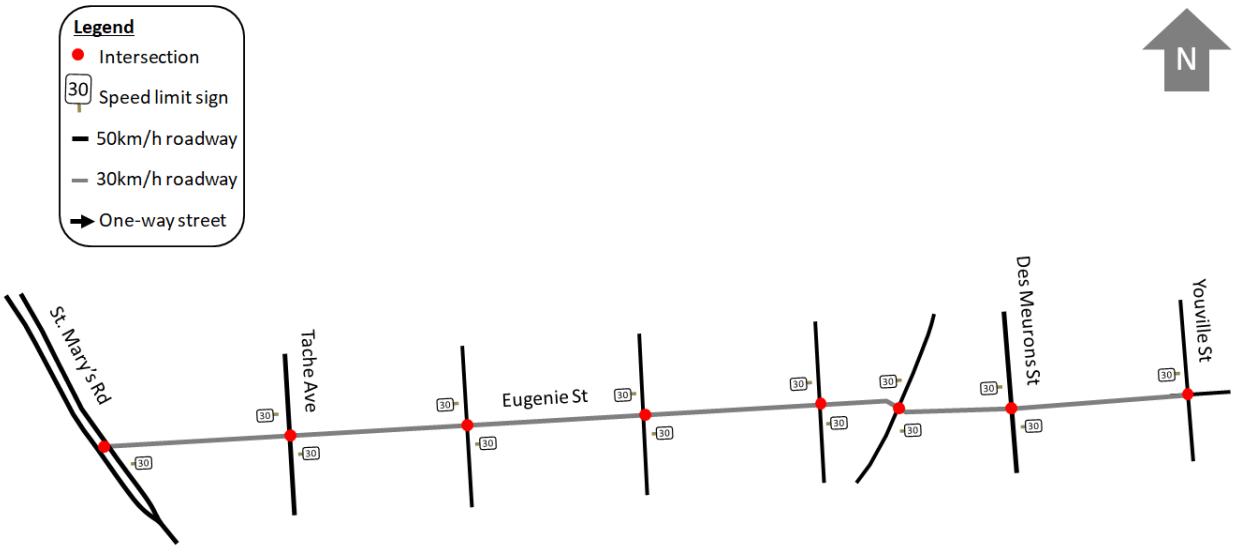

Figure D2: Proposed Signage for Eugenie Street Greenway Speed Trial

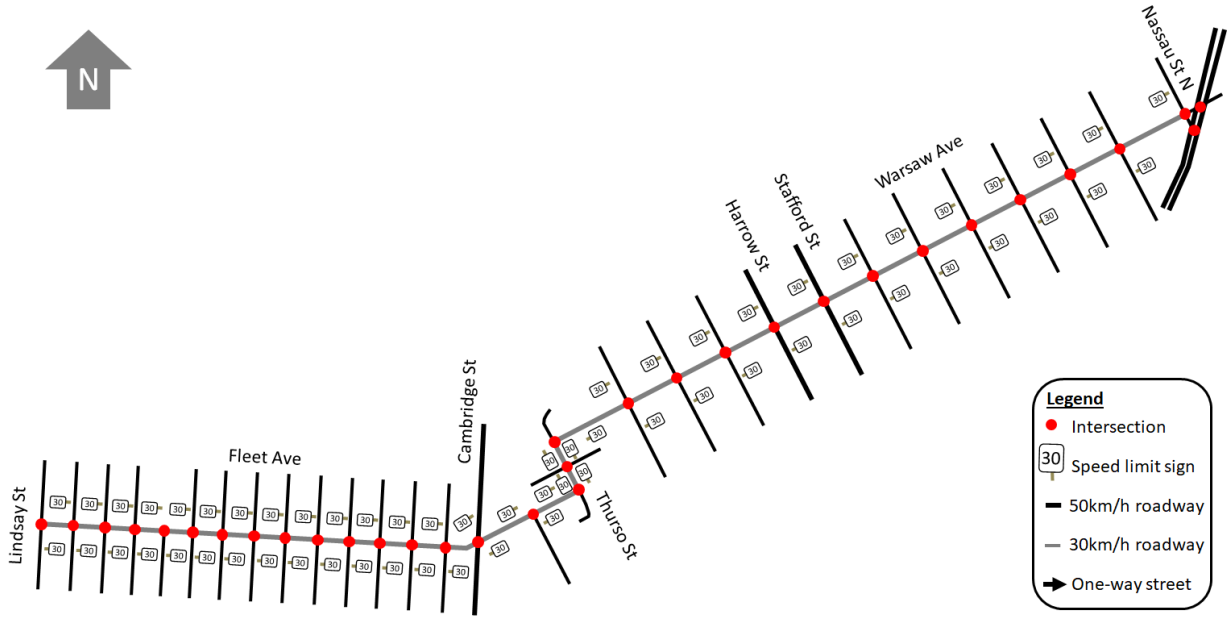

Figure D3: Proposed Signage for Fleet Avenue/Warsaw Avenue Greenway Speed Trial

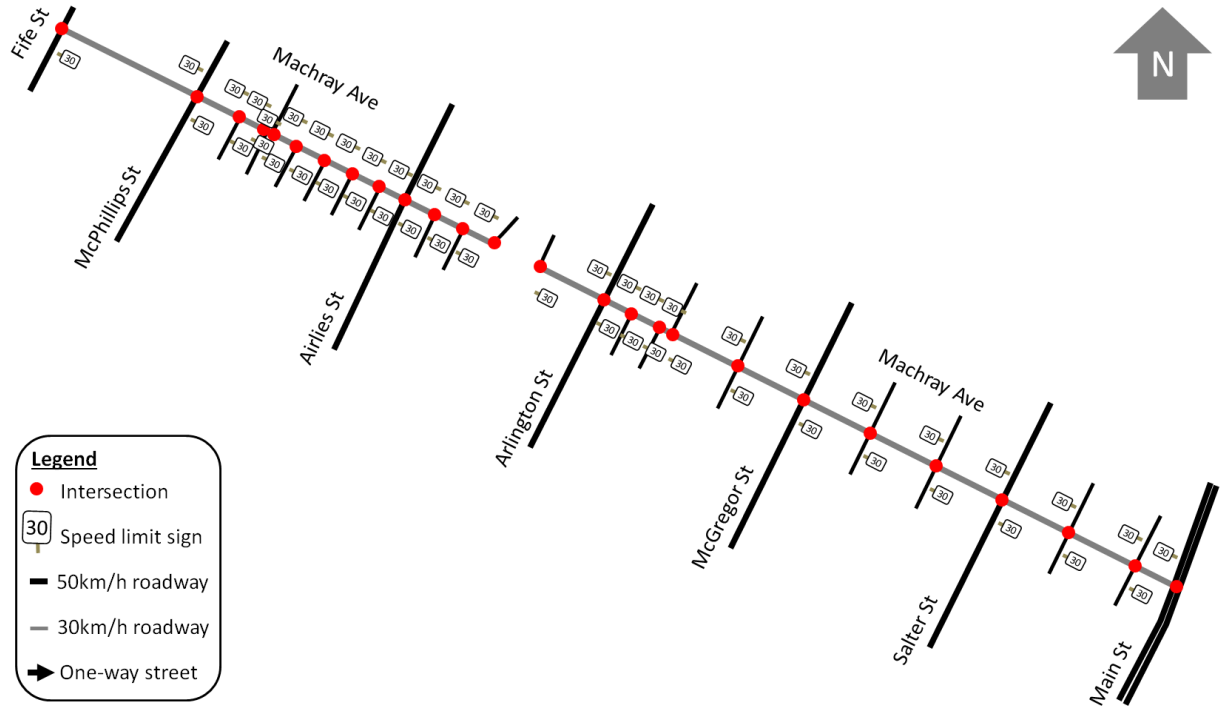

Figure D4: Proposed Signage for Machray Avenue Greenway Speed Trial

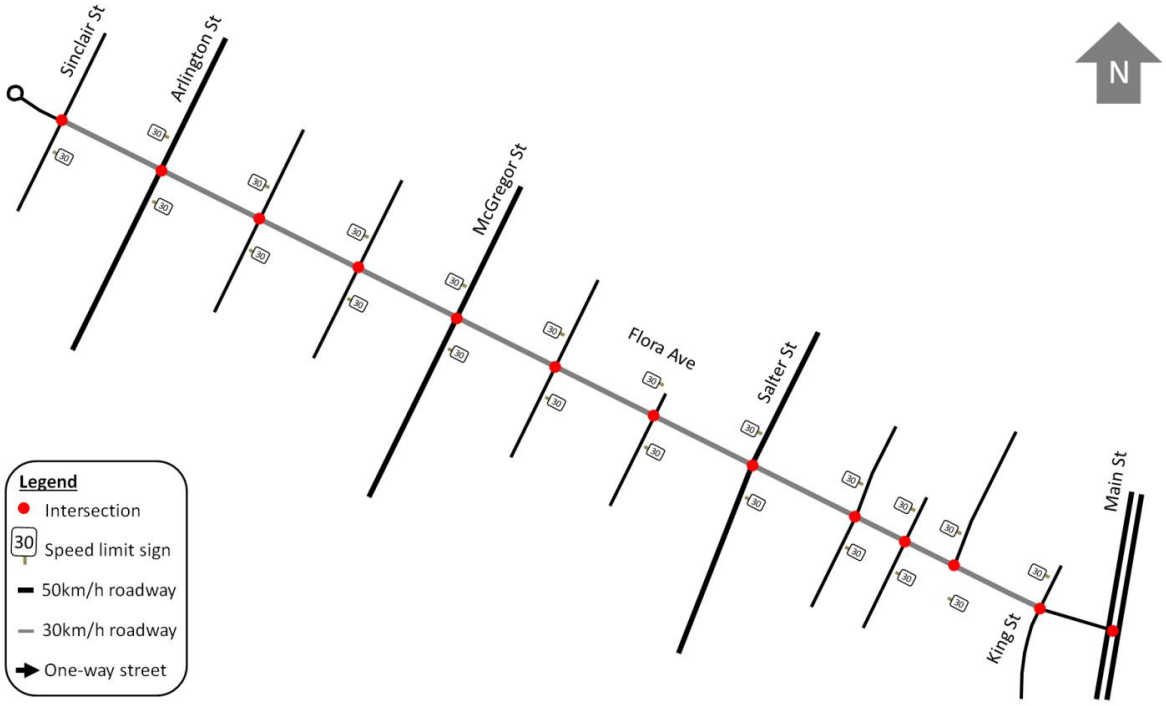

Figure D5: Proposed Signage for Flora Avenue Greenway Speed Trial

APPENDIX E: COMMUNICATIONS & ENGAGEMENT BRIEF

While comprehensive public engagement and communications plans will be developed upon approval of the trial locations, the following have been identified as required components of the trial:

- Working closely with area Councillors to coordinate the trial and communicate it with area residents.
- Robust Public Service-led community communications informing area residents of the change prior to implementation and asking them to provide feedback on any challenges to 311 (including mailers, signage, social media, and other channels).
- Community open houses or pop-ups throughout the trial to get a temperature check on public opinion.
- Reporting back to the community at the trial's conclusion to advise on both public feedback and engineering data, and informing residents on whether the trial is permanent or will be removed.