

**Minutes – Standing Policy Committee on Infrastructure Renewal and Public Works –
May 19, 2020**

REPORTS

**Item No. 26 Traffic Study – Bridge Lake Drive between Water Bend Road and
Water Bend Road
(Waverley West Ward)**

STANDING COMMITTEE DECISION:

The Standing Policy Committee on Infrastructure Renewal and Public Works concurred in the recommendation of the Winnipeg Public Service and received the report as information.

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DECISION MAKING HISTORY:

Moved by Councillor Sharma,

That the recommendation of the Winnipeg Public Service be concurred in.

Carried

STANDING COMMITTEE RECOMMENDATION:

On April 21, 2020, the Standing Policy Committee on Infrastructure Renewal and Public Works granted a further extension of time to its May 12, 2020 meeting for the Winnipeg Public Service to report back on the matter.

On March 3, 2020, the Standing Policy Committee on Infrastructure Renewal and Public Works granted a further extension of time to its April 7, 2020 meeting for the Winnipeg Public Service to report back on the matter.

On November 19, 2019, the Standing Policy Committee on Infrastructure Renewal and Public Works granted a further extension of time to its March 3, 2020 meeting for the Winnipeg Public Service to report back on the matter.

On May 28, 2019, the Standing Policy Committee on Infrastructure Renewal and Public Works granted an extension of time to its November 19, 2019 meeting for the Winnipeg Public Service to report back on the matter.

On November 20, 2018, 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 and speed study on Bridge Lake Drive between Water Bend Road and Water Bend Road, to look at the installation of speed tables, and report back within 180 days.

COMMUNITY COMMITTEE RECOMMENDATION:

On September 28, 2018, the Riel Community Committee passed the following motion:

WHEREAS there is a large park in the Bridgwater Lakes area;

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DECISION MAKING HISTORY (continued):

COMMUNITY COMMITTEE RECOMMENDATION (continued):

AND WHEREAS we want to ensure safe access to the park on Bridge Lake Drive;

THEREFORE BE IT RESOLVED THAT the Standing Policy Committee on Infrastructure Renewal and Public Works direct the Winnipeg Public Service to conduct a traffic and speed study on Bridge Lake Drive between Water Bend Road and Water Bend Road, to look at the installation of speed tables.



ADMINISTRATIVE REPORT

Title: Traffic Study – Bridge Lake Drive between Water Bend Road and Water Bend Road

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

AUTHORIZATION

Author	Department Head	CFO	CAO
D. Patman, P. Eng.	J. Berezowsky	N/A	M. Ruta, Interim CAO

EXECUTIVE SUMMARY

A Traffic Study was conducted on Bridge Lake Drive in the Water Bend Road area to determine if traffic calming was warranted. Traffic speeds and volumes were collected, the three-year collision history was reviewed, and a site visit was conducted. Volume and collision results did not indicate a need for traffic calming; however, existing vehicle speed results indicated that speeds are sufficient for consideration of traffic calming.

The Public Service considered Transportation Association of Canada measures suitable for addressing traffic speed concerns through traffic calming. This resulted in development of three conceptual traffic calming options. Of the three, the preferred option is employing raised median islands (Option 2). The raised median islands will be placed on the priority list for installation through the Traffic Engineering Improvement Program, subject to available budget and City-wide priorities. At the time of this report the public service estimates the cost of this project to be \$45,025.

RECOMMENDATIONS

That this report be received as information.

REASON FOR THE REPORT

On November 20, 2018, 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 and speed study on Bridge Lake Drive between Water Bend Road and Water Bend Road, to look at the installation of speed tables, and report back on the matter within 180 days. Subsequent extensions were granted by the Standing Policy Committee.

IMPLICATIONS OF THE RECOMMENDATIONS

There are no implications to receiving this report as information.

HISTORY/DISCUSSION

BACKGROUND INFORMATION

On November 20, 2018, 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 and speed study on Bridge Lake Drive between Water Bend Road and Water Bend Road, to look at the installation of speed tables, and report back. The reason stated for the request was to ensure safe access to the large park on Bridge Lake Drive in the Bridgwater Lakes area.

CURRENT TRAFFIC CONDITIONS

Bridge Lake Drive in the study area is a two-lane, undivided, 10-metre-wide collector street with southbound Transit Service (Route 86) in Waverley West. Bridge Lake Drive's north limit is at North Town Road and the south limit is at Eaglewood Drive. The area of interest for this traffic study is the section within the Water Bend Road loop (see Figure 1), which is located between the roundabout at North Town Road and the roundabout at Eagleview Road in the Bridgwater Lakes neighbourhood. Bridge Lake Drive has a speed limit of 50 km/h. Parking is permitted on the west side of the street and the utilization of on-street parking appears to be low. There are sidewalks on both sides of the street in the area of interest. The average weekday traffic volume on Bridge Lake Drive from an April 2019 count is approximately 1,600 vehicles per day, which is at the lower end of the volume scale for a two-lane undivided collector street.

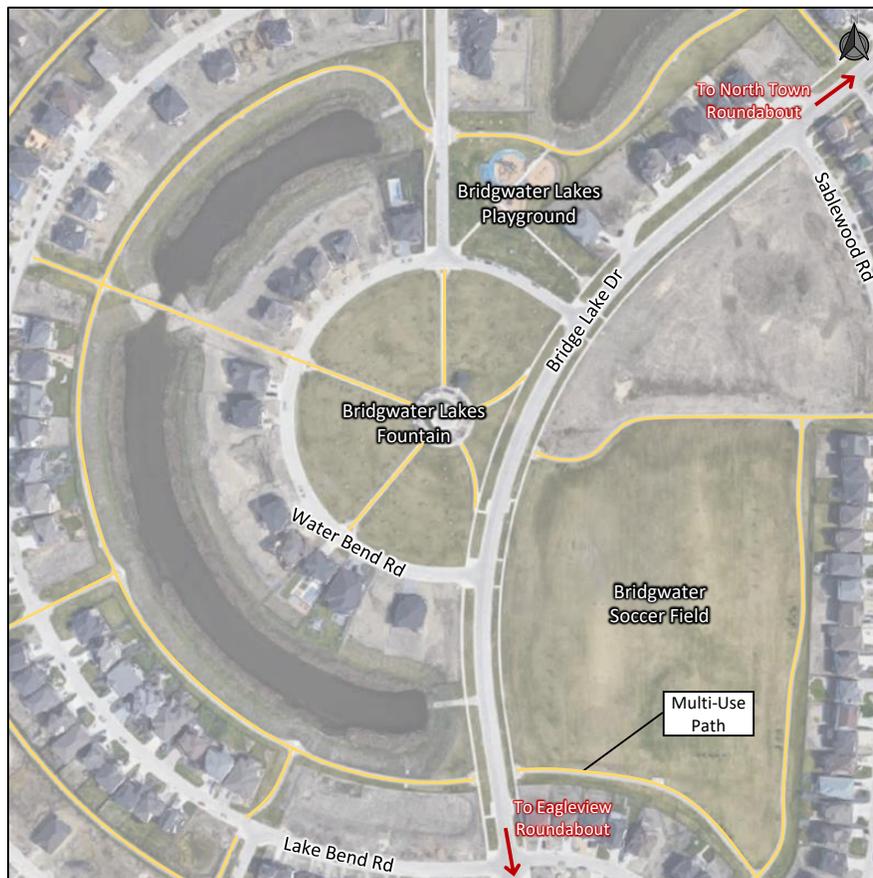


Figure 1: Study Area

Land use in the study area is single family residential and recreational. Residential properties in the area either flank Bridge Lake Drive or are located on cross streets and there is no direct access from the properties to the roadway. Recreational land uses in the study area include a large green space on the east side of Bridge Lake Drive that is used for soccer and a large green space on the west side of Bridge Lake Drive that contains a fountain and a playground. There are boulevard trees lining the east side of Bridge Lake Drive; however, these trees are small recent plantings.

TRAFFIC STUDY

Speed data and traffic volumes were collected using pneumatic tubes on Bridge Lake Drive at a point 100 metres north of the south leg of Water Bend Road during the April 9 to 18, 2019 period. The results of the speed study are shown in Table 1, below.

Table 1: Speed Study Results for Combined Northbound and Southbound Traffic on Bridge Lake Drive (Data from April 9 to 18, 2019)

Metric	Result
Speed Limit	50 km/h
85 th Percentile Speed	56 km/h
Average Speed	49 km/h
Percent of Vehicles traveling 55 km/h or higher	21.2%
Percent of Vehicles traveling 60 km/h or higher	7.3%
Total Vehicles Studied (over 7 days)	14,398

Results from the speed studies indicate that two of the three speed values are below typical speed criteria currently used by the City in warrant considerations for speed humps. The average speed recorded was 49 km/h, which is just below the threshold of 50 km/h, and 7.3% of vehicles exceeded 60 km/h, which is below the threshold of 10% of vehicles exceeding 60 km/h. The threshold that is exceeded is 15% of vehicles exceeding 55 km/h. The value for Bridge Lake Drive is 21.2% of vehicles exceeding 55 km/h. Observed vehicle speed may reflect lack of friction in the driving environment including low traffic volumes, no direct property access, large greenspaces on either side of the roadway, and a wide roadway with limited to no on-street parking demand. As such, based on a speed limit of 50 km/h, existing vehicle speeds appear to warrant consideration of traffic calming.

As noted earlier in the report, average weekday volumes are in the order of 1,600 vehicles per day. This volume is well below the environmental limit of 5,000 vehicles per day for an undivided collector roadway classification in the City of Winnipeg. There have been no reported collisions on this section of Bridge Lake Drive. As such, traffic volume and collision history are not driving a need for traffic calming.

In the disposition requesting this report, there is a stated intent of ensuring safe access to the park on Bridge Lake Drive. Currently, there are sidewalk pedestrian crossing points with curb ramps at both the north and south connection points of Water Bend Road to Bridge Lake Drive which provide a connection between the green spaces on either side of Bridge Lake Drive. The level of pedestrian activity has not been recorded at these crossing locations and the crossings are uncontrolled. The multi-use path that runs through the central portion of the east side green space (Figure 1, above) does not connect, or cross Bridge Lake Drive, to the green space and

fountain area despite the anticipated desire line to make this connection. Instead, the multi-use path terminates at the east sidewalk. The level of pedestrian and cycling activity on this multi-use path and informal mid-block crossings of Bridge Lake Drive at this location have not been recorded.

TRAFFIC CALMING CONSIDERATIONS

The speed data confirms that vehicle speeds on Bridge Lake Drive are at a level that warrants consideration of traffic calming. The Transportation Association of Canada (TAC) *Canadian Guide to Traffic Calming Second Edition* notes the following with regards to reducing vehicle speeds:

“Traffic calming measures are implemented to increase motorists’ awareness of the street’s function and thereby reduce vehicular speeds. Some features make it physically uncomfortable or difficult to travel along a street without reducing speed. Excessive speeds increase risk and create a safety concern, as motorists are less able to stop safely if confronted with situations, such as a child running into the street, a vehicle backing out of a driveway, or a cyclist swerving around an obstacle. Excessive vehicle speeds also increase the severity of a collision should one occur. Overall, speeding vehicles can detract from the livability of a neighbourhood.”

According to the *Canadian Guide to Traffic Calming Second Edition* there are numerous beneficial measures for reducing vehicle speeds. The primary categories of available measures are:

- Vertical deflection – This group of measures includes raised crosswalks, raised intersections, and speed tables. All of these measures have been applied at other locations in Winnipeg. Raised crosswalks and intersections would require removing some of the (new) roadway and potentially installing additional drainage features.
- Horizontal deflection – This group of measures includes chicanes, traffic circles and mini-roundabouts. Given the presence of transit on this roadway and the roadway curvature these measures are likely not desired.
- Roadway narrowing – This includes measures such as curb extensions and raised median islands.

Considering available measures to address speed, three potential traffic calming options were explored. Note that all three options show the introduction of a pedestrian and cycling crossing on Bridge Lake Drive opposite the fountain. There are catchbasins at this location so the crossing is at roadway grade and would be located north of the catchbasin inlets to avoid puddles at the curb ramps. The three options are described below.

Option 1: Speed Tables on Bridge Lake Drive

Option 1 would see three speed tables introduced on Bridge Lake Drive (Figure 2, below). The tables are spaced at 100-125 metre intervals as per City guidelines. The south speed table is located south of the south leg of Water Bend Road under a light standard, the middle speed table is located under a light standard just north of the crossing to the fountain, and the north speed table is located north of the north leg of Water Bend Road.

Advantages

- Speed tables have proven to be effective measures to reduce speeds in the City of Winnipeg. TAC indicates an 85th percentile speed reduction between 6 and 13 km/h.
- Does not affect roadway drainage.
- No negative effect to cyclists on Bridge Lake Drive.

Disadvantages

- Construction of the speed tables on a new concrete roadway may present some challenges.
- May have a negative effect on emergency services. It would be critical to involve emergency services if this measure is given further consideration.
- May have a negative effect on Transit.
- Does not provide benefits to crossing pedestrians or cyclists beyond speed reduction.
- Removes some parking – though parking demand is generally low.

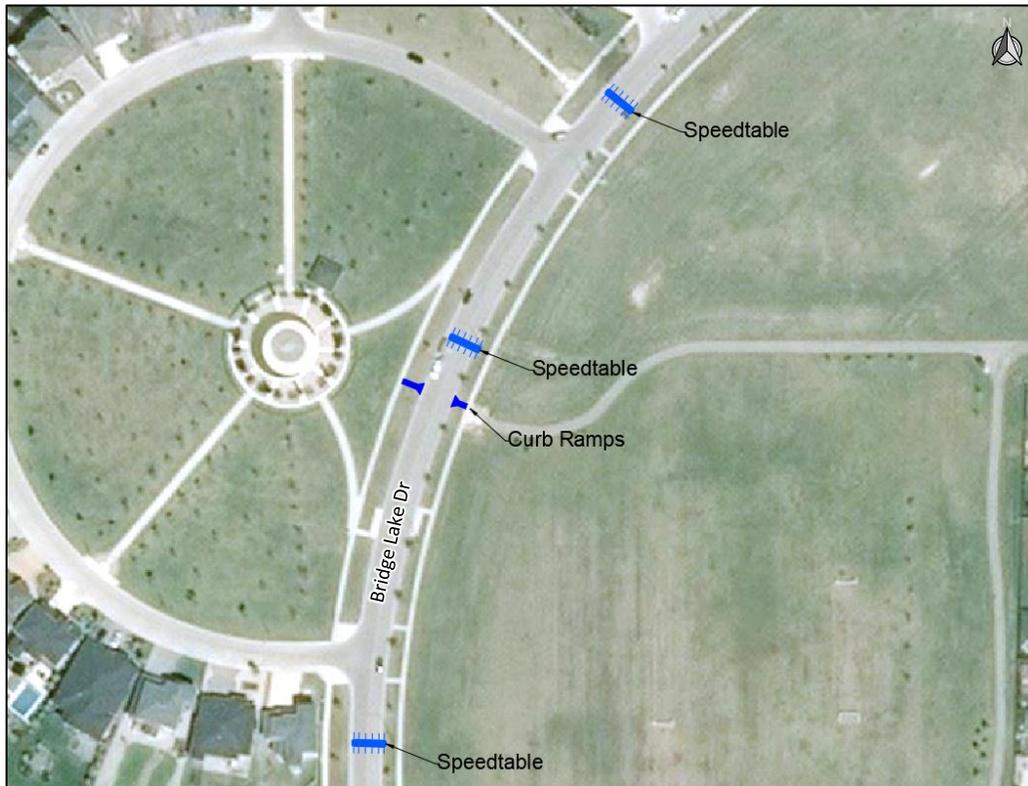


Figure 2: Option 1 Speed Tables

Option 2: Raised Median Islands on Bridge Lake Drive

Option 2 would see raised median islands located before and after both Water Bend Road intersections and the fountain crossing to reduce vehicle speed by narrowing the width of the roadway (Figure 3, below). Islands would be 2.5 to 3.0 metres wide and parking would not be permitted adjacent to the islands.

Advantages

- TAC indicates a reduction in vehicle speed of between 3 and 8 km/h.
- Can function as a pedestrian refuge resulting in reduced pedestrian-vehicle conflicts.
- Does not affect roadway drainage.
- Would not negatively affect Transit or Emergency Services.

Disadvantages

- Narrows the roadway for cyclists on Bridge Lake Drive.
- Removes some parking – though parking demand is generally low.
- Feature is untested in Winnipeg.

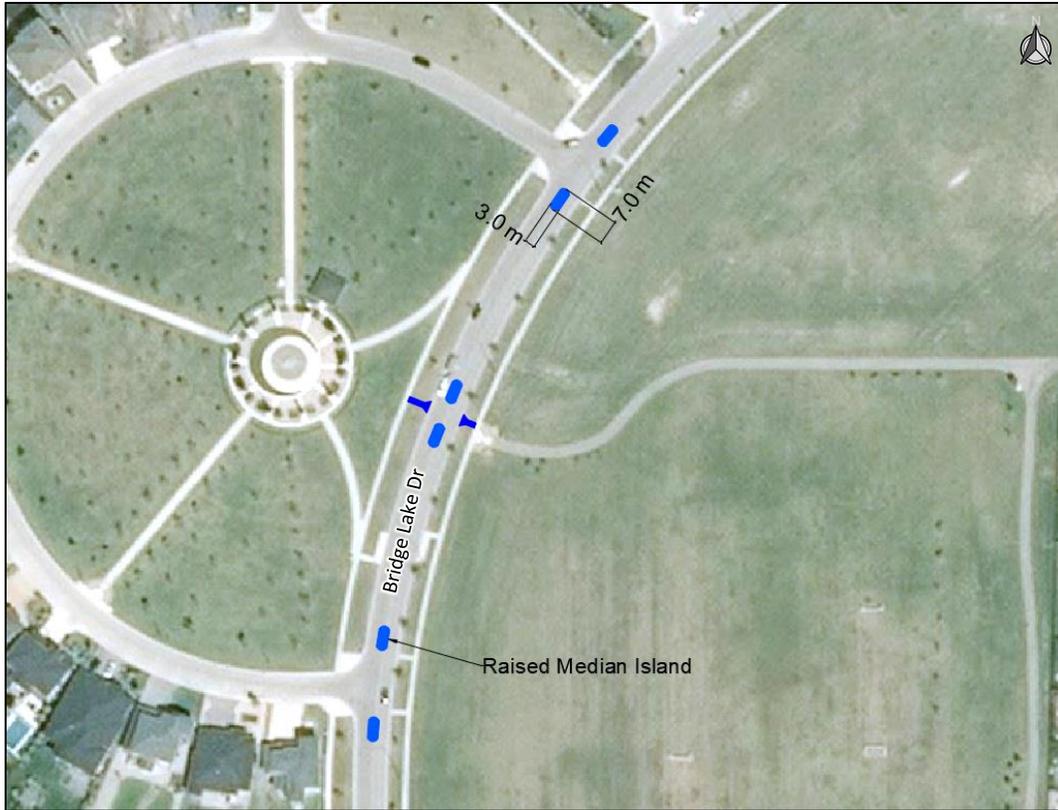


Figure 3: Option 2 Raised Median Islands

Option 3: Curb Extensions on Bridge Lake Drive

Option 3 would see curb extensions installed on the east side of Bridge Lake Drive at both Water Bend Road intersections to reduce vehicle speed by narrowing the width of the roadway (Figure 4, below). Curb extensions would be just under three metres wide. Parking in this section of Water Bend Road would flip from the west side to the east side.

Advantages

- TAC indicates a reduction in vehicle speed of between 2 and 8 km/h.
- Reduced pedestrian crossing distance at intersections may reduce pedestrian-vehicle conflicts. Better mutual visibility between pedestrians and motorists if crosswalks are eventually installed.
- Defines the parking side of the street.
- Would not negatively affect Transit or Emergency Services.

Disadvantages

- Affects roadway drainage and would be anticipated to have a greater cost than Options 1 or 2.
- Narrows the roadway for cyclists on Bridge Lake Drive.
- Removes some parking – though parking demand is generally low.
- Curb extensions installed in Winnipeg have not always been effective in reducing speeds.

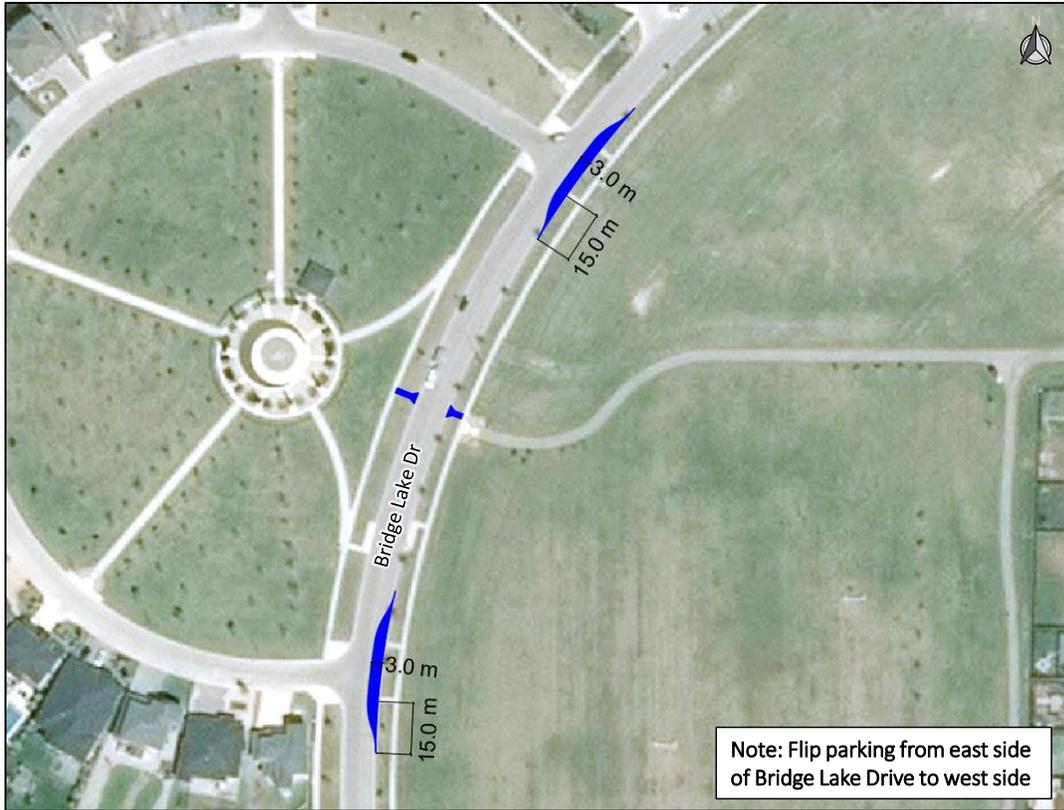


Figure 4: Option 3 Curb Extensions

Considering the advantages and disadvantages of the three options, Option 2 is preferred. Figures 5 and 6 (below) show the design of the medians for Option 2.

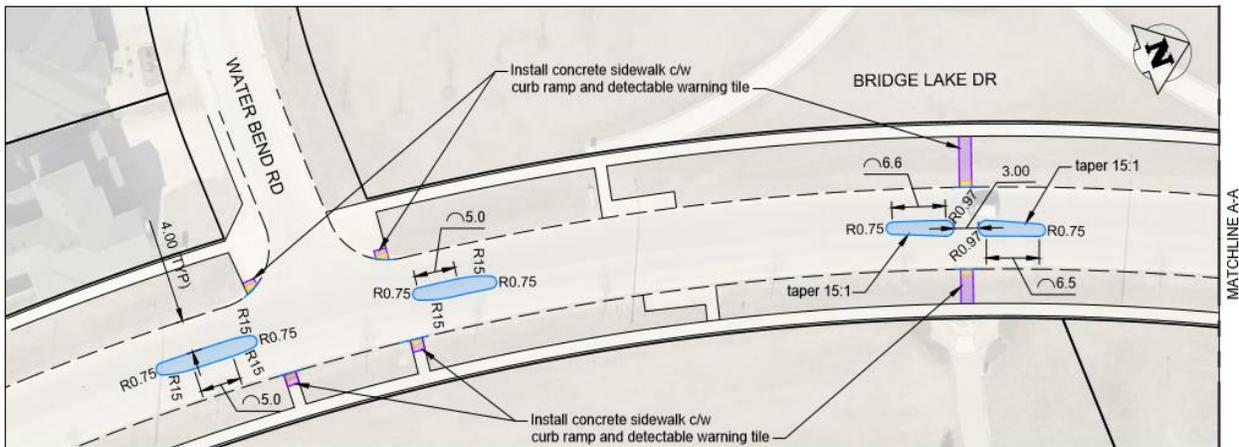


Figure 5: Median Design at Water Bend Road (South Leg)



Figure 6: Median Design at Water Bend Road (North Leg)

The estimated cost of the traffic calming measures is \$45,025, based on a Class 3 estimate. This project will be prioritized against others City-wide in the Traffic Engineering Improvement Program and constructed as resources allow. 2021 is likely the earliest resources will allow for this project.

FINANCIAL IMPACT

Financial Impact Statement Date: April 16, 2020

Project Name:
Traffic Study – Bridge Lake Drive between Water Bend Road and Water Bend Road

COMMENTS:

There is no financial impact associated with the recommendation of this report.

The preliminary cost estimate for the raised median islands (Option 2) is \$45,025. At this time there is no approved budget allocated to deliver this project. This work will be prioritized amongst other City-wide priorities within the Traffic Engineering Improvements program, and is subject to availability of future budget resources.

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

J. Peters CPA, CGA

Acting Manager of Finance & Administration

CONSULTATION

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

OURWINNIPEG POLICY ALIGNMENT

The recommendation of this report is 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

N/A

SUBMITTED BY

Department: Public Works
Division: Transportation
Prepared by: C. Flather, P.Eng., M.Sc., Traffic Management Engineer
Date: April 16, 2020
File No.: A-08