

**Agenda – Standing Policy Committee on Infrastructure Renewal and Public Works –
June 9, 2020**

REPORTS

**Item No. 19 Traffic Study – McGillivray Boulevard and Front Street
(Waverley West Ward)**

WINNIPEG PUBLIC SERVICE RECOMMENDATION:

That this report be received as information.

**Agenda – Standing Policy Committee on Infrastructure Renewal and Public Works –
June 9, 2020**

DECISION MAKING HISTORY:

STANDING COMMITTEE RECOMMENDATION:

On April 21, 2020, the Standing Policy Committee on Infrastructure Renewal and Public Works laid the matter over for up to 90 days.

On March 3, 2020, the Standing Policy Committee on Infrastructure Renewal and Public Works laid the matter over for 30 days.

On May 28, 2019, the Standing Policy Committee on Infrastructure Renewal and Public Works concurred in the recommendation of the Assiniboia Community Committee, with the following amendment:

- Add the following new recommendation 3:

“3. Examine speed and intersection safety, in consultation with the area Councillor.”

and directed the Winnipeg Public Service to report back to the Standing Committee within 240 days.

Councillor Lukes, Waverley West Ward, submitted a photo with respect to the matter.

COMMUNITY COMMITTEE RECOMMENDATION:

On May 7, 2019, the Assiniboia Community Committee passed the following motion:

WHEREAS within the past five years significant new commercial development has occurred on McGillivray Boulevard west of Kenaston, both within and outside of City limits;

AND WHEREAS the Whyte Ridge neighbourhood south of McGillivray Boulevard continues to see an increase in multifamily developments, places of worship, and active transportation paths which connect the north and south sides of McGillivray Boulevard;

AND WHEREAS Brady Road has experienced increased traffic as motorists use the road as an access point to the Whyte Ridge neighbourhood;

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DECISION MAKING HISTORY (continued):

COMMUNITY COMMITTEE RECOMMENDATION (continued):

AND WHEREAS the FortWhyte Alive nature centre located on the north side of McGillivray Boulevard continues to add new features on site, including bike trails;

AND WHEREAS the current speed limit on McGillivray Boulevard is 70 km/hr. which makes it extremely dangerous for cyclists and pedestrians to cross the intersection of Front Street and McGillivray Boulevard to enter FortWhyte Alive;

THEREFORE BE IT RESOLVED that the Assiniboia Community Committee recommend to the Standing Policy Committee on Infrastructure Renewal and Public Works:

1. That the Winnipeg Public Service be directed to conduct a traffic study along McGillivray Boulevard between Brady Road and Kenaston Boulevard, to determine where a controlled pedestrian crossing could be installed in order to connect the Whyte Ridge neighborhood with FortWhyte Alive;
2. That the Winnipeg Public Service consult with the Province of Manitoba regarding the traffic study, and include the consultation in the report back to the Standing Committee.

ADMINISTRATIVE REPORT

Title: Traffic Study – McGillivray Boulevard and Front Street

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 along McGillivray Boulevard between Brady Road and Kenaston Boulevard was completed to determine where a controlled pedestrian crossing could be installed to connect the Whyte Ridge neighbourhood with FortWhyte Alive. The study found that although a crossing of McGillivray Boulevard within the study area would not meet the City's warrant for crossing control from an existing demand perspective, there is merit to introducing crossing control from a system connectivity perspective.

Two options for a crossing control location were explored and a preferred location at McGillivray Boulevard and the Fort Whyte Service Road approach was identified. Based on the Transportation Association of Canada guideline's "Decision Support Tool – Treatment Selection Matrix", the recommended minimum treatment across McGillivray Boulevard at Fort Whyte would be a pedestrian corridor. However, the vehicle speeds and traffic volumes should be re-evaluated prior to installation to determine if a traffic signal control would be preferred as a higher order pedestrian crossing control treatment.

Moving forward, an agreement with Fort Whyte with respect to crossing control, and discussion of the feasibility of a potential long-term multi-use path along the north side of McGillivray Boulevard, is needed, as well as funding for crossing control implementation. It would be preferable for the pedestrian crossing control treatment to be installed after Manitoba Infrastructure has installed traffic signals at westerly intersections on McGillivray Boulevard (traffic signals will likely be warranted in the near future). It is proposed that crossing control be considered in future budget processes following installation of traffic signals by Manitoba Infrastructure and to allow time for an agreement with Fort Whyte (potentially in the 2022 budget process; however, securing funding for the project will be dependent on resources and other City-wide priorities). The Public Service has shared the analysis within this report with Manitoba Infrastructure and will work with Manitoba Infrastructure when the project moves forward. Approval of the crossing control would be sought at the point where there is budget secured to proceed.

RECOMMENDATIONS

That this report be received as information.

REASON FOR THE REPORT

On May 28, 2019, the Standing Policy Committee on Infrastructure Renewal and Public Works concurred in the recommendation of the Assiniboia Community Committee, as amended, and directed the Winnipeg Public Service to:

1. Conduct a traffic study along McGillivray Boulevard between Brady Road and Kenaston Boulevard, to determine where a controlled pedestrian crossing could be installed in order to connect the Whyte Ridge neighbourhood with FortWhyte Alive.
2. Consult with the Province of Manitoba regarding the traffic study, and include the consultation in the report back to the Committee.
3. Examine speed and intersection safety, in consultation with the area Councillor and report back to the Standing Committee within 240 days.

IMPLICATIONS OF THE RECOMMENDATIONS

There are no implications as a result of this recommendation.

HISTORY/DISCUSSION

BACKGROUND INFORMATION

On May 7, 2019 the Assiniboia Community Committee recommended to the Standing Policy Committee on Infrastructure Renewal and Public Works (SPC IRPW) that the Winnipeg Public Service be directed to conduct a traffic study along McGillivray Boulevard between Brady Road and Kenaston Boulevard, to determine where a controlled pedestrian crossing could be installed in order to connect the Whyte Ridge neighborhood with FortWhyte Alive, consult with the Province of Manitoba regarding the traffic study, and include the consultation in the report back to the Standing Committee. Reasons stated for the request included:

- Within the past five years significant new commercial development has occurred on McGillivray Boulevard west of Kenaston, both within and outside of City limits.
- The Whyte Ridge neighbourhood south of McGillivray Boulevard continues to see an increase in multifamily developments, places of worship, and active transportation paths which connect the north and south sides of McGillivray Boulevard.
- Brady Road has experienced increased traffic as motorists use the road as an access point to the Whyte Ridge neighbourhood.
- The FortWhyte Alive nature centre located on the north side of McGillivray Boulevard continues to add new features on site, including bike trails.
- The current speed limit on McGillivray Boulevard is 70 km/h which makes it extremely dangerous for cyclists and pedestrians to cross the intersection of Front Street and McGillivray Boulevard to enter FortWhyte Alive.

On May 28, 2019, the SPC IRPW concurred in the above recommendations and directed the Public Service to report back.

TRAFFIC CHARACTERISTICS

McGillivray Boulevard within the study area between Brady Road and Kenaston Boulevard (Figure 1, below) is a Regional street, a full-time truck route, and a Transit route (east of Columbia); with an Average Weekday Daily Traffic (AWDT) volume ranging between 10,400 and 14,300 vehicles, and a speed limit of 70 km/h. The street cross section changes within the study area. Between Kenaston Boulevard and Columbia Drive, McGillivray Boulevard is a wide

four-lane divided road with auxiliary lanes for left and right turns and there are traffic signal controlled intersections that include pedestrian crossing control at Columbia Drive, a commercial approach, and Kenaston Boulevard. West of Columbia Drive, McGillivray Boulevard transitions from a four-lane divided roadway to a two-lane undivided roadway before crossing the CPR La Riviere line. The two-lane section continues to the City Limit at Brady Road where the street becomes Provincial Trunk Highway (PTH) 3 under Provincial jurisdiction. At Brady Road, there is a westbound bypass lane provided to allow westbound through traffic to bypass westbound left turning vehicles. There are currently no controlled crossings or intersections on McGillivray Boulevard/PTH 3 between Columbia Drive and the Perimeter Highway, a distance of 9.4 kilometres.

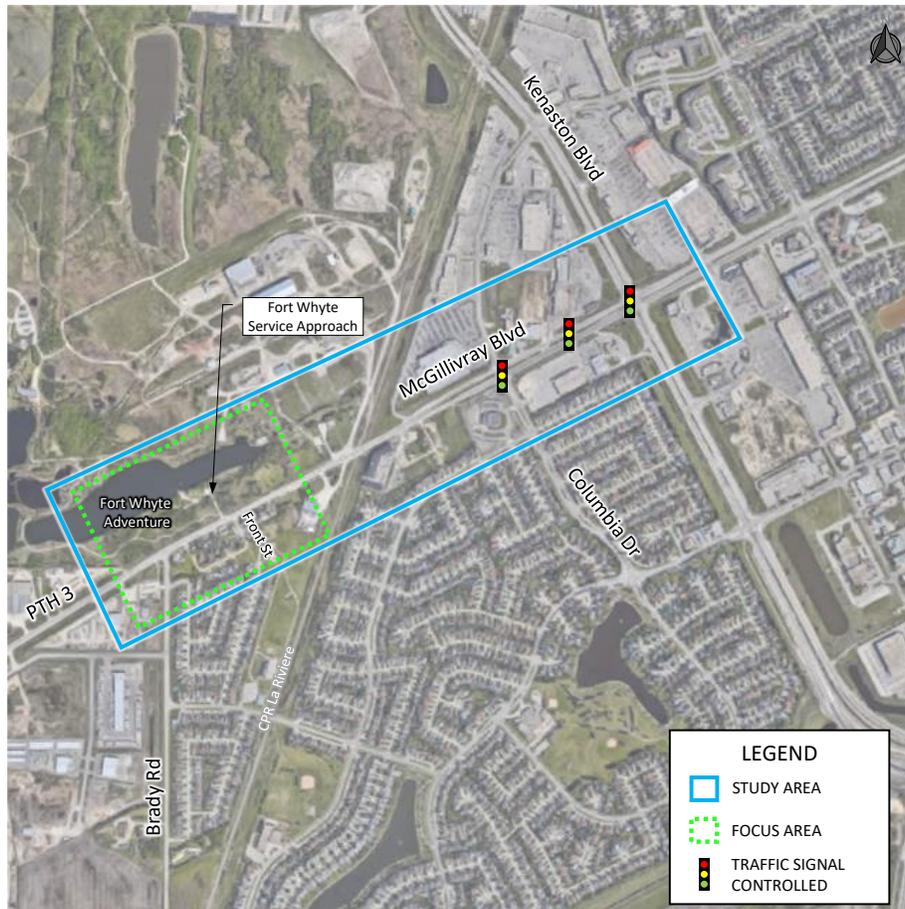


Figure 1: Study Area

Figure 2, below, illustrates the current cycling facilities in the study area and environs from the Winnipeg Cycling Map (Version 6). Multi-use paved pedestrian and cyclist facilities are provided along McGillivray Boulevard that connect to facilities farther east on McGillivray to Pembina Highway and south along Kenaston Boulevard to the Bishop Grandin Greenway. On the south side of McGillivray Boulevard within the study area, there is a sidewalk from Kenaston Boulevard to Columbia Drive and then a narrow multi-use path from Columbia Drive to Brady Road. On the north side of McGillivray Boulevard, there is a multi-use path from Kenaston Boulevard to Columbia Drive and no facility west of Columbia Drive. As a result, the multi-use path on McGillivray Boulevard west of Kenaston Boulevard flips from the north side to the south side on its way to Brady Road and the City limit.

Within Fort Whyte, there is a multi-use granular path that connects from the north side of McGillivray Boulevard just west of Front Street, via the service approach identified in Figure 1, all the way to the Thundering Bison Trail located on the south side of Sterling Lyon Parkway. This path within Fort Whyte is only open during specific hours. Outside of those hours it is physically closed with a gate. During fall hours, the gate at the McGillivray Boulevard end of the path is closed at 4:30 p.m. daily. South of McGillivray, Front Street connects to a pathway through the Whyte Ridge Community Centre to Fleetwood Road. The City of Winnipeg's Cycling Map shows 'low stress' routes within Whyte Ridge and the full extent of the Fort Whyte path as illustrated in the image below. Connections to McGillivray Boulevard at Front Street and at Post Street are both currently red circled as 'areas of caution' due to the speed and volume on McGillivray Boulevard coupled with the lack of crossing control.

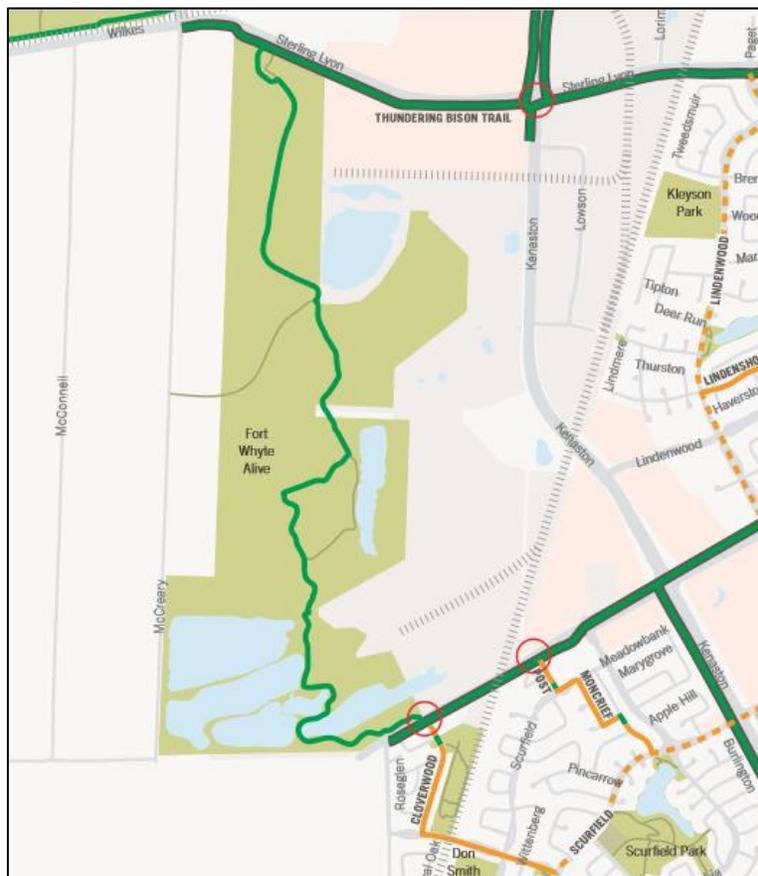


Figure 2: Cycling Routes from the Winnipeg Cycling Map

The City of Winnipeg Pedestrian and Cycling Strategies (excerpt image in Figure 3, below) show similar routes to the cycling map in the study area; however, there is an additional route proposed along an alignment for the extension of Bishop Grandin Boulevard into the RM of Macdonald curving up towards William Clement Parkway. This future pathway would not provide a direct connection to the path through Fort Whyte and the future crossing of McGillivray Boulevard/PTH 3 by this path would be a significant distance west of the City Limit if it were built along the illustrated alignment.

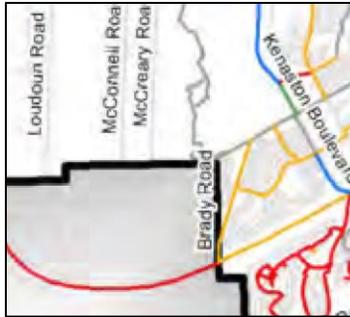


Figure 3: Cycling Routes from the Winnipeg Pedestrian and Cycling Strategies

Based on the disposition direction to connect the Whyte Ridge neighbourhood with FortWhyte Alive, the focus on a potential crossing location for pedestrians and cyclists was concentrated in the area of McGillivray Boulevard west of the CPR La Riviere line, and in particular, the section between Front Street and Brady Road.

CURRENT PEDESTRIAN CROSSING CONTROL GUIDELINES

Current Pedestrian Crossing Control Guidelines were approved by the Standing Policy Committee on Infrastructure Renewal and Public Works on January 11, 2013. These guidelines are based on the Pedestrian Crossing Control Guide published by the Transportation Association of Canada (TAC). The Pedestrian Crossing Control Guide presents a set of principles to guide professionals during the decision-making process associated with the provision of pedestrian crossing control. The warrant for a treatment system is based on factors that include pedestrian volume at the crossing location, vehicular traffic volume, proximity to other traffic control devices, and route connectivity requirements. The City considers that a warrant is fulfilled when the following two criteria from the Pedestrian Crossing Control Guide are met:

1. Average hourly pedestrian volume in terms of Equivalent Adult Units (EAUs) is greater than or equal to 15 per hour over a minimum seven-hour continuous period and Average Daily Traffic (ADT) is greater than or equal to 1,500 vehicles per day. EAUs account for age and differences in physical ability. For example; an able-bodied adult is considered as 1.0 EAU, an unaccompanied child (estimated age ≤ 12 years) is considered as 2.0 EAUs, a senior citizen (estimated age >65 years) is considered as 1.5 EAUs, and an individual of any age with a physical impairment crossing is considered as 2.0 EAUs.
2. The proposed crossing location is at a minimum distance, from the nearest form of traffic control, typically between 100 and 200 metres for a particular location. This may vary based on a location's individual traffic characteristics and engineering judgment.

Pedestrian crossings of McGillivray Boulevard in the area west of the CPR La Riviere line were last counted in June 2014 at Front Street, which is the only location in this section where demand would be anticipated due to the presence of a physical connection with Fort Whyte on the north side of McGillivray Boulevard via the service approach. At that time, the Fort Whyte pathway did not connect to the Thundering Bison Trail as it does today. The two June 2014 counts were 15 hours in duration and recorded 2 EAUs in one count and 3 EAUs in the other count. As a result, the basic warrant was not met at that time in terms of level of activity despite being well removed from other forms of traffic control. There have been no reported collisions involving pedestrians at McGillivray Boulevard and Front Street in the last 10 years.

Using any of the above warrants should not substitute engineering judgment. For this reason, engineering judgment is an input into the warrant process. In particular, low observed pedestrian volumes may not be an indication of low pedestrian demand if inadequate facilities

are provided. McGillivray Boulevard is a high volume and high-speed road with few gaps in traffic in the two-lane section that is the area of focus. Current operation of McGillivray Boulevard is likely a deterrent to crossing, particularly for more vulnerable users (such as families with children or seniors). Therefore, it is necessary to determine the need for treatment based on latent demand, system connectivity and considerations for linking land uses as outlined in the TAC Pedestrian Crossing Control Guide.

The residential and recreational (Fort Whyte) nature of land uses in the area, time of day restrictions on Fort Whyte path access, and seasonality of demand for access to Fort Whyte suggests that the latent demand to cross McGillivray Boulevard in this area may not reach minimum thresholds consistently over a full year. System connectivity is a more significant consideration. Currently, Fort Whyte is only safely accessible to pedestrians and cyclists via Sterling Lyon Parkway, far removed from McGillivray Boulevard. Pedestrian and cyclist connection to Fort Whyte from Whyte Ridge and other residential areas to the south and east of Whyte Ridge would only reasonably available via a controlled crossing in the Front Street to Brady Road area and/or construction of a multi-use path on the north side of McGillivray Boulevard from Columbia Drive to the Fort Whyte pathway (a distance of over 800 metres).

TREATMENT SELECTION

If pedestrian crossing control is warranted based on system connectivity, the guideline's "Decision Support Tool – Treatment Selection Matrix" *recommends* a treatment based on the following factors: Average Daily Traffic (ADT) volumes, speed limit, and roadway cross section. Based on the guideline's "Decision Support Tool – Treatment Selection Matrix", the recommended minimum treatment across McGillivray Boulevard at Fort Whyte would be a pedestrian corridor.

However, there are context considerations that suggest that traffic control signals would be preferred over a pedestrian corridor under current traffic conditions. These context considerations include:

1. Vehicle traffic is arriving from a highway condition to the west where they have not had to stop for almost 10 kilometres of travel. This crossing location would be the first point where eastbound traffic encounters traffic control in the City.
2. The 70 km/h speed limit on McGillivray Boulevard begins just west of Brady Road, beyond which the posted speed is 80 km/h. Speed data from 10 years ago indicates that at that time, operating speeds on McGillivray Boulevard at Brady Road were at an 85th percentile speed of 73 km/h and about 10% of traffic exceeded 75 km/h. A speed limit of 70 km/h is the maximum speed for a pedestrian corridor. Traffic signals are recommended for anything above that 70 km/h limit.
3. A traffic signal would be a good candidate for eastbound advance warning flashers as per City of Winnipeg guidelines due to the speed of traffic and the location being the first traffic signal as traffic enters the City of Winnipeg.
4. Traffic control on McGillivray Boulevard east of the area of focus is all traffic signals until a 60 km/h zone near Pembina Highway.
5. Demand to cross is expected to vary considerably by season. Regular drivers on McGillivray Boulevard may become accustomed to an inactive pedestrian corridor.

Based on discussions with the provincial Traffic Services Engineer, Manitoba Infrastructure is aware of traffic-related concerns at both the McGillivray Boulevard at McCreary Road and McGillivray Boulevard at South Landing Business Park intersections and they have reviewed traffic operations at these intersections. The intersections do not currently meet the traffic signal

warrant threshold. However, Manitoba Infrastructure will continue to monitor traffic operations and they anticipate that traffic signals will likely be warranted in the near future.

Once traffic signals are installed at one or both of the McGillivray Boulevard at McCreary Road and McGillivray Boulevard at South Landing Business Park intersections, then considerations 1, 2, and 3 from the above points will no longer be applicable. At that future time, vehicle speeds and traffic volumes should be re-evaluated to identify the appropriate pedestrian treatment.

CROSSING CONTROL OPTIONS

Based on the above, two location options were explored for the introduction of pedestrian crossing control on McGillivray Boulevard to enable pedestrian and cycling access to Fort Whyte.

Option 1: McGillivray Boulevard and Brady Road Intersection

Option 1 is at the intersection of McGillivray Boulevard and Brady Road. A pedestrian and cyclist crossing would be located on the east side of the intersection and would connect the existing south side multi-use path on McGillivray Boulevard with a new pathway connection constructed in Fort Whyte along with a new gate in the fence that runs along McGillivray Boulevard. Conceptual layout of traffic signal control is illustrated in Figure 4, below.

From a vehicle perspective, the intersection of McGillivray Boulevard and Brady Road does not currently meet a warrant for traffic signal control. Using an available 2015 count, the intersection scores 50 warrant points, which is less than the minimum 100 points required for consideration of signalization. The intersection also does not meet the minimum requirement of 75 vehicles per hour of cross street activity (excluding right turns). Collision data from 2016-2018 does not indicate collision issues at the intersection that could be mitigated by traffic signal control. However, despite not being warranted for traffic signal control on the basis of vehicle volumes, the Brady Road intersection is the most significant intersection in the area of focus on McGillivray Boulevard and the volume of traffic on Brady Road far exceeds that of the Fort Whyte service road access in Option 2. Advantages and disadvantages of Option 1 include:

Advantages

- The intersection would have regular cross street demand which would condition drivers to expect to stop even when demand for pedestrian and cyclist crossings is lower.
- The intersection is a standard size for traffic signals and the layout would be consistent with driver expectation.
- The safety of the northbound left turn from Brady Road would increase and there would be less delay experienced for both northbound left and right turns from Brady Road with traffic signal control.

Disadvantages

- This location would require additional pathway construction in Fort Whyte and the addition of another gate that Fort Whyte would have to operate.
- Traffic signals at Brady Road would result in more stops and more delay for the high volume of traffic on McGillivray Boulevard. This may result in more collisions, particularly rear end collisions, on McGillivray Boulevard at the intersection.
- Traffic signals at Brady Road may draw more traffic to the intersection from the Whyte Ridge neighbourhood which may trigger neighbourhood concerns and request for mitigation on streets where volumes increase.



Figure 4: Option 1 McGillivray Boulevard and Brady Road (Traffic Control Signals shown)

Option 2: McGillivray Boulevard and the Fort Whyte Approach

Option 2 would see pedestrian crossing control introduced at the intersection of McGillivray Boulevard and the Fort Whyte service road approach. Conceptual layout is illustrated in Figure 5, below. A pedestrian and cyclist crossing would be located on the east side of the intersection and would connect the existing south side multi-use path with the Fort Whyte private approach.

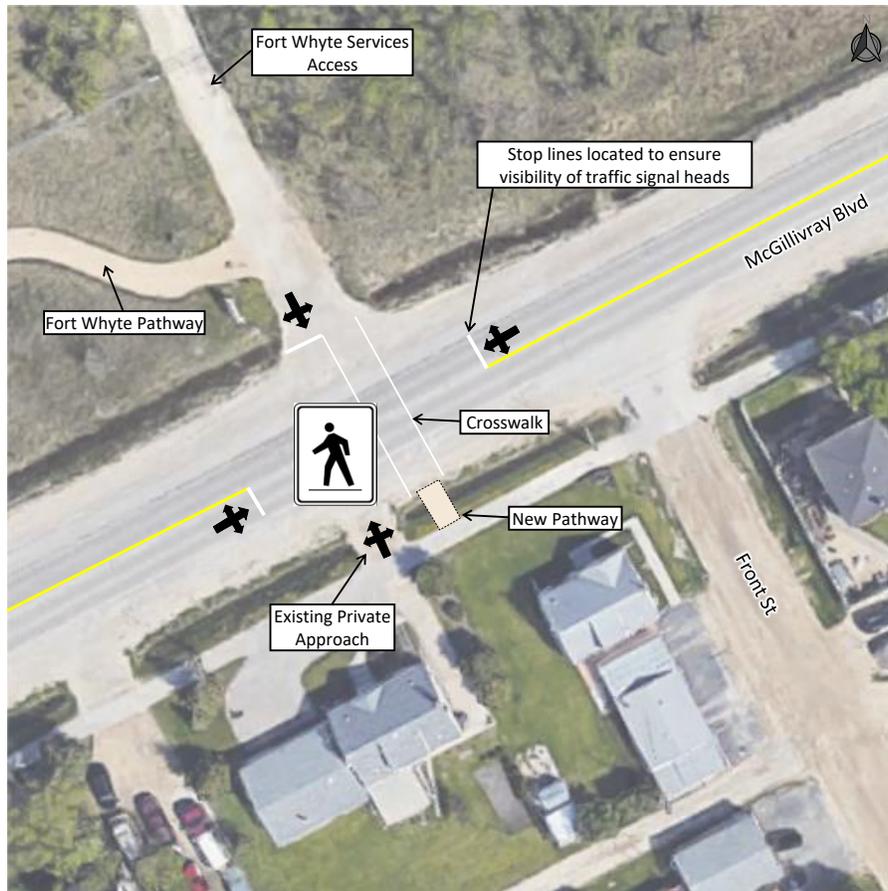


Figure 5: Option 2 Pedestrian Crossing Control at the Intersection of McGillivray Boulevard and the Fort Whyte Service Access

From a vehicle perspective, the intersection of McGillivray Boulevard and the Fort Whyte service road approach would not meet a warrant for traffic signal control now or in the future due to very low cross street volumes. Advantages and disadvantages of Option 2 include:

Advantages

- No construction would be required in terms of additional pathways, approaches, or gates on Fort Whyte property.
- McGillivray Boulevard traffic would only be stopped by crossing pedestrians or cyclists. This would result in far fewer stops for McGillivray Boulevard traffic than a traffic signal at Brady Road.

Disadvantages

- There would be an awkward overlap of the pedestrian/cycling crosswalk and vehicle movements on the service approach as a result of the dual-purpose nature of the approach. However, this is mitigated somewhat by the low volume of vehicles on the service approach.
- The lack of crossing demand may reduce drivers' expectations of having to stop at the intersection.
- The mid-block location would be less conspicuous than an intersection location. This may result in compliance issues and the potential for more stop line violations.

SUMMARY

Option 2 would be the preferred location for crossing control to connect the Whyte Ridge Neighbourhood with Fort Whyte. This option does not require construction at Fort Whyte or any changes related to fences and gates. Additionally, if traffic signals are installed, Option 1 introduces concern that the Brady Road intersection would draw traffic from Whyte Ridge and generate new traffic issues within the neighbourhood. Implementation should be considered after traffic signals have been installed by Manitoba Infrastructure at one or both of the McGillivray Boulevard at McCreary Road and McGillivray Boulevard at South Landing Business Park intersections which are likely warranted in the near future. Traffic signals at these locations will be beneficial so that the pedestrian crossing location is not the first controlled intersection that eastbound motorists will encounter entering the city.

If crossing control is introduced at the Option 2 location in the future, the need to construct a multi-use path along the north side of McGillivray Boulevard becomes a longer-term consideration. Property availability, the need to cross the CPR La Riviere rail line, and implications of future widening of McGillivray Boulevard to four lanes are issues that would need to be carefully assessed when the path is given further consideration. The primary benefit of this future path would be to remove the need for users arriving or departing to and from the east to cross the intersection at the McGillivray/Columbia intersection and then re-cross McGillivray Boulevard location again at the Option 2 location.

Moving forward, an agreement with Fort Whyte with respect to crossing control, and discussion of the feasibility of a potential long-term multi-use path along the north side of McGillivray Boulevard are needed, as well as funding for crossing control implementation. It is proposed that crossing control be considered in future (potentially 2022) budget process to allow for time for an agreement with Fort Whyte; however, securing funding for the project will be dependent on resources and other City-wide priorities. The Public Service will communicate with Manitoba Infrastructure regarding installation of traffic signals and pedestrian crossing control when the project moves forward. Warranted locations for crossing control must be prioritized relative to each other City-wide so that limited funds are dedicated to locations with the highest need. Approval of the crossing control would be sought from the SPC IRPW at the point where there is budget secured to proceed.

FINANCIAL IMPACT

Financial Impact Statement Date: [May 12, 2020](#)

Project Name:

Traffic Study – McGillivray Boulevard and Front Street

COMMENTS:

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

"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: May 12, 2020