Agenda – Council – September 29, 2021

Report – Standing Policy Committee on Infrastructure Renewal and Public Works – September 15, 2021

Item No. 4 Cost Sharing Agreement with The City of Winnipeg and Red River Cooperative Ltd. for Improvements to the Intersection of Lagimodiere Boulevard and Cottonwood Road

STANDING COMMITTEE RECOMMENDATION:

On September 21, 2021, the Executive Policy Committee concurred in the recommendation of the Standing Policy Committee on Infrastructure Renewal and Public Works and submitted the following to Council:

1. That the City enter into, execute and deliver a cost-sharing agreement with Red River Co-op, and such other agreements as determined necessary by the City Solicitor/ Director of Legal Services to implement the intent of the foregoing (the "Ancillary Agreements").

2. That authority be delegated to the Chief Financial Officer to negotiate and approve the terms and conditions of the contribution agreements with Red River Co-op and the Ancillary Agreements, in accordance with this report and such other terms and conditions deemed necessary by the City Solicitor / Director of Legal Services to protect the interests of the City.

3. That the installation of new traffic control signals at the intersection of Lagimodiere Boulevard and Cottonwood Road be approved.

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

Report – Standing Policy Committee on Infrastructure Renewal and Public Works – September 15, 2021

DECISION MAKING HISTORY:

EXECUTIVE POLICY COMMITTEE RECOMMENDATION:

On September 21, 2021, the Executive Policy Committee concurred in the recommendation of the Standing Policy Committee on Infrastructure Renewal and Public Works and submitted the matter to Council.

STANDING COMMITTEE RECOMMENDATION:

On September 15, 2021, the Standing Policy Committee on Infrastructure Renewal and Public Works concurred in the recommendation of the Winnipeg Public Service and submitted the matter to the Executive Policy Committee and Council.

On July 7, 2021, the Standing Policy Committee on Infrastructure Renewal and Public Works laid the matter over to its meeting on September 15, 2021.

ADMINISTRATIVE REPORT

Title: Cost Sharing Agreement with The City of Winnipeg and Red River Cooperative Ltd. for Improvements to the Intersection of Lagimodiere Boulevard and Cottonwood Road and Traffic Control Signal Installation

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

AUTHORIZATION

Author	Department Head	CFO	CAO
D. Patman, P. Eng.	J. Berezowsky	C. Kloepfer	M. Ruta, Interim CAO

EXECUTIVE SUMMARY

The Winnipeg Public Service requests Council approval to enter into a cost sharing agreement with Red River Cooperative Ltd. in order to improve the intersection at Lagimodiere Boulevard and Cottonwood Road. Red River Cooperative Ltd. is re-developing the land at 717 Lagimodiere Boulevard and is constructing a gas bar and convenience store.

Traffic control signals are recommended for the intersection based on the traffic projections and analysis completed as part of the *717 Lagimodiere Boulevard Red River Co-Op Transportation Impact Study* (WSP, 2018). The signal warrant analysis shows that once the Red River Co-Op gas bar development is completed the intersection will greatly exceed the required 100 warrant priority points and also meet the minimum cross street volume threshold of 75 vehicles per hour. The traffic signals will provide acceptable level of service for traffic operations and will increase the level of safety at the intersection.

The estimate for signal installation is $290,000, of which the City of Winnipeg will pay 30% (approximately $87,000) of the total cost, and Red River Cooperative Ltd. will pay 70% (approximately $203,000). The City's share of the installation costs will be charged to the Traffic Engineering Improvement Program (TEIP). The cost of upgrading the infrastructure, specifically related geometric improvements, will be paid by Red River Co-op; Red River Co-op will provide design, construction and project management for the geometric improvements.

RECOMMENDATIONS

1. That the City enter into, execute and deliver a cost-sharing agreement with Red River Co-op, and such other agreements as determined necessary by the City Solicitor / Director of Legal Services to implement the intent of the foregoing (the "Ancillary Agreements").

2. That authority be delegated to the Chief Financial Officer to negotiate and approve the terms and conditions of the contribution agreements with Red River Co-op and the

Ancillary Agreements, in accordance with this report and such other terms and conditions deemed necessary by the City Solicitor / Director of Legal Services to protect the interests of the City.

3. That the installation of new traffic control signals at the intersection of Lagimodiere Boulevard and Cottonwood Road be approved.

4. 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

Council approval is required for Recommendations 1 and 2 for the City to enter into the cost-sharing agreement with Red River Co-op.

As the City's Traffic Authority, the Standing Policy Committee on Infrastructure Renewal and Public Works approval is required for Recommendation 3.

IMPLICATIONS OF THE RECOMMENDATIONS

The contribution agreements must be signed and returned in order to receive the funding from Red River Co-op.

The estimated capital cost of the traffic signal is $290,000 of which the City of Winnipeg will pay 30% of the total cost and Red River Cooperative Ltd. will pay 70%. The City of Winnipeg 30% share (approximately $87,000) will be funded by the Traffic Engineering Improvements Program (TEIP) budget. The annual maintenance and operating cost associated with this signal will be funded within existing resources by the Transportation Operating Budget.

HISTORY/DISCUSSION

COST SHARING AGREEMENT

Red River Cooperative Ltd. is re-developing the land at 717 Lagimodiere Boulevard and is constructing a gas bar and convenience store. The City of Winnipeg Public Works Department (PWD) was contacted by Red River Co-op regarding the proposed development and identified the following items to be included in a Transportation Impact Study (TIS):

- Determine appropriate site access locations along the private access roadway opposite Cottonwood Road, such that adequate spacing is provided between the site access and Lagimodiere Boulevard;
- Determine whether modification of the Lagimodiere Boulevard median is required to accommodate westbound left-turning traffic;
- Provide a northbound right-turn deceleration lane at the private access roadway; and
- Conduct intersection capacity and queuing analysis of the intersection of Lagimodiere Boulevard and Cottonwood Road/Private Access.

The results of the TIS indicated that the intersection of Lagimodiere Boulevard and Cottonwood Road will require signalization at build out of the above. Due to the current traffic volumes of the intersection (background traffic), the City of Winnipeg will pay a portion of the cost to signalize the intersection (30% of the estimated cost of $290,000). To safely signalize the intersection, and meet design criteria, the following geometric improvements were identified:

- Intersection turn-lane modifications
- Site access modifications

Red River Co-op will be responsible for the full cost of the needed geometric improvements, as agreed upon.

TRAFFIC SIGNALS WARRANT ANALYSIS

In recommending the installation of new traffic control signals, the Winnipeg Public Service follows the installation warrant criteria provided in the Transportation Association of Canada (TAC) *Manual of Uniform Traffic Control Devices for Canada*, a national standard which is based upon the conflicting pedestrian and vehicular volumes for the busiest six hours during a typical weekday. The minimum cross street volume threshold for consideration of traffic control signals is 75 vehicles per hour (excluding right turns) for at least six hours of the day. Generally, traffic control signals are recommended when the conflicting traffic volumes for the busiest six hours of a typical weekday produce a signal warrant of 100 points and fulfill the minimum cross street volume criterion to ensure that traffic signal control is an appropriate consideration throughout the day.

In most circumstances, the warrant calculations are completed using traffic volumes from a recent intersection turning movement count reflective of current and expected conditions. However, these signals are being evaluated to serve (partially) the Red River Cooperative gas bar development at the southeast corner of the Lagimodiere Boulevard and Cottonwood Road intersection. Based on the traffic projections and analysis completed as part of the *717 Lagimodiere Boulevard Red River Co-Op Transportation Impact Study* (WSP, 2018), the signal warrant analysis shows that once the development is completed the intersection will greatly exceed the required 100 warrant priority points and also meet the minimum cross street volume threshold of 75 vehicles per hour. Traffic signals at this intersection will provide a safe access point to the development and Cottonwood Road with acceptable traffic delays.

Collison Analysis and Video Conflict Analysis

The City of Winnipeg network screening results use state-of-the-art road safety methodologies to effectively estimate the safety performance of intersections and to identify higher-risk sites within the regional street network. Network screening results are summarized and reported using *level of safety service (LOSS)* which assesses the collision history of a site compared to predicted collision history from other sites with similar characteristics. Sites are categorized from LOSS I (the safest) to LOSS IV (the least safe). The Lagimodiere Boulevard and Cottonwood Road intersection is categorized as LOSS II which indicates a low to moderate potential for collision reduction.

The most recent five-years (2015-2019) of reported collisions were reviewed. During this time there were 43 collision events reported (30 property damage only, 13 injury collisions, and no fatalities). The following provides a summary of general collision trends:

- Intersection 90 degree collisions were the most common configuration representing 23% (10 of 43) of the total collisions and 54% (7 of 13) of injury collisions.

- Rear-end collisions were the second most common configuration representing 19% (8 of 43) of the total collisions and 15% (2 of 13) of injury collisions.

- There were no pedestrian or cyclist related collisions recorded in the database.

The City retained an independent consultant specializing in video conflict analysis to help identify the risk factors at the existing intersection. Video conflict analysis (VCA) is a diagnostic tool that uses algorithms to analyze recorded video data and identify near-miss interactions in the traffic stream. A key advantage of this approach is that issues can be identified proactively, before collisions and associated injuries and fatalities occur.

The VCA indicated that there is a large number of “high risk” events for motorists travelling northbound on Lagimodiere Boulevard and turning left onto Cottonwood Road into the Windsor Park area. The VCA also indicated that there was a large number of “high risk” events for motorists travelling eastbound on Cottonwood Road and turning left onto Lagimodiere Boulevard exiting the Windsor Park area.

Additional Considerations

Advantages and disadvantages of installing new traffic control signals at the intersection include:

Advantages

- Traffic control signals will provide a pedestrian walk phase as part of the cycle timing so that pedestrians from Windsor Park can safely cross to the east side of Lagimodiere Boulevard to access transit or other developments.

- Traffic control signals will provide a fully protected turn phase for motorists turning northbound left or southbound left from Lagimodiere Boulevard. This will reduce the likelihood of intersection 90 degree and left turn across path collisions (which are typically higher severity).

- Traffic control signals will provide a dedicated phase for eastbound and westbound motorists. This will reduce the likelihood of intersection 90 degree collisions (which are typically higher severity).

- Additional geometric improvements will occur at the intersection as part of the intersection upgrades (addition of a new northbound right turn lane and extending the southbound left turn lane).

Disadvantages

- Traffic control signals will result in more stops and more delay for the high volume of traffic on Lagimodiere Boulevard. This may result in more collisions, particularly rear-end collisions on Lagimodiere Boulevard at the intersection.

- Traffic control signals may draw more traffic to the intersection from the Windsor Park neighbourhood as it will provide a safe location to access Lagimodiere Boulevard from the neighbourhood. This may result in increased traffic volumes on Cottonwood Road and neighbourhood concerns with traffic volumes.

- Traffic control signals may encourage cut-through traffic between Fermor Avenue and Lagimodiere Boulevard. This may result in increased traffic volumes on Cottonwood Road and Westmount Drive and neighbourhood concerns with traffic volumes. Traffic calming measures could be explored if this does become a major concern.

Traffic Signal Summary

Based on the traffic projections and analysis completed as part of the *717 Lagimodiere Boulevard Red River Co-Op Transportation Impact Study* (WSP, 2018) the signal warrant analysis shows that once the development is completed the intersection will greatly exceed the required 100 warrant priority points and also meet the minimum cross street volume threshold of 75 vehicles per hour.

The major advantages of installing traffic signals here include improved safety for motorists turning onto/from Lagimodiere Boulevard and improved pedestrian network connectivity. Traffic control signals are recommended for the intersection.

FINANCIAL IMPACT

Financial Impact Statement

Date: June 23, 2021

Project Name:

First Year of Program **2021**

Cost Sharing Agreement with The City of Winnipeg and Red River Cooperative Ltd. for Improvements to the Intersection of Lagimodiere Boulevard and Cottonwood Road and Traffic Control Signal Installation

	2021	2022	2023	2024	2025
Capital					
Capital Expenditures Required	$ 91,246	$ -	$ -	$ -	$ -
Less: Existing Budgeted Costs	91,246	-	-	-	-
Additional Capital Budget Required	$ -	$ -	$ -	$ -	$ -
Funding Sources:					
Debt - Internal	$ -	$ -	$ -	$ -	$ -
Debt - External	-	-	-	-	-
Grants (Enter Description Here)	-	-	-	-	-
Reserves, Equity, Surplus	-	-	-	-	-
Other - Enter Description Here	-	-	-	-	-
Total Funding	$ -	$ -	$ -	$ -	$ -
Total Additional Capital Budget Required	$ -				
Total Additional Debt Required	$ -				
Current Expenditures/Revenues					
Direct Costs	$ 203,000	$ -	$ -	$ -	$ -
Less: Incremental Revenue/Recovery	207,246	-	-	-	-
Net Cost/(Benefit)	$ (4,246)	$ -	$ -	$ -	$ -
Less: Existing Budget Amounts	(4,246)	-	-	-	-
Net Budget Adjustment Required	$ 0	$ -	$ -	$ -	$ -

Additional Comments: The total estimated capital cost of $91,245 includes interest and overheads, and will be funded by the 2021 Traffic Engineering Improvement Program, (Project #1831000221). Direct costs of $203,000 are the estimated traffic signal costs to be paid by Red River Cooperative (RRC). Incremental Revenue/Recovery represents amounts to be recovered from RRC plus Departmental Engineering and Corporate Interest overheads.

"signed by J. Ruby, CPA, CA"

J. Ruby CPA, CA
Manager of Finance and Administration

CONSULTATION

This Report has been prepared in consultation with:

- Legal Services (as to legal issues)

OURWINNIPEG POLICY ALIGNMENT

01-1 City Building – Connect and Expand our Sustainable Transportation and Infrastructure Networks. Ensuring mobility for people of all ages and abilities with active transportation options.

Transportation Master Plan

Section 5.2 Active Transportation

Enabling strategies

n) Seek innovative and new partnerships to support AT programs and facilities

WINNIPEG CLIMATE ACTION PLAN ALIGNMENT

Strategic Opportunity #3 Advancing Sustainable Transportation 3.4 Increase Active Transportation Rates

Strategic Opportunity #3 Advancing Sustainable Transportation 3.5 Reduce Traffic Congestion

SUBMITTED BY

Department: Public Works
Division: Transportation
Prepared by: Colleen Flather, M.Sc., P. Eng., Traffic Management Engineer
Keenan Patmore, M.Sc., P.Eng., Regional Traffic Engineer
Date: June 23, 2021