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TAMRMS#: B05

INFORMATION REQUEST (IR) - Capital Project Charter ENGS-080 Meadowview Land & Railway Crossing

Requested by: Councillor Korotash

Date of Request: May 12, 2026

Date Response Due: June 12, 2026

Confidential Response: No

QUESTION

Could Administration please provide additional detail relating to Capital Project Charter ENGS-080 Meadowview Lane and Railway Crossing including:

- Relevant TIAs for both Riverside and Mission and potential impact on Mission/McKenney intersection;
- Whether non-McKenney Riverside access is "required";
- Additional detail on whistle cessation (to what extent does relocation guarantee whistle cessation and could this be achieved with changes to existing crossing);
- Additional details on Meadowview Ball Diamonds access with new realignment and how either alignment affects AHF Site Plan;
- Cost differential between upgrades and connection to existing crossing vs realignment and new crossing;
- Anticipated Meadowview Lane /Mission intersection design (lights or roundabout).

RESPONSE

General Background

Project charter ENGS-080 Meadowview Lane is a project and funding request to complete engineering, design, and construction of an urban 2-lane Neighbourhood (Collector) roadway (with pedestrian accommodation) that will connect Rankin Drive to Mission Avenue. There are three key beneficial outcomes associated with the delivery of this project:

- 1) Improved vehicular and pedestrian connectivity between the Riverside and Mission communities. For clarity, this connection does not generate new traffic; instead, it supports the

distribution and movement of traffic generated by new development.

- 2) Supports appropriate servicing and traffic operations for surrounding development. This roadway would allow for the eventual closure of the existing Meadowview Drive alignment through the Heritage Site, creating a more cohesive area intended for public / recreational use by removing conflicts with vehicle traffic.
- 3) Removal of the existing railway crossing on Meadowview Drive that is constrained to meet the requirements for whistle cessation, and replacement with a new railway crossing that does.
 - a. The current at-grade crossing of Meadowview Drive is the closest rail crossing to residential development and there are reported concerns about reduced quality of life due to the proactive train whistles.
 - b. Development is continuing in direct vicinity of the rail corridor in the Riverside community, directly adjacent to the rail crossing. It is anticipated that residents' concerns with negative train impacts are going to increase.
 - c. Due to site area grades and conditions, potential access changes of the ball diamonds result in substantial costs, with lower benefits.

The project is in a state of being "shovel-ready". Detailed design has been advanced to tender-ready status for construction. Engagement has been undertaken with directly affected residents in the area, primarily along Mission Avenue near the proposed Meadowview Lane / Mission Avenue intersection. The roadway design was also completed in collaboration with the developer (Genstar), and the grading of adjacent residential lots has been coordinated with the proposed Meadowview Lane grading.

Responses to this Information Request and background are intended to compile inputs and share background information that will account for the above project objectives and will align the following considerations of the Meadowview Lane connection and proposed project while addressing the specific questions asked within the IR:

- A. Riverside Area Structure Plan: Bylaw 1/2012 (approved May 6, 2025)
 - a. This area focuses on the Traffic Impact Assessments of the Area
 - b. Questions #1 and #2
- B. Heritage Sites Development Plan and area servicing
 - a. This area will focus on the influence of the planned development area for roadway services
 - b. Questions #4 and #5
- C. Influence of the roadway on Whistle Cessation and planned intersection controls
 - a. This area will focus on high level background of current issues, restrictions and constraints of potential improvements of the existing rail crossing versus relocation
 - b. Questions #3 and #6

A: Riverside Area Structure Plan: the following is an excerpt taken from Bylaw 1/2012 (approved May 6, 2025) Riverside Area Structure Plan (ASP)

Within the approved ASP for Riverside, the connection of Meadowview Lane is identified in key sections including:

4.11.1 Meadowview Lane

Meadowview Lane is planned to be extended to connect between Mission Avenue and Rankin Drive with a new railway crossing supporting whistle cessation. This includes closure of the existing Mission Avenue/Meadowview Drive intersection. Meadowview Lane will provide alternate access to the Riverside neighbourhood, and primary access to the Meadowview Ball Diamonds, the St. Albert Grain Elevator Park, and the future Heritage Park development.

3.2 Land Use Concept

The existing heritage buildings will form the nucleus of a Heritage Park in the eastern portion of the Plan Area. A new neighbourhood connection of Rankin Drive to Mission Avenue is proposed - by extending Rankin Drive to the east of Meadowview Lane and providing a north-south connection from Rankin Drive to Mission Avenue, with a proposed neighbourhood intersection accommodated northwest of the St. Albert Grain Elevator Park (future Heritage Sites) on Mission Avenue. This new roadway shall provide service and improved connectivity to the Riverside community to the west, as well as access to the Meadowview Ball Diamonds and Heritage sites to the east.

3.6.2 Heritage Park and Meadowview Ball Diamonds

A new neighbourhood connection off Rankin Drive to Mission Avenue is proposed, by extending Rankin Drive to the east of Meadowview Lane and providing a north-south connection from Rankin Drive to Mission Avenue, with a proposed neighbourhood intersection accommodated northwest of the St. Albert Grain Elevator Park (future Heritage Sites) on Mission Avenue. This new roadway shall provide service and improved connectivity to the Riverside community to the west, as well as access to the Meadowview Ball Diamonds and Heritage sites to the east.

Since its original approval in 2005, the Riverside ASP has been amended several times for land use changes. In support of an amendment proposed in 2020, a Traffic Impact Assessment (TIA) was prepared that considered the impacts / benefits along McKenney Avenue, with and without the inclusion of the Meadowview Lane connection. Key findings of the assessment included:

- a) The inclusion of the Meadowview Lane connection would divert around 2,700 vehicles per day (vpd) away from McKenney Avenue, east of Riverside Drive, while also reducing projected traffic volumes on Riverside Drive, Rose Gate, and Rankin Gate. At each of the following intersections, the assessment found:
 - McKenney Avenue @ Rankin Gate intersection - Overall intersection operations did not change much with or without the Meadowview Lane connection.
 - McKenney Avenue @ Rose Gate - Operations of the westbound left turn during the PM peak hour improved with the inclusion of the Meadowview Lane connection; however, the overall intersection operations did not differ much.
 - McKenney Avenue @ Riverside Drive -
 - i. Without Meadowview Lane, a dedicated westbound left-turn phase is anticipated to be required, which decreases the capacity and level of service of the

eastbound through movements.

ii. With the Meadowview Lane connection, a dedicated westbound left-turn phase is not anticipated to be required, which improves operations of the eastbound through movements. However, overall intersection operations are projected to be similar between the two scenarios.

- McKenney Avenue @ Mission Avenue - Although this intersection was not directly analyzed within the 2020 TIA, the inclusion of Meadowview Lane was identified to reduce daily traffic volumes to/from McKenney Avenue east of Riverside Drive. In turn, it is expected to reduce the through traffic on McKenney Avenue through the Laydon Drive and Mission Avenue intersections. Both intersections are being monitored by administration as potential candidates for traffic signals in the future, and while the inclusion of Meadowview Lane may not eliminate the future need for traffic signals, it is expected to delay necessary improvements.

During detailed design of Meadowview Lane, additional traffic analysis was undertaken to better understand projected traffic distribution, which is appended for reference. This work was completed largely in response to residents' concerns about potential traffic increases, particularly on Mission Avenue. The analysis compared projected traffic volumes on the surrounding Mission community road network under two scenarios: with the Meadowview Lane connection in place and without the connection. Key findings and considerations are summarized below.

1. Mission Avenue: from McKenney Avenue to Malmo Avenue
 - a. Without Meadowview Lane Connection = 7,010 vehicles per day (vpd)
 - b. With Meadowview Lane Connection = 6,150 vpd
 - c. Results:
 - i. The north section of Mission Avenue will experience reduced traffic volumes and the McKenney Avenue at Mission Avenue intersection is expected to operate at a better level of service with the connection of Meadowview Lane.
2. Mission Avenue: from Malmo Avenue to Meadowview Lane
 - a. Without Meadowview Lane Connection = 5,210 vpd
 - b. With Meadowview Lane Connection = 4,480 vpd
 - c. Results:
 - i. 15% decrease in traffic on this segment with the completion of the Meadowview Lane connection.
3. Mission Avenue: from Meadowview Lane to Perron Street
 - a. Without Meadowview Lane Connection: 5,210 vpd
 - b. With Meadowview Lane Connection: 5,210 vpd
 - c. Results:
 - i. With or Without Meadowview Lane, this section of Mission Avenue is expected to experience equivalent traffic demands.
4. St Vital Avenue: from Mission Avenue to Malmo Avenue
 - a. Without Meadowview Lane Connection: 1,100 vpd
 - b. With Meadowview Lane Connection: 1,230 vpd

- c. Results:
 - i. The daily volumes on this roadway segment are expected to increase slightly with the inclusion of Meadowview Lane but continue to operate well.
- 5. St. Vital Avenue: Malmo Avenue to St. Albert Trail
 - a. Without Meadowview Lane Connection: 2,550 - 3,425 vpd
 - b. With Meadowview Lane Connection: 2,550 - 3,425 vpd
 - c. Results:
 - i. The daily volumes on this roadway segment are expected to remain the same with or without the Meadowview Lane connection.

Relevant IR Questions:

1. *Relevant TIAs for both Riverside and Mission and potential impact on Mission/McKenney intersection;*

The above information summarizes traffic analysis findings on the surrounding area in the scenario “with” or “without” connection of Meadowview Lane to Mission Avenue. The most recent traffic analysis reported in a Technical Memo for the Mission Avenue area is shared as an attachment to this report.

2. *Whether non-McKenney Riverside access is "required";*

Technically, providing Meadowview Lane from a transportation network operations perspective is not required; however, when compared to projected traffic volumes without Meadowview Lane, it is expected to beneficially reduce volumes on McKenney Avenue (east of Riverside Drive), Mission Avenue (south of McKenney Avenue), Riverside Drive (south of McKenney Avenue), Rose Gate (south of McKenney Avenue), and Rankin Gate (south of McKenney Avenue).

B. Heritage Sites Development Plan and area servicing

While traffic analysis has established expected benefit from the connection of Meadowview Lane, a key impetus for the delivery of Meadowview Lane is associated with planned development in the community and the servicing needs and function of the Heritage Site and Meadowview Ball Diamonds.

There is a functional plan in place for the expansion of the Grain Elevator Heritage Site, which notes that the long-term development of the site is dependent on the removal of Meadowview Drive. This requires the development of Meadowview Lane to provide access to the Heritage Site. With Meadowview Lane constructed, the Mission Avenue/Meadowview Drive intersection is to be closed.

The proposed land use, site plan, and overall layout create a need to remove vehicle traffic from this recreational area, which is used primarily by vulnerable road users, thereby requiring an alternate connection (i.e. Meadowview Lane) to provide access to/from the Heritage Site and the Meadowview Ball Diamonds.

On an interim basis, Meadowview Drive will continue to connect to Meadowview Lane and provide access to the Meadowview Ball Diamonds. However, ultimate access to the ball diamonds is planned

to come off Meadowview Lane somewhere south of Rankin Drive, which will ultimately remove the conflict between the Heritage Site development and access to the ball diamonds. The exact location of this new ball diamond access will need to be determined through future detailed design of the Heritage Site. Attached to this Information Request report is the Heritage Site Functional Plan.

Because of the above considerations, no formal design or investigation of costs for improving or upgrading Meadowview Drive as a separate project has been carried out. The site improvements and changes to Meadowview Drive would occur as part of the potential staged development of the Heritage Site.

Relevant IR Questions:

- 4. Additional details on Meadowview Ball Diamonds access with new realignment and how either alignment affects AHF Site Plan;*

The above summarizes the details regarding the Meadowview Ball Diamonds and the Heritage Site Functional Plan, while the proposed site plan for the Heritage Site is appended for reference.

- 5. Cost differential between upgrades and connection to existing crossing vs realignment and new crossing;*

Administration has not developed a cost comparison of the new aligned Meadowview Lane compared to the maintenance of Meadowview Drive because maintaining the existing is not feasible with planned development of the Heritage Site.

C. Whistle Cessation and Intersection Control at Meadowview Lane @ Mission Avenue

C.1: Whistle Cessation

Administration has been actively pursuing whistle cessation since Council provided direction in 2015 via the Whistle Cessation Bylaw (15/2016), in response to ongoing public concerns regarding quality of life and the intermittent but recurring use of train whistles along the CN operated Sangudo Subdivision rail line. With Bylaw 15/2016, Council has approved whistle cessation at all existing at-grade railway crossings within St. Albert. However, while the bylaw authorizes whistle cessation, implementation cannot proceed until site inspections are completed and CN, as the rail operator, confirms its support.

Current crossings that have whistle cessation approved and enacted include the at-grade crossings of:

- LeClair Way
- Levasseur Road
- McKenney Avenue
- Ray Gibbon Drive

Crossings that are supported in the Bylaw, but have not yet been supported by CN yet include:

1. Riel Drive - This site is in process of further review from CN following onsite improvements being completed that have, from Administration's view, addressed requirements.

2. Meadowview Drive - This site is not supported by CN due to constraints and operational risk associated with the existing access area to the ball diamonds.
3. Range Road 260 - This site is planned for crossing improvements that will occur with the development of Lakeview Business Park and the planned realignment of Range Road 260.
4. Township Road 540A - Upgrade to this site will be identified as part of ongoing preliminary design for the portion of Twp Rd 540A between the west city limit and Cherot Boulevard. Crossing improvements will be implemented when this portion of Township Road 540A is urbanized and upgraded.

In terms of the specific crossing of Meadowview Drive, there exists an issue with the proximity of the ball diamonds access to the rail line, leading CN to not support whistle cessation at this site without addressing the said issue. In response, actions needed to support the potential of whistle cessation at this crossing were investigated by Administration in 2016. For the key issue of the ball diamond site access, the severe grading in the area restricted feasible locations to relocate the access and the estimated costs to do so were valued at \$540,000 in 2016 dollars. The estimated costs of construction were high and in consideration of the future Heritage Site plans, the alternative of relocating the crossing to Meadowview Lane was preferred. The influence of the decision largely fell to the benefits of the new connection to the Riverside community and servicing needs of the future Heritage Site, while the component of Whistle Cessation being addressed was an added benefit to the new corridor.

CN has been involved in the detailed design of the Meadowview Lane project and has provided conceptual support for Whistle Cessation to be enacted once the new crossing is completed and the existing Meadowview Drive crossing is closed.

The costs of the project, specifically to construct the new at-grade rail crossing are \$756,000 and the decommissioning of the old crossing is \$150,000. This equates to \$906,000 of the total construction estimate of \$3,376,000 to deliver the Meadowview Lane project.

C.2: Intersection Control at Meadowview Lane at Mission Avenue

During conceptual design of Meadowview Lane, a roundabout was considered and investigated as an effective intersection treatment that would well service traffic needs and act as an influence on driver speeds and behaviour through Mission Avenue.

Through progression of design work, challenges were faced incorporating front driveway access to various parcels into the roundabout design. In turn, the intersection was re-analyzed as an unsignalized T-intersection with stop control on Meadowview Lane. This treatment was estimated to operate well at full build-out of the area while also addressing the design challenges identified above. Therefore, the Meadowview Lane / Mission Avenue intersection has been designed as an unsignalized T-intersection with stop control on Meadowview Lane. While not envisioned with initial construction, a westbound left-turn lane may be developed within the existing Mission Avenue carriageway if needed in the future.

Relevant IR Questions:

5. *Cost differential between upgrades and connection to existing crossing vs realignment and new crossing;*

As per the above, background information is shared on the whistle cessation considerations and constraints of whistle cessation from the existing layout of Meadowview Drive.

6. *6. Anticipated Meadowview Lane /Mission intersection design (lights or roundabout);*

As per above, the intersection of Meadowview Lane at Mission Avenue is designed and planned for construction as a t-intersection with side street stop control on Meadowview Lane.

E: Summary of Information Request Questions:

1. Information shared reflects on the analysis results of traffic impacts on the surrounding area in the scenario “with” or “without” connection of Meadowview Lane to Mission Avenue. The overall results anticipate lower volumes of traffic at the intersection of McKenney Avenue and Mission Avenue, as well as along the north portion of Mission Avenue, with minimal traffic demand impacts on the south portion of Mission Avenue with the connection of Meadowview Lane completed.
2. Technically, providing Meadowview Lane from a transportation network operations perspective is not required. By this, it means that from a Traffic Impact Assessment perspective the network intersections operate at acceptable levels of service without the connection of Meadowview Lane.

However, the connection is expected to beneficially reduce traffic volumes on McKenney Avenue (east of Riverside Drive), Mission Avenue (south of McKenney Avenue), Riverside Drive (south of McKenney Avenue), Rose Gate (south of McKenney Avenue), and Rankin Gate (south of McKenney Avenue). Conversely, it is also not expected to add significant traffic volumes to any roads in the Mission area.

3. Background information is provided regarding the considerations and constraints associated with whistle cessation at the existing Meadowview Drive crossing. The findings indicate that maintaining Meadowview Drive (with the rail crossing) presents significant barriers, offers a negative cost-benefit outcome and provides limited functional value when considered in context of future land use plans.
4. As per the Heritage Site Functional Plan, long-term access to the Meadowview Ball Diamonds is planned on Meadowview Lane, somewhere south of Rankin Drive / existing Meadowview Drive.
5. Administration has not developed a cost comparison of the new aligned Meadowview Lane compared to the maintenance of Meadowview Drive because maintaining the existing is not feasible with planned development of the Heritage Site.
6. The intersection of Meadowview Lane at Mission Avenue is designed and planned for construction as a t-intersection with side street stop control on Meadowview Lane.

Report Date: May 29, 2026
Author(s): Dean Schick, Transportation Manager
Department: Engineering
Department Director: Dawny George
Managing Director: Adryan Slaght
Chief Administrative Officer: William Fletcher

Approximate time preparing response: ~13 hours

Attachment: Estimated Daily Traffic Volume Comparison With / Without Meadowview Lane

Mission Neighbourhood - Estimated Daily Traffic Volumes (With and Without Meadowview Lane)

Roadway	Segment / Location	Existing (vpd)	Future (w/ Full Riverside Build-out)		
			Without Meadowview Lane (vpd)	With Meadowview Lane (vpd)	Variance with Meadowview Lane (vpd)
Mission Avenue	McKenney Avenue to Malmo Avenue	5,000	7,010	6,150	-860
	Malmo Avenue to Meadowview Lane	3,500	5,210	4,480	-730
	Meadowview Lane to St. Vital Avenue	3,500	5,210	5,340	130
	St. Vital Avenue to Perron Street	3,910	5,420	5,420	0
St. Vital Avenue	Mission Avenue to Malmo Avenue	900	1,100	1,230	130
	Malmo Avenue to Mount Royal Drive	2,050	2,550	2,550	0
	Mount Royal Drive to St. Albert Trail	3,100	3,425	3,425	0
Malmo Avenue	Mission Avenue to St. Vital Avenue	1,000	1,300	1,170	-130

TECHNICAL MEMO

To Sean Willis Transportation Planning Engineer	Prepared by Jarrett Zilinski, P.Eng. Project Engineer
	Reviewed by Elaine Lau, P.Eng., PTOE Senior Traffic Engineer
Re Neighbourhood Traffic Distribution Assessment	Date January 22, 2026

1. Introduction

The City of St Albert (City) requested support from McElhanney to complete traffic analysis of the present and future impacts of the Riverside neighborhood on Mission Avenue **with** and **without** the proposed Meadowview Lane connection in-place. McElhanney met with the City as part of the design process to determine the scope of this study, with the City providing the necessary data to complete the analysis. The City has requested that McElhanney review and independently determine the traffic impacts of the following corridors and scenarios:

- **Without** the proposed Meadowview Lane connection in-place, how much of the traffic generated by the Riverside neighborhood is destined to/from Mission Avenue and St Vital Avenue and the impacts on the surrounding transportation network.
- **With** the proposed Meadowview Lane connection in-place, how much traffic is projected to use the new intersection (Meadowview Lane & Mission Avenue), how much traffic is projected to continue to use the McKenney Avenue to Mission Avenue connection, and what impact is this projected to have on traffic volumes on Mission Avenue, St. Vital Avenue and the overall local and collector roadways networks?

2. Reference Studies

The 2015 Riverside ASP Traffic Impact Assessment (TIA) was provided as background information and data and was provided the team to review. In addition to this TIA, supplementary data sources were provided and are summarized below.

Riverside Area Structure Plan Amendment Traffic Impact Assessment (ASP TIA)

This study updated the 2015 Riverside ASP TIA to account for changes in land use, such as additional commercial and school sites. It analyzed the impacts of a vehicular connection between Rankin Drive and Mission Avenue under two scenarios—connection open and closed—and concluded that the roadway network could accommodate projected traffic with acceptable levels of service. Recommendations included upgrades to Rankin Drive if the connection was established and considerations for mitigating shortcutting traffic.

Other data provided includes the following

- Turning Movement Counts
 - McKenney Avenue/Rose Gate (May 2023, April 2024, September 2024)
 - McKenney Avenue/Riverside Drive (May 2023, June 2024)
 - Mission Avenue/Malmo Avenue (December 2023, May/June 2024)
 - St Vital Avenue/Malmo Avenue (May/June 2024)
 - St Vital/Mont Clare Place (May 2024)
 - StreetLight Data – Top Routes To/From Riverside (Jan 1, 2022 – April 30, 2022)
 - StreetLight Data – Mission Avenue/Perron Street Turning Movement Count

3. Road Classification Capacity

Based on St. Albert's Municipal Engineering Standards roadway classifications are to follow the guidelines within St. Albert complete streets standards and/or TAC guidelines. The following table summarizes the general approximate AADT and peak hour roadway capacities derived from TAC.

Table 1: Road Classification Typical Capacity

Road Classification	AADT Capacity
Residential Local	<1000
Industrial/Commercial Local	<3,000
Residential Collector	<8,000
Industrial/Commercial Collector	<12,000
Minor Divided Arterial	<20,000
Major Divided Arterial	<30,000

Both Mission Avenue and St. Vital Avenue are operating as residential collectors in the City's transportation network. Based on McElhanney's traffic engineering experience neighbourhood collectors such as these roadways can generally operate well with peak hour volumes under 600 vehicles/hour/lane. As a conservative estimate for acceptable levels of service, this factors to 6,000 ADT ($ADT=(AM+PM)x$ or $ADT = (Peak\ hour)y$ – see next section for further details). This is in alignment with the City's Municipal Engineering Standards which references that "lot layouts shall be such that driveways do not connect directly to any arterial roadways or major collector roadways with an estimated ultimate traffic volume of more than 6000 vehicles per day in residential areas" (Section 3.3.1.7.1). It is however noted that some sections of these corridors do not have driveways and have enhanced collector cross-section features that may allow for an increased capacity, likely closer to 8,000 ADT. These segment with better capacity are primarily on the east side of the neighbourhood and include St Vital Avenue between St Albert Trail and Mt Royal Drive/Mont Clare Place and Mission Avenue east of Mt Royal Drive.

As there are driveways present on both St Vital Avenue and Mission Avenue, it is recommended that ultimate daily volumes should aim to remain under 6,000 ADT where possible, with some ability to carry more traffic towards the east part of the neighbourhood.

4. Existing Traffic Volumes

4.1. EXISTING MISSION AVENUE AND ST. VITAL AVENUE OPERATIONS

Based on available traffic count data, the existing (2024) daily traffic volumes on the relevant road network is illustrated in *Table 2*, *Table 3* and *Figure 1*. As shown, the existing daily volumes on Mission Avenue and St. Vital Avenue fall below their theoretical volume threshold, while Malmo Avenue is at its theoretical threshold.

As a developing neighbourhood, Riverside is already contributing to the existing traffic volumes on Mission Avenue, Malmo Avenue and St. Vital Avenue. Based on available data including traffic counts and Streetlight Data, key notes include:

- Approximately 17% of all Riverside generated vehicle trips located east of Riverside Drive on McKenney Avenue, are destined to/from Mission Avenue, south of McKenney Avenue. This equates to Riverside accounting for approximately 450 vehicles per day on Mission Avenue between Malmo Avenue and McKenney Avenue.
- Of these vehicles, approximately 25% are destined to/from St. Vital Avenue (West of Mt Royal Drive).
- Of the 25% of vehicles destined to/from St. Vital Avenue (West of Mt Royal Drive), 60% connect with St. Vital via Malmo Avenue, with the other 40% access St. Vital Avenue from the Mission Avenue/St. Vital Avenue intersection.
- Of the 25% destined to/from St. Vital Avenue (West of Mt Royal Drive), only about 25% of that traffic continues to/from St. Vital Avenue east of Mt Royal Drive.

Table 2: Existing Mission Avenue Daily Traffic Volumes

Mission Avenue Road Segment	Northbound	Southbound
	Daily Traffic Volumes (ADT)	
McKenney Avenue to Malmo Avenue	2500 (50%)	2500 (50%)
	5,000	
Malmo Avenue to St Vital Avenue	1750 (50%)	1750 (50%)
	3500	
St Vital Avenue to Perron Street	2345 (60%)	1563 (40%)
	3908	

Table 3: Existing St Vital Avenue Daily Traffic Volumes

St. Vital Avenue Road Segment	Eastbound	Westbound
	Daily Traffic Volumes (ADT)	
Mission Avenue to Malmo Avenue	450 (50%)	450 (50%)
	900	
Malmo Avenue to Mt. Royal Drive	1025 (50%)	1025 (50%)
	2050	
Mt. Royal Drive to St. Albert Trail	1550 (50%)	1550 (50%)
	3,100	



Figure 1: Existing Mission Neighbourhood Daily Traffic Volumes

4.2. ST VITAL AVENUE AND MISSION AVENUE SUMMARY

Existing road classifications are based on *Figure 3-6 2015 Existing Road Network* from the Existing Transportation Master Plan. Volume to capacity (V/C) ratio is a metric often used for corridor levels of service to determine the operations of a roadway segment, as the V/C ratio approaches 1 more congestion and less fluid traffic flows are anticipated. Generally peak hour ratios below 0.5 are considered free flow, 0.5-0.75 indicates some congestion but generally still free-flowing, 0.75-0.9 indicates congestion is present and corridor is nearing capacity and finally ratios over 0.9 indicate significant congestion is projected. V/C Ratio is typically determined using peak hour volumes. As a means of confirming the above analysis is valid and that operations were at acceptable levels of service, peak hour V/C Ratios were reviewed assuming a peak hour carries approximately 10% of daily volumes based on a formula of (AM+PM)x where x is 5 and AM/PM peaks are approximately equal.

The following table summarized the general corridor parameters of Mission Avenue and St Vital Avenue and gives an indication of current operations and the estimated capacity of these roadways to review with/without the presence of the Meadowview Lane connection.

Table 4: Mission Avenue & St. Vital Avenue Existing Operations

Roadway Name	Road Classification	Existing ADT	Notes
Mission Avenue¹	Residential Collector	McKenney Ave to Malmo Ave: 5000	Estimated V/C Ratio is 0.8 = 500/600 – Acceptable, some operational delays
		Malmo Ave to St Vital Ave: 3500	Estimated V/C Ratio is 0.58 = 350/600 - Acceptable
		St Vital Ave to Perron St: 3908	Estimated V/C Ratio is 0.65 = 391/600 - Acceptable
St Vital Avenue¹	Residential Collector	Mission Ave to Malmo Ave: 900	Estimated V/C Ratio is 0.15 = 90/600 - Acceptable
		Malmo Ave to Mt Royal Dr: 2,050	Estimated V/C Ratio is 0.34 = 205/600 - Acceptable
		Mt Royal Dr to St Albert Trail: 3,100	Estimated V/C Ratio is 0.52 = 310/600 - Acceptable

1 – Mission Avenue and St Vital Avenue data sourced from St Albert Traffic Count GIS platforms and provided traffic counts. Volumes are shown as of 2024, therefore it is assumed this is without Meadowview Lane connection.

Based on the above values all segments of both corridors have ample capacity and are expected to operate at acceptable levels of service under existing conditions.

5. Projected Future Volumes

Based on the 2020 Riverside ASP TIA, at full build-out Riverside is projected to generate 14,465 vpd (east of Riverside Drive). Whether the Meadowview Lane connection exists or not, there is a draw between Riverside and Mission. The following sections highlight the projected traffic volumes on the Mission roadway network with and without Meadowview Lane.

Using the existing vehicle distribution described in Section 4, Riverside is estimated to contribute 2,460 vpd to the Mission neighbourhood.

5.1. WITHOUT MEADOWVIEW LANE CONNECTION

Without Meadowview Lane, traffic to/from Riverside to Mission will continue to use the existing McKenney Avenue/Mission Avenue intersection. Applying the identified distributions in [Section 4, Table 5](#) and [Figure 2](#) illustrate the projected traffic to/from Riverside on key Mission roadways along with the total trips including existing traffic (with adjustments to avoid double counting of riverside generated traffic)

Table 5: Mission Avenue and St Vital Avenue Daily Traffic Volumes at Full Build Out – Without Meadowview Lane

Mission Avenue Road Segment	Total Riverside Generated Daily Traffic Volumes (ADT)		Adjusted Total Daily Traffic Volumes (ADT)	
	Northbound	Southbound	Northbound	Southbound
McKenney Avenue to Malmo Avenue	1230 (50%)	1230 (50%)	3505 (50%)	3505 (50%)
	2460		7010	
Malmo Avenue to St Vital Avenue	1255 (60%)	836 (40%)	3217 (60%)	2,084 (40%)
	2091		5211	
St Vital Avenue to Perron Street	1786 (50%)	1787 (50%)	2709 (50%)	2709 (50%)
	3573		5418	
St Vital Avenue Road Segment	Total Riverside Generated Daily Traffic Volumes (ADT)		Adjusted Total Daily Traffic Volumes (ADT)	
	Eastbound	Westbound	Eastbound	Westbound
Mission Avenue to Malmo Avenue	123 (50%)	123 (50%)	551 (50%)	550 (50%)
	246		1101	
Malmo Avenue to Mt Royal Drive	308 (50%)	307 (50%)	1275 (50%)	1275 (50%)
	615		2550	
Mt Royal Drive to St. Albert Trail	200 (50%)	200 (50%)	1731 (50%)	1731 (50%)
	400		3425	



Figure 2: Riverside Full-Build Out - Mission Neighbourhood Daily Traffic Volumes Without Meadowview Lane

5.2. WITH MEADOWVIEW LANE CONNECTION

With Meadowview Lane, the overall desire line between Riverside and Mission remains; however, there is an alternate route available reducing some of the reliance on McKenney Avenue and the McKenney Avenue/Mission Avenue intersection.

The Meadowview Lane connection is anticipated to have limited use by residents of Riverside located north of McKenney Avenue, and the greatest use by residents of Riverside located south of McKenney Avenue and east of Rose Gate. These lands make up approximately 35% of all of Riverside (i.e. 170 acres of 495 total acres). It is assumed that this percentage of the total Riverside traffic destined to/from Mission will use Meadowview Lane (i.e. 35% of 2,460 vpd = 860 vpd) instead of McKenney Avenue. Re-distributing the information within Section 4 and 5.1, along with the above defined information, the impacts on the transportation network with the addition of Meadowview Lane is shown below in [Table 6](#) and [Figure 3](#).

Table 6: Mission Avenue and St Vital Avenue Daily Traffic Volumes at Full Build Out – With Meadowview Lane

Mission Avenue Road Segment	Total Riverside Generated Daily Traffic Volumes (ADT)		Adjusted Total Daily Traffic Volumes (ADT)	
	Northbound	Southbound	Northbound	Southbound
McKenney Avenue to Malmo Avenue	1300 (50%)	1299 (50%)	3075 (50%)	3074 (50%)
	1599		6149	
Malmo Avenue to Meadowview Lane	815 (60%)	544 (40%)	2687 (60%)	1792 (40%)
	1359		4479	
Meadowview Lane to St. Vital Avenue	1332 (60%)	888 (40%)	3102 (60%)	2068 (40%)
	2220		5170	
St Vital Avenue to Perron Street	923 (50%)	922 (50%)	2709 (50%)	2709 (50%)
	1845		5418	
St Vital Avenue Road Segment	Total Riverside Generated Daily Traffic Volumes (ADT)		Adjusted Total Daily Traffic Volumes (ADT)	
	Eastbound	Westbound	Eastbound	Westbound
Mission Avenue to Malmo Avenue	209 (50%)	209 (50%)	637 (50%)	636 (50%)
	418		1273	
Malmo Avenue to Mt Royal Drive	308 (50%)	307 (50%)	1275 (50%)	1275 (50%)
	615		2550	
Mt Royal Drive to St. Albert Trail	200 (50%)	200 (50%)	1713 (50%)	1712 (50%)
	400		3425	



Figure 3: Riverside Full-Build Out - Mission Neighbourhood Daily Traffic Volumes With Meadowview Lane

6. Network Impact Discussion

6.1. STUDY ANALYSIS

Table 7 provides a comparative summary of the projected traffic volumes with and without Meadowview Lane, with the following key highlights:

Mission Avenue:

- Without Meadowview Lane, the daily volumes on Mission Avenue between McKenney Avenue and Malmo Avenue are anticipated to reach 7,010 vpd, which is beyond the typical daily volume threshold of 6,000 vpd on a collector roadway with front driveways. With Meadowview Lane, the projected daily volumes on this segment of road is 6,150 vpd, slightly above the daily volume threshold.
- In turn, intersection operations at the McKenney Avenue/Mission Ave intersection are expected to be better with Meadowview Lane than without Meadowview Lane. Regardless, the City will need to continue to monitor this intersection as a candidate for signalization.
- Without Meadowview Lane, the daily volumes on Mission Avenue between Malmo Avenue and Meadowview Lane are anticipated to reach 5,211 vpd, which represents a 49% growth in daily volumes. Conversely, with Meadowview Lane, this segment is estimated to experience daily volumes of 4,479 vpd, which is an improvement. In both cases, the daily volumes fall within the typical daily volume threshold.
- From Meadowview Lane to Perron Street, the daily volumes are expected to remain relatively similar regardless of whether Meadowview Lane connects to Mission Avenue or not. In both cases, the daily volumes fall within the typical daily volume threshold.

Malmo Avenue:

- Without Meadowview Lane, the daily volumes on Malmo Avenue between Mission Avenue and St. Vital Avenue are expected to reach 1,300 vpd with full build-out of Riverside Drive. This is a 30% increase above existing traffic on Malmo Avenue bringing the expected volumes above the typical daily volume threshold of a local residential roadway. Conversely, with Meadowview Lane, this roadway is estimated to experience daily volumes of 1,170 vpd, which is still higher than the typical daily volume threshold but an improvement compared to without Meadowview Lane.
- It is noted that much of the draw of traffic to Malmo Avenue is related to vehicles to/from the St. Albert Catholic High School. However, it is understood that the high school is reaching the end of its life cycle with the potential that it is closed and relocated in the future. In the interim, the City has recently implemented traffic calming measures on Malmo Avenue to reduce speeds and improve safety.

St. Vital Avenue:

- From Mission Avenue to St. Albert Trail, the daily volumes are expected to remain relatively similar with or without Meadowview Lane, with a slight increase noted on the segment between Mission Avenue and Malmo Avenue when the Meadowview Lane connection is provided. In both cases, the traffic volumes are expected to continue to fall well below the daily volume threshold of a residential collector roadway.

6.2. CONCLUSION

Regardless of whether the Meadowview Lane connection with Mission Avenue exists or not, there is and will continue to be a draw of traffic between Mission and Riverside. Overall, the Meadowview Lane connection is not anticipated to significantly negatively impact traffic volumes or operations in Mission. In fact, it is expected to reduce volumes and offer better operations on the portion of Mission Avenue between Meadowview Lane and McKenney Avenue, as well as reduce volumes on Malmo Avenue.

Table 7: Projected Traffic Volume Comparison (With & Without Meadowview Lane)

Roadway	Location	Existing Daily Traffic Volumes	Existing Riverside Traffic Generated	Existing Traffic Without Riverside	Total Riverside Traffic Generated (w/o ML)	Total Riverside Traffic Generated (w/ ML)	Total (w/o ML)	Total (w/ ML)	Growth from existing w/o ML	Growth from existing w/ ML	Impact of Meadowview lane
Mission Ave	McKenney Ave to Malmo Ave	5000	450	4550	2460	1599	7010	6149	40%	23%	-17%
	Malmo Ave to Meadowview Lane	3500	380	3120	2091	1359	5211	4479	49%	28%	-21%
	Meadowview Lane to St. Vital Avenue	3500	380	3120	2091	2220	5211	5340	49%	53%	4%
	St. Vital Avenue to Perron Street	3908	335	3573	1845	1845	5418	5418	39%	39%	0%
St. Vital Ave	Mission Ave to Malmo Ave	900	45	855	246	375	1101	1230	22%	37%	14%
	Malmo Ave to Mt Royal Dr	2050	115	1935	615	615	2550	2550	24%	24%	0%
	Mt Royal Dr to St. Albert Trail	3100	75	3025	400	400	3425	3425	10%	10%	0%
Malmo Ave	Mission Ave to St. Vital Ave	1000	70	930	369	240	1299	1170	30%	17%	-13%

1 – Meadowview Lane is abbreviated to ML

Assumptions:

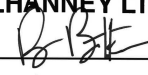
1. 17% of all Riverside site generated trips located east of Riverside Drive are destined to/from Mission Avenue (South of McKenney Avenue).
2. 25% of Riverside site generated trips on Mission Avenue (South of McKenney Avenue) are destined to/from St. Vital Avenue (West of Mt Royal Drive).
 - a. Of the 25% only 65% continue to/from the east of Mt Royal Drive.
 - b. Of the 25% that are destined to/from St. Vital Ave (West of Mt Royal Drive), 60% use Malmo Ave while 40% use St. Vital Ave (West of Malmo Ave).
3. With Meadowview Lane in place, 35% of Riverside site generated trips destined to/from Mission will now use this new connection. The remaining 65% will continue to come from McKenney Ave.
4. Riverside is already contributing to the existing traffic volumes on Mission Ave, Malmo Ave and St. Vital Ave. It is estimated at approximately 450 vpd south between McKenney Ave & Malmo Ave. Using the same percentages described above, the existing contributions from Riverside on Mission Ave and St. Vital Ave needs to be discounted.

7. Closure

This technical memorandum has been prepared by McElhanney for the benefit of the City.

The information and data contained herein represent McElhanney's best professional judgment in light of the knowledge and information available to McElhanney at the time of preparation. McElhanney denies any liability whatsoever to other parties who may obtain access to this report for any injury, loss or damage suffered by such parties arising from their use of, or reliance upon, this document or any of its contents without the express written consent of McElhanney or the City of St Albert.

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Attachment: Heritage Site Functional Plan

