

VALLEY LINE WEST 2025 ROADWAY CONSTRUCTION OPTIONS AND IMPACTS

Recommendation

That the February 11, 2025, Integrated Infrastructure Services report IIS02745, be received for information.

Requested Action	Information only		
ConnectEdmonton's Guiding Principle	ConnectEdmonton Strategic Goals		
CONNECTED This unifies our work to achieve our strategic goals.	Urban Places		
City Plan Values.	ACCESS		
City Plan Big City Move(s)	A community of communities	Relationship to Council's Strategic Priorities	Mobility network
Corporate Business Plan	Transforming the future		
Council Policy, Program or Project Relationships	<ul style="list-style-type: none"> C569 - Optimization of the Transportation System Network 		
Related Council Discussions	<ul style="list-style-type: none"> Integrated Infrastructure Services report IIS02750, Transportation Projects Traffic Management (Q1 2025) 		

Previous Council/Committee Action

At the October 22, 2024, City Council meeting, the following motion was passed:

That Administration provide a report on the steps that need to be taken to ensure that the road construction work from 107th Street to the west end of the Valley Line West LRT is complete by November 30, 2025.

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Executive Summary

- The Valley Line West LRT project is now entering its fourth year of construction.
- Marigold Infrastructure Partners (MIP) and the City have developed a plan to accelerate roadwork in 2025 to reduce the overall timeframe of traffic restrictions in key areas by more than half for commuters, residents and businesses.
- The accelerated roadwork plan involves a three-phased approach from April to November, and would continue to benefit from the significant progress on construction in 2024.
- The accelerated roadwork would result in significant traffic restrictions at key intersections and along busy roadway corridors.
- The successful completion of accelerated roadwork would result in the majority of project roadwork in key areas being completed in 2025. This would allow MIP to predominantly focus efforts in 2026 on trackwork and systems infrastructure.
- For the accelerated roadwork plan to proceed, a separate written agreement would be needed between MIP and the City to allow for increased traffic restrictions that are currently not authorized under the Project Agreement.
- MIP's proposed roadwork schedule for 2025 is ambitious, but they have made a commitment to work extended hours and have dedicated crews at key intersections to maintain the schedule.
- A public communications plan would be developed to provide advanced notice about upcoming traffic restrictions along with alternative travel routes and wayfinding signage.

REPORT

Valley Line West is a major transformational project to prepare Edmonton for a future of two million residents. This \$2.6 billion project is the single largest infrastructure project undertaken by the City of Edmonton. Marigold Infrastructure Partners (MIP) was awarded the contract and signed the Project Agreement in late 2020 with design work starting immediately thereafter. In 2021, third party utility providers conducted utility relocations and site preparation work along the majority of the alignment. Throughout 2022 and 2023, MIP conducted surface removal and drainage work, along with foundation and piling work for utility complexes and facilities. MIP's work in 2022 and 2023 did not progress as quickly as anticipated, however significant construction progress was made in 2024.

With the project now entering its fourth year of major construction, commuters, residents and businesses have expressed frustration with ongoing road construction, traffic/access restrictions and the associated delays and congestion. MIP and the City are equally motivated to accelerate the completion of roadwork to move traffic to its permanent configuration. In response to City Council's motion on October 22, 2024, MIP and the City have developed a strategy to complete the majority of roadwork in key areas in 2025; however, doing so will require MIP to implement more significant traffic restrictions than currently authorized under the Project Agreement.

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The Valley Line West alignment is 14 kilometres consisting of approximately 47 lane-kilometres of roadway reconstruction, plus 28 track-kilometres of new LRT infrastructure. MIP has completed 51 per cent of the roadworks, with more than half of that progress completed in 2024.

This report provides an overview of the work MIP would like to undertake in 2025 and the associated traffic impacts. Administration sees this work as manageable and the benefits associated with completing more work in a shorter period of time provides the least net impact. Allowing MIP to focus on a larger construction site with fewer phases also results in a more flexible worksite, fewer interactions with vehicle traffic, improved constructability and the best means to provide quality control. Unless directed otherwise by Council, Administration will work with MIP to carry out the workplan described in this report.

Current Traffic Requirements in the Project Agreement

Provisions in the Project Agreement stipulate a number of traffic requirements MIP must adhere to when carrying out roadwork. In general, MIP must limit the impacts to signalized intersections by maintaining all turn movements during peak traffic hours, and limiting impacts at adjacent intersections. In addition, MIP can only conduct full roadway closures if alternative routes are available on similar adjacent roads with no significant traffic restrictions.

These provisions were designed to strike a balance between maintaining traffic flows along the LRT alignment and allowing sufficient space for construction of the infrastructure. This does, however, result in longer construction periods, more complex phasing and traffic impacts including at major intersections. If accelerated roadwork proceeds, some of the above-mentioned requirements will no longer be enforced under the Project Agreement.

Proposed Traffic Restrictions to Accelerate Road Construction

MIP has developed a construction strategy for 2025 with a goal to complete the majority of roadwork in key areas by the end of November 2025. The two roadway sections that will not be completed in 2025 include 102 Avenue from 102 Street to 107 Street (full closure in 2025), and 87 Avenue from the elevated guideway to Anthony Henday Drive. This work would be completed in 2026. MIP will make their best efforts to complete the roadworks at the intersections of 87 Avenue at 170 Street and 87 Avenue at 178 Street in 2025.

MIP intends to complete the majority of roadwork in three phases (outlined below) throughout 2025. This will result in significant traffic restrictions at key intersections and along one roadway corridor. Attachment 1 provides a detailed description of the workplan, expected duration and traffic impacts for each of the key intersections and the 104 Avenue corridor.

Phase 1 (April - July)

- 104 Avenue corridor (106 Street to 121 Street)
- Stony Plain Road at 124 Street (full closure)
- Stony Plain Road at 156 Street
- 87 Avenue at Meadowlark Road

Phase 2 (July - September)

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- 104 Avenue corridor (106 Street to 121 Street)
- Stony Plain Road at 142 Street
- 95 Avenue at 156 Street

Phase 3 (September - November)

- 104 Avenue corridor (106 Street to 121 Street)
- Stony Plain Road at 149 Street

The work has been divided into three phases to focus efforts on one major north/south arterial road at a time, leaving the next adjacent arterial road available to carry diverted traffic.

The table below summarizes the various intersections and roadways in the accelerated plan, along with the approximate timeframes for traffic restrictions for the accelerated plan compared to the timeframe under the Project Agreement. Overall, the accelerated plan would reduce the timeframe of traffic restrictions at key intersections by more than half, but comes with tradeoffs as indicated.

INTERSECTION/CORRIDOR	ACCELERATED	PROJECT AGREEMENT
Stony Plain Road at 124 Street (full closure)	6-8 weeks	48 weeks (over 2 years)
Stony Plain Road at 156 Street	10-12 weeks	36 weeks
87 Ave at Meadowlark Road	8-10 weeks	24 weeks
Stony Plain Road at 142 Street	7-9 weeks	24 weeks
95 Ave at 156 Street	7-9 weeks	36 weeks
Stony Plain Road at 149 Street	7-9 weeks	24 weeks
104 Ave (106-121 Street); single lane EB/WB	28 - 36 weeks	52 weeks (over 2 years)

In addition to the phased work above, project construction along Stony Plain Road, 156 Street and 87 Avenue will continue concurrently and will result in traffic being restricted to one lane in each direction. These segments, with the exception of 87 Avenue beneath the elevated guideway, will be fully opened to traffic on its permanent configuration as work is completed. In 2025, LRT tracks will also be installed along various sections of the alignment with a major focus along 104 Avenue between 107 Street and 116 Street. Trackwork, streetlighting and traffic signal installation will continue in 2026 and will involve intermittent short-term lane closures during off-peak hours.

Other Concurrent 2025 City Projects

There are three other significant roadway projects planned for 2025 in close proximity to Valley Line West that were assessed with respect to their concurrent and overlapping traffic impacts.

Wellington Bridge Replacement (102 Avenue east of 132 Street)

Wellington Bridge has reached the end of its serviceable life and requires replacement beginning in 2025. A number of measures have been implemented to responsibly delay its replacement,

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including installation of a bracing and scaffolding system under the bridge in 2014. Monitoring and maintenance activities for the Wellington Bridge, including adjustments to the bracing and scaffolding system, have been ongoing over the past several years to extend the bridge life and to mitigate the risk that bridge replacement would overlap with the LRT bridge construction on Stony Plain Road. Due to changing conditions, including increased frequency of adjustments required to the bracing structure, it is critical the replacement work starts in 2025. The current plan is to close 102 Avenue between Wellington Crescent and Churchill Crescent in late 2025 once the majority of the LRT intersection restrictions are completed to minimize the duration of any overlapping work.

Imagine Jasper Avenue (114 Street to 124 Street)

Imagine Jasper Avenue involves the reconstruction of Jasper Avenue from 114 Street to 124 Street to address the deteriorating condition of the Avenue and to extend the existing streetscape work completed between 109 Street and 114 Street. In 2025, work will start at 114 Street and the work will extend west. The current plan is to conduct the work in phases with completion anticipated in 2027. Each phase will restrict traffic on Jasper Avenue to one through-lane in each direction with left-turning lanes at intersections. Results from the traffic modelling suggest the traffic impacts on Jasper Avenue will be localized with modest traffic delays during peak periods. Signal timings will be adjusted to minimize delays for east/west traffic as much as possible.

95 Avenue (163 Street to 178 Street)

The rehabilitation of 95 Avenue, including the installation of active mode infrastructure, is scheduled for 2025. The work includes:

- Reconstruction from 163 Street to 170 Street
- Repaving from 170 Street to 178 Street
- Construction of a new shared pathway from 163 Street to 182 Street

The most significant traffic disruption along 95 Avenue will be due to the reconstruction from 163 Street to 170 Street. This work will be done in phases with traffic flow maintained east-west along a reduced number of lanes. Signal timings will be adjusted to minimize delays for east-west traffic as much as possible.

Further information about these projects and other major transportation projects with traffic impacts will be provided in an upcoming Integrated Infrastructure Services report IIS02750, Transportation Projects Traffic Management (Q1 2025).

Traffic Impacts

Traffic modelling was undertaken to assess the traffic impacts and traffic diversions for each of the three roadway construction phases. While traffic delays from roadway construction are a frequent concern to Edmontonians, Edmonton does have a robust roadway network which provides motorists with a number of choices in travel routes. Detailed traffic impact information for each key intersection is provided in Attachment 1.

Partial or full intersection closures are likely to result in a few instances of neighbourhood shortcutting predominantly in the first week following the closure. After a few days, commuters

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typically adjust their travel patterns resulting in a decrease in shortcutting, however, some may persist by drivers less familiar with the area. Restrictions at the intersections of Stony Plain Road at 142 Street and Stony Plain Road at 149 Street pose the greatest risk of shortcutting through residential neighbourhoods. A robust communications plan will be developed with proactive detour signage and other traffic control measures to reroute traffic appropriately, encourage transit use and discourage the use of local residential roadways. Attachment 2 provides an overview of the public communications plan.

Impacts to transit service were also considered in the development of this plan, to ensure continued transit service during the construction period. Detour plans, summarized in Attachment 1, are being developed by ETS to adjust bus service to reflect the traffic restrictions and will be refined based on route testing before they are implemented. ETS coordinates closely with the traffic accommodation planning process to minimize transit rider and operational impacts. Some transit riders will encounter longer walking distances due to detours and bus stop closures. On-Demand and DATS service may encounter minor delays, however, these smaller buses have more options to navigate around construction zones. Some impacts to transit riders will be mitigated by the timing of construction during warmer months.

Active mode impacts will be limited to the local intersections and will be mitigated through the detailed traffic accommodation plans that have been used to date throughout the project.

Valley Line West Project Schedule

Completing the majority of Valley Line West roadwork in 2025 would be a significant milestone. It would also allow MIP to focus efforts in 2026 on completing the majority of trackwork, power and associated system infrastructure. While intermittent lane closures would still be needed, the majority of lengthy traffic disruptions would be finished.

Each of the three phases will have very tight timelines and limited schedule flexibility to accommodate unforeseen events. MIP's construction arm from Colas Canada and Parsons has made a commitment to provide sufficient labour and equipment to accomplish the work. MIP intends to use multiple dedicated crews, a dedicated project management team and extended work hours, including night work if required, to manage the schedule risk. Furthermore, allowing the work to proceed will require exemptions to certain provisions in the Project Agreement which will be documented in a separate agreement with MIP. This separate agreement may include relaxations of payment deductions for lane closures if MIP meets its lane closure performance obligations.

Construction completion for Valley Line West is targeted for 2028, which will be followed by an extensive testing and commissioning phase to ensure the system is safe and reliable before opening to the public. A timeline for testing and commissioning is not known at this time.

Legal Implications

The Project Agreement, as originally drafted, contains interconnected provisions related to the lane closure regime, traffic restrictions and prohibitions on intersection closures to balance the interests of nearby businesses and residents, the interests of the driving public, the reasonable exercise of the

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City's authority to manage roads, seasonal technical construction restrictions, industry-standard construction practices and anticipated construction schedules.

Further agreements to amend, waive or not enforce portions of the Project Agreement should consider the interconnected provisions of the Project Agreement (and previous agreements to amend, waive or not enforce these provisions) to maintain the value and appropriate balancing of the City's interests.

Community Insight

Public engagement has not been conducted for the intersection closures outlined in this report. There will be localized impacts to commuters, residents and businesses resulting from changes to access and potential increases in neighbourhood shortcutting as drivers adjust to major intersection closures. The communications and stakeholder support team have already established meetings and methods for informing interested parties along the alignment and the team will continue to meet with interested parties to understand specific needs and accommodate if possible. A robust public communications plan will be developed to provide notice to local residents, businesses and commuters. On-street signage will be deployed in advance of any major closure and business wayfinding signs will be used where appropriate. Special consideration will also be given to communications in advance of the typical increase in traffic experienced in early September as students return to schools and post-secondary institutions. Attachment 2 provides an overview of the public communications plan.

GBA+

Major arterial roadways and river crossings are critical to the movement of all forms of transportation, including goods movement, commuting traffic, transit and active modes.

Planning for traffic impacts and the implementation of accommodation strategies is particularly important for major capital projects that have a significant impact on transit or active modes, as these forms of traffic disruption may have a disproportionate impact on those who rely on such travel modes to meet their daily needs. ETS rider research in 2024 shows that marginalized communities, including riders experiencing low income, younger riders ages 24 and under, newcomers to Canada, and those who identified as Indigenous, rely on transit more frequently for a variety of trip purposes.

Longer travel times may be a barrier for individuals who rely on transit or active modes for their daily travel needs. Impacts and mitigations for these modes of travel are considered in developing traffic accommodation plans for construction activities and network planning studies so that public transit remains available to users impacted by construction. Further, shortening the construction impact window could alleviate longer-term frustration of trip disruptions. Timing of the construction during the summer months also lessens the impact on students using transit as it falls outside of the school year.

Environment and Climate Review

This as well as any other major roadway project has the potential to increase Greenhouse Gas (GHG) emissions throughout the course of the construction period. This is primarily due to

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increased congestion, idling and vehicle travel times incurred due to traffic restrictions and closures. These are often offset by reductions in GHG following the completion of the project, especially public transit infrastructure, which makes travel by non-single passenger vehicles more attractive. Emission modelling was not undertaken as part of this assessment, however it is expected the GHG impact resulting from a shorter more significant traffic restriction would be offset by one that would be less restrictive but last longer.

From an urban noise perspective, accelerated roadwork at these locations would involve more evening and night work. This would be outside the typical work hours outlined in the Community Standards Bylaw and therefore would require an exemption for any night work.

Attachments

1. Proposed Traffic Restrictions
2. Overview of Public Communications Plan