

MOBILITY NETWORK ASSESSMENT

RECOMMENDATION

That the February 15, 2022, Urban Planning and Economy report UPE00491, be received for information.

Report Purpose

Information only.

Urban Planning Committee is being informed of Administration's technical analysis to prioritize mobility infrastructure investments in alignment with The City Plan.

Executive Summary

- Administration has developed a prioritization framework for mobility infrastructure investments that support the Big City Moves identified in The City Plan.
- The process identified eight corridors and/or intersections with high alignment to the City's strategic goals.
- Additional investment programs were also considered that could support smaller operational improvements at various locations city-wide.
- High priority corridors and/or intersections will be packaged into projects with a defined scope for potential funding, which will help inform recommendations for the 2023-2026 Capital Budget Cycle.
- Through the Capital Budget process, City Council will have the opportunity to allocate funding towards recommended priorities.

REPORT

The City Plan envisions a vibrant and prosperous city of two million people with half of future population growth occurring in established areas. The foundation of our future city includes a network of nodes and corridors that provide the necessary urban structure to direct future investment and manage ongoing change. Together, the network of nodes and corridors support greater community equity, opportunity and connectedness. This vision is supported by an

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integrated and diverse mobility system that provides residents with convenient travel options and allows people to complete their daily needs within a 15-minute travel time.

As part of implementing the City Plan, a Mobility Network Assessment was developed, establishing a technically driven process to identify transportation network investments that align with the City's strategic goals. The process considers potential capital investments that would result in operational improvements for either general traffic, transit, or active modes along arterial roadways, freeways and expressways. The process also considers budget allocations that could fund multiple small local improvements throughout Edmonton. The results of this technical process will contribute to developing the upcoming 10-year Capital Plan, which will contribute to recommendations related to priority transportation infrastructure investments in upcoming capital budget cycles.

The Urban Planning and Economy report CR_7477, Transportation Network Indicators, presented at the March 23, 2021, Urban Planning Committee meeting provided an overview of the Mobility Network Assessment process to prioritize mobility network investments. This report summarizes the prioritization process, alignment with The City Plan and introduces the priority locations identified through the assessment. The report highlighted that the highest priorities will not include locations affected primarily by vehicular congestion or perceived operational issues, and many road widening project locations will not rank highly.

Prioritization Process

The Mobility Network Assessment assessed potential infrastructure investments that would address existing gaps and operational issues in the mobility networks. The assessment prioritized investments that provide the greatest support to the strategic evolution of the mobility system.

The City Plan was used as a key input in the development of the prioritization framework. Alignment with nodes, corridors, principal roadways, active modes and mass transit all inform the prioritization criteria. The criteria also incorporates direction from The Safe Mobility Strategy, The Sidewalk Strategy, The Bike Plan, The Transit Priority Measures Study, and Mass Transit Planning for a population of 1.25 million people. Other inputs into the process include data on funded capital projects and upcoming renewal plans. Details on the prioritization process are included in Attachment 1.

A holistic approach was used to consider how all types of transportation investments align with the City's strategic direction including locations that have previously been identified as the City's responsibility for road widening. Rather than prioritizing transit, active modes, vehicular operations, and goods movement separately, these networks were considered as an interconnected mobility system and the resulting priorities provide opportunities to improve mobility for multiple travel modes. An additional qualitative review was completed with a focus on equity and ensuring that investment priorities consider the needs of all Edmontonians.

The prioritization framework and criteria is adaptable and can be adjusted to reflect changes in circumstances, data availability or strategic direction. Administration will continue to review the prioritization framework and adjust as needed.

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Greenhouse Gas Emissions Review

In consideration of Edmonton's Community Energy Transition Strategy, Administration also completed a qualitative review of how mobility infrastructure investments may influence greenhouse gas emissions.

The types of investments most likely to support reduced transportation sector greenhouse gas emissions are those that support lower emissions travel like transit and active transportation or reduce long distance travel demand through the development of compact land use patterns. Without these types of investments, Edmonton will not be able to achieve its greenhouse gas emission targets as outlined in the updated Community Energy Transition Strategy.

Greenhouse gas emissions were considered through the development of The City Plan and are embedded within the existing strategic direction. Through alignment with The City Plan, these factors are reflected within the prioritization criteria, which considers support for transit, active transportation, and the land use patterns envisioned by The City Plan. As a result, the locations showing high strategic alignment also support opportunities for investments that support reduced greenhouse gas emissions.

Prioritization Results

The prioritization process identified eight locations that show the greatest strategic alignment to The City Plan. These locations demonstrated alignment with existing transit service, mass transit plans, roadway function, and historical safety considerations. Locations that are ranked highly align with locations of missing active modes connectivity, complement work planned or delivered through other projects, and align with The City Plan nodes and corridors.

The top locations are:

- **97 Street** (137 Avenue to 153 Avenue) provides an opportunity for improvements that support transit, active modes, and goods movement.
- **23 Avenue** (Calgary Trail to 111 Street) provides an opportunity for improvements that support transit and goods movement.
- **111 Avenue/142 Street** Intersection provides an opportunity to improve transit operations and multi-modal access to the Westmount Transit Centre.
- **104/103A Avenue** (97 Street to 102 Street) provides an opportunity to align with upcoming renewal work and support multi-modal access within the city centre node.
- **111 Avenue/101 Street** Intersection provides an opportunity to align with upcoming renewal and support multi-modal access to the Kingsway-NAIT node and the Royal Alexandra Hospital.
- **111 Avenue/Kingsway** Intersection provides an opportunity to align with upcoming renewal and support multi-modal access to the Kingsway-NAIT node and the Royal Alexandra Hospital.
- **Whyte Avenue/Gateway Boulevard** Intersection provides the opportunity to improve multi-modal access to the Whyte Avenue primary corridor.

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- **101 Street** (103 Avenue to MacDonald Drive) provides an opportunity to improve multi-modal access within the city centre node.

Additional details and insight regarding the focus of possible improvements for these locations are provided in Attachment 2. Further assessment, planning and design would be required to determine the specific improvements at each location.

Composite Programs

In addition to specific locations, the prioritization process also considers composite programs. Composite programs are funding allocations that support localized improvements at multiple locations city-wide. Composite programs can be used to complete smaller improvements at locations that did not rank as top priorities on their own, but still provide opportunity to support the evolution of the mobility system. These programs can also support improvements on local and collector roadways and in open spaces that were not considered as part of the location-specific prioritization.

The Mobility Network Assessment identifies these five composite programs for consideration in the upcoming capital budget planning process:

- Missing and/or enhanced sidewalk connections
- Missing and/or enhanced active modes/cycling connections
- Safety improvements
- Transit priority measures
- Intersection improvements

Targeted localized improvements like those supported by the composite programs provide an opportunity to improve multi-modal access to local destinations, which supports The City Plan vision of a 15 minute community.

The composite program focusing on intersection improvements can be used to implement relatively fast and low-cost interventions for targeted locations with operational concerns that may not have ranked as highly through the prioritization process including locations identified for road widening.

Impact of Investments

The Mobility Network Assessment prioritizes infrastructure investment, from a technical perspective, that helps the city progress towards the strategic goals and targets established through The City Plan. However, infrastructure investment represents only one of the four levers of change identified in The City Plan. A combination of infrastructure investment alongside the other levers such as policy, partnerships and advocacy, and incentives, pricing and subsidies will be required to effect substantial change in the transportation indicators.

Next Steps

The results of the mobility network assessment will inform:

- The priority-based Capital Budget process which considers The City Plan's Big City Moves in order to inform the 10 year Capital plan and 2023-2026 Capital Budget cycle.

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- Opportunities for further refinement with confirmed asset renewal plans and strategic direction resulting from growth management criteria.
- Development of composite programs, as identified in this report, for consideration in the budget process.

Through the Capital Budget process, City Council will have the opportunity to allocate funding towards the recommended priorities, or other priorities identified by Council.

COMMUNITY INSIGHT

The Mobility Network Assessment relied on the direction provided in The City Plan and other strategic documents that included robust public engagement with Edmontonians. Additional research and/or conversations with Edmontonians and other stakeholders would be included as part of the project development and delivery model process for mobility projects that proceed to planning and design.

GBA+

Seniors, the young, newcomers, people with disabilities, and low-income populations, among others, experience physical, social, and/or economic barriers to driving. Mobility barriers and safety concerns can be experienced by these populations when investment is focused on infrastructure that favours one mode of transportation, like motor vehicles. In alignment with direction in The City Plan, the mobility network assessment includes transit, safety, and active transportation as important criteria to help identify locations for investment that can benefit a wide range of users including those that do not have access to a personal vehicle. Most trips Edmontonians take every day are multimodal. Trips typically begin and end with walking, and thus a diverse mobility system benefits everyone even if an individual favours one particular mode of transportation.

The mobility needs of marginalized populations such as seniors and families with children may not be addressed by projects that focus on commuting corridors and long-distance travel. Large projects focusing on arterial roadways may not address localized needs for access to healthcare services, education, and other supports. The Mobility Network Assessment identifies the importance of prioritizing composite programs which support more localized improvements supporting a greater diversity of users in accessing local destinations.

A GBA+ process will be integrated into the project process for all mobility projects that proceed to planning and design. Applying GBA+ to mobility planning will help ensure that projects do not create inequalities or contribute to the marginalization of diverse individuals.

ATTACHMENTS

1. Mobility Network Assessment Prioritization Process
2. Mobility Network Assessment Priority Locations