

ETS Fleet Storage and Maintenance Facility Project

RECOMMENDATION

That Urban Planning Committee recommend to City Council:

That the strategy outlined in the February 15, 2022, Integrated Infrastructure Services report, IIS00416, be approved.

Report Purpose

Council decision required

Council is being asked to approve the strategy and next steps outlined in this report that supports the long term need to guide the renewal and development of existing and future Edmonton Transit Service fleet storage and maintenance facilities as a priority for alignment with The City Plan.

Executive Summary

- The Edmonton Transit Service Fleet Storage, Operations and Maintenance Facility Strategy (“the Strategy”) is designed to guide the renewal and development of existing and future Edmonton Transit Service fleet storage and maintenance facilities to address the growth, capacity and electrification needs of the fleet through to 2040.
- Transitioning to a zero-emission transit fleet is a core objective of this work and currently calls for up to 440 electric buses to replace diesel buses by 2030.
- The Strategy recommends the construction of two new operations and maintenance garages in the southeast and northwest quadrants of the city, enabling a fully electrified bus fleet. The Strategy also recommends a progressive series of upgrades, renewals and expansion projects within existing facilities to accommodate growth, capacity and electrification.
- The success of this Strategy will ideally see facility development stay ahead of fleet growth, capacity and electrification requirements. New and upgraded facilities are needed to enable transit service growth related to bus service.
- The Strategy will help address corporate outcomes and future impact on our community, including support in delivering services to Edmontonians now and in the future.

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- Approval of this strategy will launch the process toward a fully integrated approach that addresses the needs of the network of fleet storage, operations and maintenance facilities across the city. This will ensure a holistic approach that aligns the service, infrastructure, and deployment of assets to be located where and when they are needed most.

REPORT

Edmonton Transit Service (ETS) fleet storage, operations and maintenance facilities are operating at full capacity. In order to grow, respond to future increased service demands and achieve greenhouse gas emissions targets by 2030 and beyond, significant investment into the design and construction of new and expanded facilities will need to be considered.

The Strategy outlined in this report is foundational to contributing to the delivery of The City Plan and the four strategic goals of ConnectEdmonton. It is critical to support the growth of the Bus Network and implementation of the Mass Transit Network envisioned in The City Plan. The ETS fleet of buses will need to grow and transition from diesel to electric buses over the next 20 years to meet these objectives.

This integrated strategy considers all aspects and infrastructure needed for the storage, operations and maintenance of buses allowing ETS to be responsive to riders' needs. The Strategy includes being more efficient with City resources and identifying what is needed now and in the future. With the foundation of the transit network established, the Strategy supports future city and ridership growth.

The Strategy also supports building an environmentally sustainable transit service. It addresses growth requirements that align with the Energy Transition Strategy and City Operations Greenhouse Gas Management Plan by building the foundation to support a fully electric fleet in the future.

The current fleet occupies the total available storage within each garage and cannot grow or be electrified without expanding the storage and maintenance capacity. Electric bus maintenance and charging stations require different infrastructure than diesel buses, including significant electrical substation and distribution system upgrades. Retrofits cannot be undertaken in an existing facility without a complete shutdown, which is not possible when all garages are required to be fully operational.

Recommended Approach - Scenario 3

Administration explored three scenarios (Attachment 1) as options to address and guide the renewal and development of existing and future ETS fleet storage, operations and maintenance facilities. The recommended scenario is designed to meet the City's objectives for growth and electrification, resulting from the hybrid scenario. The recommended approach and strategy builds on the existing storage and maintenance facilities, adds capacity and diversifies fuel sources. In addition to enhancing existing facilities, the strategy recommends constructing two new garages over the next 20 years which will alleviate the expected growth pressures on the transit network. The Strategy has the flexibility to integrate and adapt to evolutions in technology and the future decisions related to the Edmonton Metropolitan Regional Transit Commission.

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Administration's first priorities are the development and delivery of a new southeast garage, in addition to the expansion of the Davies and Ellerslie facilities to accommodate additional maintenance requirements as the fleet grows. To meet the target for a new southeast garage in the 2027-2030 budget cycle, the land acquisition, design and delivery would commence in the 2023-2026 budget cycle.

The second phase is the expansion of existing facilities between 2025 and 2028 and will target the Richard Paterson Garage (5710 86 St NW), Thomas Ferrier Garage (8620 58 Ave NW) and Centennial Garage (15520 Ellerslie Rd SW). Adjusting capacity levels at these facilities will support the increased service demand due to fleet growth. As the fleet of electric buses expands, an expansion of the electric bus infrastructure is required at Kathleen Andrews Transit Garage (12403 Fort Rd NW) within the same timeframe.

Ideally, planning and design for a new northwest garage would begin as early as 2024, starting with functional programming and land acquisition activities. The northwest garage is expected to be complete in the 2031-2034 budget cycle, followed by progressive installation of electric bus infrastructure through 2040 or as the procurement timeline for electric buses dictates.

Opportunities for Growth Before 2027

Understanding that the bus fleet will require growth before 2027, Administration has been reviewing opportunities to accommodate additional buses and increase fleet electrification ahead of the completion of the new southeast garage. The following changes from the recommended approach could be considered:

- Establishing a satellite storage facility by acquiring an existing facility or building a new facility. The facility would be limited to storage and dispatch operations of diesel buses. As well as creating capacity, the satellite facility would ensure the work on existing facilities is completed safely and efficiently by temporarily housing operations on a rotating basis as facilities are expanded to accommodate the long-term growth.
- Accelerating the upgrades to the electric bus charging infrastructure of Centennial Garage and Kathleen Andrews Transit Garages to support additional electric buses.
- This revised approach would allow the decision on the investment into the Strategy to align with the capital budget deliberations for 2023-2026 by allowing for the new southeast garage to be delayed by one year while allowing for growth in the bus fleet.

The Strategy's success requires facility development to stay ahead of fleet growth, creating capacity and electrification requirements, flexibility, opportunity and efficiency across the facility and bus network. Additional infrastructure is needed to ensure that the maintenance of the bus fleet is well supported through the growth of the fleet. This growth will require new and expanded garages to support the growing needs of the bus fleet and Edmonton.

Budget/Financial Implications

Council approved the capital profile 20-20-2022 New Transit Bus Garage with \$6 million in funding in the 2019-2022 Capital Budget cycle through tax-supported debt. The profile provides funding to complete the strategy phase and begin the planning phase for the initial priorities.

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The order of magnitude estimate for implementing the Strategy for fleet storage and maintenance facilities to address the growth, capacity and electrification needs is approximately \$1.4 billion, with investments up to 2040. This estimate is an order of magnitude as the project has completed the strategy phase and Checkpoint 1 of the Project Development and Delivery Model (PDDM), per Capital Project Governance Policy C591.

Given the order of magnitude of the investment required for the proposed expansion, the City continues to advocate to both the federal and provincial governments for funding support toward the construction of the proposed new transit garage and expansion of two existing garages as important infrastructure priorities.

Next Steps/Priorities

- \$4.1 million in funding remains available in Capital Profile 20-20-2022 to advance the project to the facilities planning phase. The following planning activities are planned for 2022:
 - Complete functional programming for the new southeast garage, Davies, Ellerslie expansions and the resulting Paterson operational impacts to PDDM Checkpoint 2;
 - Advance concept and preliminary design for Davies and Ellerslie expansions towards PDDM Checkpoint 3; and
 - Advance planning for establishing the satellite facility and the acceleration of the upgrades to the electric bus charging infrastructure of Centennial Garage and Kathleen Andrews Transit Garages.
- Additional funding may be required in the short-term to support the establishment of a satellite storage facility by acquiring land if necessary. Planning will be informing the needs in 2022.
- A critical component to the implementation of the Strategy is the acquisition of land to advance to concept and preliminary design for the new southeast garage. The current budget is insufficient to support the land acquisition estimated at \$45 million.
- If this strategy is supported by Council, Administration will return with a budget request through future capital budget processes. Depending on how quickly Council would like to advance the strategy the budget requirement for initial costs, such as the land acquisition costs for the new southeast garage, could be included for consideration in the Spring 2021 Supplemental Capital Budget Adjustment. Approving funding in advance of formal 2023-2026 capital budget deliberations in the fall of 2022, will reduce available funding for other priorities over the 2023-2026 budget cycle. However, Administration views electrification of the City's bus fleet and investment in supporting transit infrastructure as one of the City's top priorities.
- Project timelines will be reviewed and updated as these next steps progress.

COMMUNITY INSIGHT

This strategy supports the implementation of the energy transition strategy and The City Plan. This work is needed to support the City's services to Edmontonians; the facilities identified are required as municipal service support to ensure that transit serves Edmontonians now and in the future. Maintenance, operations and storage facilities are required to operate and maintain

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transit service as the fleet and the city continues to grow. Public engagement, if required, will be evaluated on a facility by facility basis.

GBA+

The development of the ETS Fleet Storage, Operations and Maintenance Facility Strategy has identified some key areas and opportunities to address equity for all age groups, abilities and diverse demographics:

- **Accessibility:** ensure accessibility requirements for people with disabilities in the new and existing facilities and their surrounding areas are in place; accessibility is considered at each stage of the project design.
- **Safety:** Incorporate the needs of diverse demographics to improve safety within existing and new facilities.
- **Useability:** Consider how facility renewals (i.e. existing buildings) and new facilities improve the useability for those working in and for others who visit these facilities for business or other purposes.

The planning and design process will be guided by the principles of universal design, which speak to “the design of products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design.”

As the Strategy transitions into the Develop phase, GBA+ Analysis will be applied to ensure the projects are inclusive, decisions are evidence-based, work is effective and the process contributes to equality of outcomes.

ATTACHMENTS

1. ETS Fleet Storage and Maintenance Facility Project - Executive Summary
2. Ideal Scenario Implementation Timeline