

Bus Network Redesign - Interim Review

Bus Network and On-Demand Service Implementation Update

RECOMMENDATION

That the January 19, 2022, City Operations report CO00605, be received for information.

Report Purpose

Information only.

This Report presents a review of the Bus Network Redesign, including ridership data, on time performance and insights from riders.

Previous Council/Committee Action

At the March 9/11, 2020, City Council meeting, the following motion passed:

3. That Administration report to the appropriate Committee on the performance of the on-demand service, in conjunction with updates on the Bus Network Redesign and that the transition of the contracted services to a public service model be examined within two years of commencement of service.

At the April 19, 2021, City Council meeting, the following motion passed:

That Administration provide a report to Committee following a review of the implementation of the Bus Network Redesign, including:

a. an accelerated interim review of successes and shortfalls with routes, timing, and frequency.

Executive Summary

- Following the implementation of the Bus Network Redesign, On Demand Transit service, and City Policy C539A Transit Service Policy in April 2021, Administration has been monitoring performance of Edmonton's bus network, listening to Edmontonians about opportunities to improve the user experience and refining the service in response to community needs.

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- Although overall transit ridership is low Canada-wide due to the pandemic, service analysis shows that Edmonton's ridership is steadily climbing and is currently at the highest level since the onset of the initial pandemic restrictions in March 2020.
- On Demand Transit service ridership has risen steadily since the launch of the pilot in April 2021 and is currently averaging approximately 6,000 rides per week.
- The bus network is aligned with City Plan goals and provides a solid foundation for future growth. Upcoming reports in 2022 will provide more in-depth exploration of expansion and growth opportunities, sustainable funding, and additional equity measures.

REPORT

After several years of engagement, research and design, the revised bus network (referred to as the "Bus Network Redesign") was implemented on April 25, 2021, the same day On-Demand transit service was launched. The previous bus network design was implemented in 1997 and had not significantly changed over the last 24 years. The revised network reflects input from more than 40,000 Edmontonians and follows principles established with Council through the Transit Service Policy (C539A). The network redesign responds to on-time performance, crowding on buses, and inability to provide transit service to new and growing areas.

The creation of a modern network better supports a growing city and is aligned to the City Plan goals for the mass transit network. Public engagement revealed preferences common to most Edmontonians, such as focusing service on benefiting the largest number of Edmontonians, improving service frequencies, matching service levels to ridership demand, using measures to prioritize buses in traffic and improving walk and wait times for transit. Some differences in preferences emerged between Edmontonians in:

- Inner Neighbourhoods - Inner areas or urban areas of the city favoured more frequent service, transfer-based travel amongst high-frequency routes; both peak and off-peak service are important and local bus service preferred over park and ride.
- Outer Neighbourhoods - Outer areas of the city with suburban neighbourhoods favoured more frequent service, minimized overall travel time, preference for weekday peak service, and divided preferences between local bus service and access to park and ride.

The resulting changes were extensive; virtually every route was revised. The revised bus network is more direct, avoids overlap, and maintains speed and reliability along bus routes, while using the same amount of buses, operators and budget. Different route types were introduced, including 82 local routes that connect transit riders to the primary transit network, as well as eight frequent routes, 14 express routes, six crosstown routes, and a high frequency corridor. An additional eight community routes operate during midday. The network provides more evening and weekend service, including 18 per cent more service on Sundays when compared to the previous network.

The network will continue to evolve to meet the changing needs of Edmontonians. Administration is listening to rider feedback submitted through 311, feedback forms, rider inquiries and Council

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inquiries to help inform future changes. Since the implementation, more than 50 service adjustments have been made.

Service Analysis

ETS tracks performance of the transit service using data aligned to service goals and feedback from transit riders. Key system-wide sources of data include ridership/number of boardings, service hours, on-time performance, and rider feedback.

Transit Ridership & Bus Boardings

Riders often use multiple routes and different modes, such as LRT, bus, on demand and active modes like cycling and walking to complete their journey. The new transit network is a frequency-based network, which means riders may need to transfer between two or more routes and this transfer is facilitated by high frequency service. The network offers different types of routes to meet various travel needs. These include frequent, rapid (express), crosstown, local, school and community routes.

The Transit Service Policy (C539A) outlines different ridership expectations for different route types. For example, local routes are expected to achieve a lower level of boardings per hour than a frequent route. Frequent routes generally serve the densest parts of the city with a mix of land uses and therefore have the highest ridership, whereas local and community routes serve neighbourhoods and seniors residences to support accessibility. Ridership is expected to vary seasonally, with system-wide peaks occurring when students return to school from September to April. Figure 1 in Attachment 1 provides an overview of pre and post pandemic weekly boardings comparison.

Currently, bus boardings are at their highest level since March 2020 and have been showing a gradual increase. Edmonton's ridership recovery from COVID-19 has continued to perform better than many peer transit agencies from similar-sized Canadian cities. To support the review of the network and the annual service planning process, route report cards were developed that include information on service levels, boardings, productivity and on-time performance. See Attachment 1 for guidance on how to access route report cards which are publicly available on the City of Edmonton's website for the following time periods, and correspond to the three service change periods following the launch:

- April 25, 2021 - June 26, 2021
- June 27, 2021 - August 28, 2021
- August 29, 2021 - November 27, 2021

Analysis shows the highest performing routes for boardings are Routes 9 (Eaux Claires - Southgate), 4 (Lewis Farms - Capilano), 8 (Abbottsville - U of A), 5 (Westmount - Stadium), & 510X (Mill Woods - Downtown; Precursor Valley Line SE). These are frequent bus routes along historically high ridership corridors. The lowest performing routes are Routes 713 (Twin Brooks - Blackburne), 522 (Bonnie Doon - Hardisty - Capilano), 726 (Windsor Park - Belgravia), 724 (Leger - Ogilvie Ridge - Brander Gardens - South Campus), 700X (Heritage Valley Park & Ride Shuttle), &

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503 (Millgate Industrial). These routes are local and community routes, which are expected to have lower ridership and are performing as anticipated.

On Demand Service

On Demand was introduced alongside the revised bus network to complement regular bus service and provides service to 37 neighbourhoods and 16 seniors residences. On Demand provides the right amount of service for areas that typically have lower demand, or are geographically isolated. On Demand offers a viable service option where a fixed route would not be considered and where communities have more than 600 metres of walking distance to a fixed route. On Demand transit ridership (shown in Attachment 1 - Figure 2) has steadily increased since its launch and now averages slightly under 6,000 rides per week. Similar to conventional transit service, ridership can vary week to week due to seasonal changes and holidays. Figure 3 in Attachment 1 illustrates the On Demand transit zones ranked by number of boardings. While there is significant variability in the ridership generated from each of the zones, the combined seniors zones generate the lowest ridership. The lower ridership attributed to the combined seniors zones may be due to COVID-19, the lower number of hours serving those zones, and the smaller number of people in those zones.

A review and analysis of the On Demand service delivery model will be presented to Council in late fall 2022.

On-time Performance

On-time performance is defined in the City of Edmonton's Transit Service Standards as when a bus leaves within five minutes of the scheduled time and does not depart early. On-time performance is affected by ridership, traffic volumes and weather conditions. On-time performance is continually monitored, and ETS routinely adjusts schedules to respond to conditions.

Throughout the pandemic, both before and after the new network launch, bus on-time performance has been high due to lower traffic volumes and lower ridership. Bus on-time performance dropped slightly in September to November with increasing traffic as students returned to school and with poor weather conditions in late November, as shown in Attachment 1 Figure 4. Despite this temporary dip, system-wide on-time performance remains above target.

Service Changes

Regular service adjustments are aligned with Administration's commitment to continually improve transit service to meet the evolving needs of Edmontonians. Opportunities for service adjustments occur five times per year during pre-planned employee schedule changes. These five windows allow the City to adjust for seasonal requirements and respond to changing traffic patterns, ridership demand, feedback from riders, and construction activity.

For detailed examples on how service has evolved since the launch of the new bus network, please see Attachment 2.

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Next Steps

Administration will continue to review feedback and analyze data to make needed adjustments and improvements. Planned service changes as part of the 2022 ETS Annual Service Plan will be outlined in the City Operations report CO00606 Bus Network Redesign - Options for Expansion, currently scheduled for March 23, 2022.

In the first quarter of 2022, Administration will also be presenting the following related reports to Council that discuss the future of transit in Edmonton:

- CO00607 Mass Transit System - Sustainable Funding and Service Growth
- UPE00342 Mass Transit: Planning for 1.25 Million People
- IIS00416 ETS Fleet Storage and Maintenance Facility Project
- UPE00491 Mobility Network Assessment
- CR_7889 The Bike Plan Implementation Guide

In the fall of 2022, Administration will present the evaluation of the service delivery model used for On Demand service — this report will address Council's previous request to examine the potential to transition from a contracted service to a public service delivery model.

In addition, an equity analysis of transit services will be completed in the first half of 2022, to develop a deeper understanding of potential service gaps to inform future changes.

Administration will share the results of the equity analysis and a related plan in late 2022 to inform the 2023 ETS Annual Service Plan.

COMMUNITY INSIGHT

Feedback from transit riders is a valuable source of information on how to improve the transit network. ETS has collected more than 1,800 comments since the initial April 2021 network changes.

Positive feedback included:

- Appreciation for frequent service along key corridors and to major nodes
- Appreciation for straighter, easier to understand routes
- Improved connections to destinations, such as the Telus World of Science
- More weekend service
- Positive feedback for availability of On Demand services

Feedback for consideration included:

- Decrease walking distance to closest stop - The most commonly submitted concern of the new bus network with 37 per cent of respondents noting the distance to their closest stop is too far.
- Inaccurate information in the Trip Planner - Recent updates to the program have resolved most of these issues.

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- Absence of transit service along Stony Plain Road due to West Valley Line construction and the resulting walking distance. In response, Administration launched a shuttle service to this area in November 2021.
- Long walking distance and need for additional service to the Hills at Charlesworth neighbourhood.
- Ease and convenience of connections to Meadowlark Shopping Centre Transit Centre - particularly between West Edmonton Mall and Jasper Place, due to West Valley Line construction.
- Requests to add weekday midday and weekend bus service in the Brander Gardens neighbourhood.
- Transit service detours along 156 Street due to West Valley Line Construction.
- Requests to add early morning trips on routes in the southeast.
- Later service for seniors routes, as most seniors routes currently end service between 3:00 p.m. and 4:00 p.m.

GBA+

As part of the development of the Bus Network Redesign, targeted workshops and 'coffee chat' sessions were held with organizations that work with specific demographic groups including riders who experience low income, seniors, multicultural communities and persons with disabilities.

Application of a GBA+ analysis was used to shape how the On Demand transit service was delivered. Administration found that accessibility, safety and comfort were key to attracting riders to the service — as such, the City ensured that safety standards and fleet specifications met or exceeded conventional transit standards. For example, the vehicles were designed to ensure safety seats for children could be used, phones were installed at key transit locations for those without access to mobile devices, and a comprehensive orientation and training for all On Demand Operators that included safety, security, the City of Edmonton code of conduct and respectful workplace standards.

Additional engagement was conducted for the On Demand service with targeted workshops in affected neighbourhoods. There was also an online survey where respondents could voluntarily provide their mode choice, age, gender, work status and geography. Indigenous people, people of colour, persons with disabilities, as well as the intersectionality of these identity factors were considered in the design of the On Demand Service.

The initial Bus Network Redesign plan was revised by 20 per cent based on feedback from public engagement. Some examples include:

- Introducing On Demand transit in multiple neighbourhoods in response to concerns about long walking distances.
- Route 701 on 97 Street in the Chinatown area in response to concerns from the community, especially seniors.

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- Castle Downs Transit Centre was maintained as a local destination and transfer hub in response to community feedback.
- Many trips on Route 101 continue as Route 2 (and vice versa) at Stadium to reduce the need to transfer at Stadium, which was a safety concern for many riders.

Further equity analysis that will be completed in 2022 will help Administration to better understand opportunities for improvement as the network evolves.

ATTACHMENTS

1. Service Analysis
2. Bus Network Service Changes