



STRATHCONA COUNTY TRANSIT

TRANSIT MASTER PLAN

FINAL REPORT | DECEMBER 2018



DILLON
CONSULTING

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Executive Summary

The purpose of this study is to develop a plan that will provide direction to the County on the delivery of transit service over a ten-year period. The plan includes:

- A comprehensive engagement strategy of both transit customers and residents that do not take transit;
- A review of existing conditions in relation to transit services and ridership, current policies in place, planned growth and improvements and other pertinent information;
- An understanding of the mobility needs of Strathcona County residents;
- A policy framework defined through a vision, mission and goals and service standards; and
- Strategic directions and plans for all types of transit services.

Background and Context

Strathcona County is a specialized municipality located immediately east of Edmonton, with a population of 98,381¹, expected to grow to 117,900 by 2029. The majority of the population resides in the Urban Service Area (currently Sherwood Park). The majority of residents commute to the City of Edmonton for employment and post-secondary education. Major employment within the County is primarily in large oil refineries and petrochemical processing facilities as well as retail and service sector jobs in Sherwood Park. In the rural areas of the County, there is also a large agricultural-based employment sector.

Strathcona County's vision of "Becoming Canada's most livable community" includes the goal of building an efficient and effective multi-modal transportation network, of which Strathcona County Transit is an integral part. Strathcona County Transit provides transit service seven days a week, connecting its residents to destinations within the County and in the City of Edmonton.

The existing Local service is designed to connect residents of Sherwood Park to one or both of the two transit terminals, providing opportunity for passengers to connect to the Inter-municipal Routes or other Local Routes in the system, and to provide access to a number of destinations within Sherwood Park, including schools, retail areas and employment opportunities. The route structure is designed as a fixed-route service, which balances the need to minimize walking distance to a transit service (proximity) and providing direct service to major destinations and to one or both of the transit terminals. The circuitous street network, low density development and limited employment and education destinations in the Urban Service Area has made providing fast and convenient service to local destinations challenging. As a result, ridership on the Local Routes is about one-quarter of the ridership achieved on Inter-municipal Routes to Edmonton, with limited growth over the past few years.

¹ Source: 2018 Municipal Census

The spine of the Strathcona County Transit system is the Inter-municipal service, which connects residents to key destinations in Edmonton from the two transit terminals and park-and-ride lots in Sherwood Park: the Bethel Transit Terminal and Ordze Transit Centre. There are six Inter-municipal Routes providing this service, utilizing double decker buses operating frequently during the weekday AM and PM peak periods. These services are very direct, with limited stops in Sherwood Park and Edmonton. The service is very well utilized and ridership has been steadily growing over the past decade.

Strathcona County Mobility Bus provides specialized transit service to eligible Strathcona County residents with disabilities or mobility challenges for travel within Sherwood Park, between Sherwood Park and Edmonton, and between the Rural Service Area and Sherwood Park or Edmonton.

Key Issues and Opportunities

The Transit Master Plan reviewed existing system performance, alignment with strategic policy documents in Strathcona County and the Edmonton Metropolitan Region, innovations and trends in urban mobility as well as input received from a comprehensive public engagement strategy. Based on this review, the following key issues and opportunities were identified that fed into the development of a strategic plan.

Increase Transit Mode Share

The 2012 Strathcona County Integrated Transportation Master Plan identifies an aggressive transit mode share target that should be achieved by 2032 to achieve its strategic goals and mitigate future roadway investment. The target identifies moving from a 1.8% mode share to a 3.5% mode share in the Rural Service Area and from a 4.6% mode share to an 8.0% in current Sherwood Park and an 11.0% mode share in future Urban Growth Areas (Bremner/Cambrian Crossing). Achieving this mode share target will require a significant investment in transit service (both capital and operating cost) to improve level of service for existing residents and expand service to newly developing areas. While the mode share target may not be achievable by 2032, there is a general recognition that transit service needs to improve and expand over the next 10 years.

Improve the Effectiveness of Evening and Weekend Local Service

While a number of Local Routes are productive during the AM and PM peak periods, ridership tends to decrease during weekday evenings and weekends (when the route structure changes to five routes that operate every hour). While demand typically reduces during these periods, the fixed-route model with hourly headways does not provide customers with an attractive level of service. This results in even lower ridership and poor productivity.

Service a Growing Population

The population of Strathcona County continues to grow steadily, particularly in the Urban Service Area. As Sherwood Park is built out, this growth is expected to shift towards Cambrian Crossing, Bremner and

Ardrossan. Providing a viable transit option to these communities in line with transit mode share targets identified in the County's Integrated Transportation Master Plan (ITMP) will be important over the ten-year life of this plan. This will require an investment in transit early as these communities begin to develop. Connecting these routes to the rest of the Urban Service Area as well as Inter-municipal Routes will be important.

Improve Service to Local Destinations within Sherwood Park

The local service in the Urban Service Area is focused on bringing passengers to the Bethel Transit Terminal and Ordze Transit Centre to make connections to Inter-municipal Routes. While connections to other Local Routes are also available at both terminals, transfers to these routes can result in long travel times to local destinations. Designing a service that effectively services both local destinations and Inter-municipal Route connections is difficult under the existing fixed-route model. A key desire of the plan is to find opportunities to provide more direct service to key local destinations such as Centre in the Park and Millennium Place without sacrificing direct connections to Inter-municipal Routes.

Park-and-Ride Lots are Nearing Capacity

The Bethel Transit Terminal offers 1,200 parking spaces and the Ordze Transit Centre has 200 spaces. Both park-and-rides are currently operating near capacity during the Fall and Winter bookings. With a growing population and a desire to increase the transit mode share, parking capacity will soon become a growing issue that will need to be resolved. Lack of parking spaces may help grow ridership on Local Routes, but may require a continued investment in local service as well as an expansion of the existing Advantage Parking (or paid permit parking) program to manage demand.

Improve Evening and Weekend Service to Edmonton

During weekday evenings, only one Inter-municipal Route services the downtown and the other services the University of Alberta. Both routes operate an hourly headway. Route 414 to the University of Alberta campus ends service before the last class. On weekends, only one Inter-municipal Route operates at hourly headways to downtown Edmonton. There was a desire to extend evening service to University of Alberta on weekdays and to provide more frequent weekend service. The challenge for Strathcona County Transit is that demand is typically lower during these periods and increasing the frequency of Inter-municipal Routes would require the same increase in local service (which has very low productivity).

Improve Mobility Options for Persons with Disabilities

Demand for Mobility Bus service continues to grow, accelerated with the introduction of fare parity in 2018. While Mobility Bus is considered a core service that needs to be expanded to meet the needs of persons with disabilities, there is also a recognition that the cost per trip is also significantly more expensive than the conventional service. As Strathcona County Transit continue to make its conventional system more accessible, opportunities to integrate the two services should be explored. This will help increase travel options for registered Mobility Bus customers that are able to use an

accessible conventional service, increase availability of existing Mobility Bus services for those that cannot use an accessible conventional option and reduce overall cost per trip.

Address Mobility Challenges in the Rural Service Area

Planning and delivery of public transportation in rural areas is often challenging. Rural areas tend to be large in area but low in density, resulting in very widely dispersed population, employment and services. Despite these challenges, there is still a need to provide mobility in rural areas. While most residents move to rural areas have access to a personal vehicle, many youth, seniors and residents with lower household incomes may not have access to a vehicle to access places of employment, education, medical appointments or services. Identifying options to improve mobility in Rural Areas was a key area that is identified in the Integrated Transportation Master Plan and identified as a need by members of the public (particularly the provision of weekend Mobility Bus service).

Policy Framework

The foundation of the Transit Master Plan is based on a recommended policy framework that outlines the role of transit in the community and provides guidance on how to plan, design, operate and maintain all of the components of the system. This began with a review of municipal policy documents and engagement with members of the community. Based on this review, the role of Strathcona County Transit can be summarized as:

The primary purpose of Strathcona County Transit is to meet the mobility needs of the residents and businesses in the community. It provides service that supports:

- ***Equity – Available and affordable for all residents regardless of their age, ability, or means;***
- ***Economic Opportunity – Provides access to employment and education within the community and regionally;***
- ***Environmental Sustainability – Provides a convenient alternative to driving that reduces emissions and congestion.***

The existing Vision and Mission statements for Strathcona County Transit were updated based on this understanding of the organization's role in the community. The Vision statement is a clear and concise statement of the desired future of Strathcona County Transit while the Mission statement succinctly describes how to achieve the vision. This forms the starting point of the policy framework, with the goal that every action undertaken by the organization should help progress towards the Vision and Mission.

The recommended Vision and Mission statements for Strathcona County Transit are as follows:

Vision

Provide access to opportunities for all residents and businesses in the community through the provision of sustainable mobility services.

Mission

Strathcona County Transit provides sustainable mobility services for the community that are Customer-focused, Accessible, Reliable, Efficient and Safe (CARES).

Goals and Objectives

The plan then identifies goals and corresponding objectives that will guide the activities of the organization. The goals are organized into the primary purposes of equity, economic opportunity and environmental sustainability, and indicates objectives to reach each goal that collectively address all of the roles and reflect the CARES values noted in the Mission statement.

Service Standards

Service Standards provide for a consistent and fair evaluation of both existing and proposed services, and establish a framework for guiding decisions on how to best serve customers' diverse travel needs within prevailing budgetary and resource limits. The standards provide guidelines governing the planning and design of the overall service strategy for a growing Strathcona County Transit system that are linked to the Vision, Mission and Goals and Objectives of the system. To ensure consistency in the decision-making process and alignment with the vision, mission and goals and objectives of the plan, it is recommended that the Service Standards document be adopted by Council.

Because markets, customer expectations, and Strathcona County Transit's resources change over time, service standards are evolutionary by nature. In the coming years, they should be reviewed and updated as necessary to ensure that the established criteria are still relevant to Strathcona County Transit's operating environment, customer needs and expectations and reflect current transit industry trends.

The Service Standards document is split into both service design standards and performance standards. Service design standards set out specific criteria for route design and service levels and include:

- Eligibility criteria;
- Hours of service;
- Headway;
- Trip booking window;
- Travel time (directness of service);
- Proximity to service;
- Bus stops; and
- Accessibility.

Performance standards are used primarily to set desired and achievable goals for the performance of Strathcona County Transit and permit evaluation and feedback on how well these goals are met. They are set out for the following areas:

- Trip denial and missed trips;
- Passenger comfort and vehicle occupancy;
- Service reliability;
- Service utilization;
- Modifications to existing services; and
- Introduction of service to new areas.

Strategic Directions

Strathcona County Transit's Vision Statement reflects the changing nature of public transit - it is no longer solely focused on providing conventional and specialized bus transit services. Rather, it considers a broader purpose where the transit system is at the centre of planning and/or coordinating a broad range of sustainable mobility services in the community. These include conventional and specialized transit services as well as, potentially, car sharing services, ride sharing services, carpool coordination, active transportation integration, travel demand management, and other emerging approaches.

While the primary focus for Strathcona County Transit is always going to be the provision of its conventional and specialized transit services, its role will expand to provide greater emphasis on more integrated mobility options and travel demand management strategies.

In order to accomplish this, a number of strategic directions were developed. These reflect the Vision described above as well as the need to accommodate a growing population, further enhance what is working well, address issues noted through the community engagement process, and address a shifting mindset in mobility, how people travel and the technology available to facilitate new approaches to shared, accessible and sustainable mobility. These strategic directions are organized into four themes, as follows:

Mobility Management (SD MM)

Mobility Management acknowledges all the ways that people can travel in a community and all of the different ways that these modes can be operated; bringing them together for the benefit of the customer. For Strathcona County Transit, investing in Mobility Management means thinking beyond the primary role of providing public transit service and becoming the sustainable mobility integrator for the community. It means better integrating conventional and specialized transit services, considering how to use or partner with other service approaches or providers for new or improved service, and understanding the needs of all customers in order to provide better service.

There are a number of strategic directions developed that will help move towards this objective. Some are quick wins while others will require more time and are recommended in the long-term (between five and ten years).

MM1: Explore the Introduction of Dynamic Transit Services

Customers are demanding greater customization of their mobility options; seeking more adaptable and flexible services that adjust to when they want to travel in real-time, without relying on a published schedule. Similarly, municipalities continue to seek solutions to reduce costs and improve productivity of services. Fixed-route transit solutions do not always meet these two goals, particularly in evening and weekend periods when ridership demand is lower, and low demand areas characterized by low density neighbourhoods and employment areas designed around the private automobile and large tracts of open or greenfield space. This combination of factors makes it difficult to provide fixed-route service cost-effectively and in a manner that meets rising customer expectations. To address these circumstances, a new Dynamic Transit Service model is recommended to be assessed.

Dynamic Transit Services are shared-ride demand-responsive services that use smaller vehicles and mobile app technology to provide mobility to customers. The service model is considered a significant improvement to the previously used Dial-A-Bus service, primarily due to the use of a mobile app, which allows customers to plan, book, track and pay for their ride in real-time.

This strategic direction focuses on further exploring the implementation of Dynamic Transit Services. The following recommendations support this strategic direction:

- Further explore the use of Dynamic Transit Services as a replacement of certain fixed-route services in the Urban Service Area. This should include a review of both dedicated and non-dedicated service models.
- Develop a Dynamic Transit Service model and business case for low demand areas and operating periods, allowing customers to use a mobile app to book a shared-ride demand-responsive service to connect to the fixed-route service.

MM2: Explore Partnerships with Other Mobility Providers

People are becoming more multi-modal in how they travel. They may cycle to a local event, drive to get groceries and take transit to work. This strategic direction is about rethinking the role of Strathcona County Transit to be not only an operator of transit services, but a manager of sustainable mobility services. The following recommendations support this strategic direction:

- Expand the role of a senior member of the Strathcona County Transit administration and management team to include the exploration of partnership approaches with other mobility service providers.
- Explore partnerships with other mobility providers, such as ride, car and bike share programs and school boards that provide school bus service, to identify opportunities to increase the range of mobility offerings, in both the Urban and Rural Service Areas.
- Promote sustainable mobility services through awareness, marketing and education campaigns to inform residents of alternatives to driving alone in private vehicles.

MM3: Partnerships with Community Agencies

Some community agencies currently provide shared-ride transportation as part of their service offering in the community. There may be opportunities to better utilize these services to improve mobility for Strathcona County residents. The following recommendations support this strategic direction:

- As a manager of ‘sustainable mobility services’, engage community agencies that deliver transportation as part of their programming to assess potential partnerships to continue and potentially expand mobility options across the community.

MM4: Travel Training

Travel training programs are designed to ensure that lack of awareness, training and familiarity is not a barrier to accessing accessible fixed-route transit services. The following recommendations support this strategic direction:

- Building on the ‘take the bus’ program being launched through the Customer Experience area, develop and implement a travel training program that ensures that the lack of awareness, training and familiarity with conventional transit is not a barrier to accessing transit services.

MM5: Manage Parking Demand through Transportation Demand Management Strategies

This strategic direction looks at addressing parking shortages at Bethel Transit Terminal and Ordze Transit Centre by managing demand. The following recommendations support this strategic direction:

- Explore further the technology and cost required to implement paid parking at both Bethel Transit Terminal and Ordze Transit Centre. This should be weighed against the potential revenue generated from each parking area and the ability to provide a free space for residents that live in the Rural Service Area.

MM6: Continue to Improve Eligibility based on a Family of Services Approach

The existing paper-based application with medical verification used by Strathcona County Transit to determine eligibility does not provide sufficient information on the functional abilities of applicants to assess the most effective and type of service that could be available for the customer. As the conventional transit service becomes more fully accessible, steps should be taken to support a Family of Services approach which better utilizes accessible fixed-route services. The following recommendations support this strategic direction:

- Update the application process to gather more detailed information on the functional limitations of applicants, including an in-person component, when appropriate.
- Re-certify existing registrants on a two year cycle to maintain accurate and up-to-date information.

- Implement photo identification as part of the updated registration process to support ease of identifying registrants, to support ‘attendants ride free’ on conventional transit and further advancing service integration.
- Once the new specialized transit scheduling software system is in place, explore the concept of a Family of Services approach.

MM7: Equity of Attendants

Attendants who accompany persons with disabilities on Mobility Bus receive a free ride, but must pay for their ride when accompanying a registered Mobility Bus client using conventional transit. To encourage greater use of conventional accessible services by persons with disabilities, the following recommendation should be considered:

- Implement an ‘attendant’s ride free’ on conventional bus service to encourage Mobility Bus registrants to ride the fixed-route service.

MM8: Integration of Mobility Bus and Dynamic Transit Service

A key strategic direction will be to better integrate Mobility Bus trips with Dynamic Transit service trips. If the County elects to use its own fleet to deliver Dynamic Transit Services, the same vehicle could be used to provide both Mobility Bus and Dynamic Transit services. This means that the services would be “comingled”, and Mobility Bus and Dynamic Transit service customers may share vehicles if this provides greater efficiency in the delivery of their trips. The decision to integrate trips will be based on the ability to utilize existing in-vehicle capacity and provide a better level of service to customers. The following recommendation supports this strategic direction:

- Explore the concept of integrating Mobility Bus services with Dynamic Transit Services. A prerequisite of this approach is demand-response software in place to support the functions required by customers and staff.

MM9: Work with Technology Providers to Develop Integrated Scheduling and Mobile App for Demand-Responsive Services

Specialized Transit scheduling software, also known as ‘demand-response’, is now being used in new and innovative ways. It forms the basis of technology platforms now used by Transportation Network Companies (TNCs). This software has the ability to track vehicles in real-time and let customers know that their ride is on the way just before it arrives. Online apps can allow riders to book trips in real-time. As the County deploys its demand response software for Mobility Bus customers, the following recommendations should be considered to support this strategic direction:

- Implement the demand-response software for Mobility Bus as soon as possible to provide technology tools to assist staff to efficiently and effectively manage a growing number of trips as well as offering customers more ways to book and track trips.

- Assess the potential of using this demand-response software for Dynamic Transit Services throughout the Urban Service Area. Requirements would include the ability to book trips online through smart devices, track rides in real-time, communicate pick-up locations to persons booking trips, accept electronic fare payments aligned with the Regional Smart Fare project, to mention a few.

Mobility in the Urban Service Area (SD US)

Strathcona County Transit is an important component of mobility in the Urban Service Area. It is an essential service for many residents who rely on transit to provide access to employment, education, and services. The challenge that Strathcona County Transit faces is that the land use and roadway network it operates on is not always conducive to effective fixed-route transit operations. To address these challenges and make better use of existing resources, the following strategic directions are recommended.

US1: Rethink Evening and Weekend Service

This strategic direction is to conduct a pilot test of Dynamic Transit Service in Strathcona County (as described in MM1). The following recommendations support this strategic direction:

- Assess options to implement either a dedicated or non-dedicated Dynamic Transit Service model and select a preferred strategy during the weekday evening and weekend periods.
- Pilot a Dynamic Transit Service on weekday evenings and all-day weekends for a full year to evaluate its effectiveness.
- Assess effectiveness of Dynamic Transit Service at the completion of the pilot based on productivity (utilization), ridership and customer satisfaction.

US2: Introduce Dynamic Transit Service Options to Bethel Transit Terminal and Other Key Local Destinations

If the initial pilot to replace fixed-route local service on weekday evenings and weekends with a Dynamic Transit Service is successful, a second phase should be piloted during weekday peak periods. The following recommendations support this strategic direction:

- Eliminate Local Routes with low productivity, and replace with a one-year Dynamic Transit Service pilot. Dynamic Transit Services would connect to the Bethel Transit Terminal at the same scheduled frequency as the existing routes that were replaced.
- Explore opportunities to expand the service to other key destinations, including the Ordze Transit Centre and the Community Centre. The goal will be to improve the options available to customers without significantly increase the number of vehicles required during the pilot to extend the service.
- Assess effectiveness of Dynamic Transit Service at the completion of the pilot based on productivity, ridership and customer satisfaction.

US3: Review Local Service in Sherwood Park

At the successful completion of the Dynamic Transit Service peak period pilot, the potential should be explored to integrate Dynamic Transit as part of the Local Route network and improve connections to local neighbourhoods and destinations during the midday. The following recommendations support this strategic direction:

- Strathcona County Transit should revisit the structure of transit services in the Urban Service Area to provide more direct connections to key local destinations. This could include a combination of Local Routes and Dynamic Transit Services providing direct trips to destinations such as Centre in the Park, shopping centres, secondary schools and Strathcona Community Hospital.
- Any future updates to the Integrated Transportation Master Plan should identify the cost of not proceeding with a transit mode share increase and compare against the cost of providing the necessary transit services in place to reach the mode share target.

US4: Expand Service to Cambrian Crossing and Bremner

Determining when to implement transit service in new communities is a balancing act: too soon and buses travel around empty on a patchwork of unconnected roads; too late and transit misses out on being a viable option while new residents are forming their travel habits. This is a growth-dependant strategic direction that will be implemented once Cambrian Crossing's or Bremner's population grows to 500-1,000 people and can support transit service. Dynamic Transit Service should be implemented first and then upgraded to fixed-route service once demand warrants. The following recommendations support this strategic direction:

- Introduce a Dynamic Transit Service to Cambrian Crossing and Bremner early in the development, with connections to Emerald Drive and the Bethel Transit Terminal.
- Consider replacing Dynamic Transit Service with a Local Route once ridership exceeds the minimum Service Utilization targets for a Local Route noted in the Service Standards.
- Continue to expand Local Route or Dynamic Transit Services in Cambrian Crossing and Bremner in accordance with the Service Standards.

US5: Expand Service for Mobility Bus Registrants

With continued growth and aging of the County population, demand is expected to grow for Mobility Bus service. Fare parity introduced in July 2018 saw a significant increase in ridership. The growing and aging population is projected to increase annual rides on Mobility Bus from approximately 21,000 trips today to between 45,000 and 55,000 trips by 2028. To maintain the existing level of service to persons with disabilities unable to use the conventional system, the following recommendations support this strategic direction:

- Expand service on Mobility Bus to meet the growth in demand arising from a growing and aging population. This includes increasing the fleet and staffing required to meet demand within the Service Standards.
- Access taxis or other non-dedicated service providers for at least 10% of trips to support efficient use of the dedicated resources (staff and fleet).
- Implement a ‘family of services’ approach to increase the travel options available to Mobility Bus registrants who can access conventional transit for part of some trips or for certain destinations. This approach to integrated service delivery is linked to an improved eligibility process.
- Review the life cycle of Mobility Bus fleet to maximize the length of service that this fleet can deliver to the community. Industry prevailing practice is 7 to 10 years.

US6: Improve Accessibility of Services

The County needs a plan to guide its work to be a more fully universally accessible place to live that supports aging in place and reduces the need for special services. The following recommendations support this strategic direction:

- Develop an overarching policy that outlines the County’s commitment to an accessible transit service.
- Develop short and long-term plans identifying improvements to policies, procedures, information, training, infrastructure, etc., to achieve a more fully accessible transit service. These plans would identify priority areas for improvement that could be submitted for funding consideration in the operating and capital budget cycles.
- Consult key stakeholders as part of this process to gather their input on priorities to improve accessibility.

Mobility for Inter-municipal Trips (SD IM)

Six Inter-municipal Routes connect Sherwood Park’s two transit terminals to key destinations in the City of Edmonton. The service is performing at a high level, with approximately 5,000 average daily boardings on all six routes combined. Accessible double-decker buses are used to deliver services, which are often full in the peak direction. A number of issues were both observed and raised through the community engagement process regarding service productivity on Mobility Bus, the need for improved service to key destinations and during evenings / weekends and potential implementation of rapid transit services. The following strategic direction build on the success of the existing service and address the issues noted above.

IM1: Identify Integration Opportunities with Edmonton Transit Service (ETS)

All Inter-municipal Routes provide connections to destinations in Edmonton. There is some duplication that occurs with Strathcona County Transit Inter-municipal Routes and existing and planned ETS LRT corridors. Providing these connections would have the potential of reducing the length of the Strathcona County Transit Inter-municipal Routes, allowing revenue vehicle hours that were saved to be reinvested

back into the system. However, this type of modification would also result in the need to transfer between two services on two separate systems, potentially increasing travel time and reducing the quality of service. The following recommendations support this strategic direction:

- Continue to operate services directly to downtown Edmonton and other key destinations in Edmonton currently serviced by the Inter-municipal Routes.
- Connections to the Valley Line LRT and the Capital Line LRT continue to be made where feasible to promote connectivity between the two systems and accommodate customers that are not originating or destined downtown.
- Consideration be made to terminating routes at an ETS LRT station only when:
 - Fare integration is in place with ETS, avoiding customers from paying another fare;
 - Service hours saved can be reinvested back into the Inter-municipal Route to increase the frequency of service to every 15 minutes or greater (to reduce transfer time);
 - An agreement is made with ETS that does not involve a transfer cost paid to ETS to accommodate an increase in service levels that would result from adding Strathcona County Transit customers on to the LRT service.

IM2: Improve Evening Connections to University of Alberta (UofA)

The last inter-municipal bus that departs the UofA campus is at 9:45pm, while the last class ends at 10:00pm. There are a number of students that attend classes in the evenings, as well as employees that work at the UofA Hospital. The existing evening ridership on Route 414 is within an acceptable Utilization Service Standard, and it is anticipated that extending the service hours by one or two runs would maintain a ridership level that is within a minimum threshold for service. The following recommendations support this strategic direction:

- Further assess options to extend evening service to the UofA campus to better align with the last class end time of 10:00pm during the Fall/Winter period.
- Further assess options to extend midday and evening service to the UofA campus during the Summer period as a second phase of expansion (based on ridership growth during the Fall/Winter period meeting minimum service standards.
- Solutions should minimize the number of revenue vehicle hours added to the system to ensure service productivity targets continue to be met.

IM3: Improve Weekend Service

Route 411 is the only Inter-municipal Route that operates on weekends. It has hourly frequency and good ridership. This may warrant an increase in frequency as the population of Strathcona and the weekend ridership continue to increase. The following recommendations support this strategic direction:

- Continue to monitor the population growth and weekend ridership on Route 411.

- Consider increasing frequency of the Route 411 weekend service as the maximum Service Utilization threshold (as outlined in the Service Standards) are reached for the different weekend time periods. Consideration should be made to improving daytime Saturday service levels first to test the market. This should only take place if the weekend Dynamic Transit Service model has passed the pilot and made into a permanent service.

IM4: Improve Connections to NAIT

There are currently only a few trips that extend Route 413 to service NAIT directly. Otherwise, students must transfer to the LRT in downtown Edmonton. NAIT has recently introduced a U-Pass and students residing in Strathcona County would like to see additional direct service. This could include increasing the number of trips to NAIT or providing a semi-express service directly from Bethel Transit Terminal, reducing the overall travel time between Sherwood Park and the post-secondary institution. The following recommendations support this strategic direction:

- Explore low cost options to improve the level of service to NAIT during the Fall/Winter period.
- The introduction of service options that significantly increase operating costs or require another peak vehicle(s) should only be in place if significant ridership growth to NAIT warrants a higher level of service and/or additional revenue opportunities are identified to offset operating costs.

IM5: Expand Service to Grow Ridership

Inter-municipal Routes have seen a steady growth in ridership over the past 10 years. Increasing the level of investment per capita will provide the additional resources that will help the County reach the ridership growth targets noted in the Integrated Transportation Master Plan. The existing Inter-municipal Routes should have their service hours gradually expanded as population and ridership grow. Once Cambrian Crossing and Bremner have developed to the point where it can support local transit service, a new Inter-municipal Route to downtown Edmonton should also be implemented. The following recommendations support this strategic direction:

- Continue to invest in Inter-municipal Routes, gradually increasing the Inter-municipal Route revenue vehicle hours per capita as population grows. The amount of service growth should be confirmed in an update of the Integrated Transportation Master Plan, and tied to a transit mode share target.
- Explore options to connect to Cambrian Crossing and Bremner, starting with a Local Route and Inter-municipal Route connection to Bethel Transit Terminal; then adding a peak period Express Inter-municipal Route directly to Edmonton. This should be based on minimum Utilization of Service Standard being met.
- Identify options to increase weekday peak period service on Route 411 as well as other existing Inter-municipal Routes from the Bethel Transit Terminal to operate every 10 minutes once a Dynamic Transit Service option is in place in the Urban Service Area. This will provide a more frequent Inter-municipal service and attract new ridership.

IM6: Integration with Mobility Bus

Mobility Bus offers eligible residents door-to-door service between any address in the County and most hospitals in the Edmonton Metropolitan Region. Mobility Bus vehicles that travel to Edmonton have limited productivity, often carrying one customer for a long-distance trip. Since Inter-municipal Routes are fully accessible, this strategic direction is to improve integration between the two services to help improve productivity and increase travel options for registered Mobility Bus customers. The following recommendations support this strategic direction:

- Assess current trips of Mobility Bus customers to determine if opportunities exist for connections onto the fixed Inter-municipal Routes. This would involve identifying transfer points that are appropriate for persons with reduced mobility, as well as working with individuals to inform them of alternate ways to travel to a destination.
- As specialized transit software is implemented, include as much as possible, the ability to deliver integrated trips in the technology platform.

IM7: Identify Opportunities to Expand Service to Other Destinations in Edmonton

Expanding Inter-municipal Routes to other destinations in Edmonton is not recommended at this time. However, it is important to continue to assess this demand periodically, especially ensuring medical trips to hospitals are provided by Mobility Bus and DATS. The following recommendations support this strategic direction:

- Inter-municipal Routes should continue to be provided to the same destinations that are serviced today. No expansion to other destinations in Edmonton that require a significant expansion to the route structure are recommended at this time.
- Assess demand for trips to hospitals not currently served by Mobility Bus and alternative ways to deliver these trips, if sufficient demand exists. For example, the Misericordia is well served by several Edmonton Transit routes with a fully accessible path of travel from 87 Avenue to a nearby entrance. Negotiating a reciprocal agreement with DATS may be another way to offer these trips should demand warrant adding this service.

IM8: Protecting for Transit Priority and Rapid Transit

Transit Priority or Rapid Transit are typically warranted on corridors with high peak hour transit bus volumes and ridership. The purpose is to improve reliability and travel time on corridors that experience congestion. Baseline Road is the busiest transit corridor between Sherwood Park and Edmonton. The following recommendations support this strategic direction:

- Initiate a study on the Baseline Road corridor to gather data on areas of delay and assess various locations where transit priority measures could be introduced.
- Protect the corridor for a future dedicated transit-only lane.

Mobility in the Rural Service Area (SD RS)

Planning and delivery of public transportation in rural areas is often challenging. Rural areas tend to be large in area but low in density, resulting in very widely dispersed population, employment and services. These characteristics make it difficult to provide a transit service model with reasonable frequency and availability that is reasonably priced. Despite these challenges, there is still a need to provide mobility in rural areas. Currently, weekday Mobility Bus Services are provided in the Rural Service Area for medical and social trips. Trips are not provided for other trip purposes or for residents, employees or visitors that are not eligible for Mobility Bus.

RS1: Addressing the Needs of Rural Mobility Bus Registrants

The population is aging and with age comes an increase in disabling conditions that reduces some individuals' ability to drive. As the County reviews its services to citizens, and as there is a greater focus on aging in place and supporting choices in where people live, options for increased transit services for persons living in rural areas of the County should be considered. The following recommendations support this strategic direction:

- Assess the demand for Mobility Bus trips in the Rural Service Area on weekends and alternative ways of delivering these trips, if sufficient demand exists.

RS2: Expanding Service to Ardrossan

With a much higher population focused in a hamlet area, Ardrossan is anticipated to have the population and density to support a fixed-route transit service connecting residents to Sherwood Park as it grows. This is a growth-dependant strategic direction to be implemented once Ardrossan's population grows to 2,400-2,800 people and can support fixed-route service. The following recommendations support this strategic direction:

- Monitor pace of population growth in Ardrossan.
- Design and implement an hourly peak/off-peak service when ridership forecasts suggests that minimum productivity targets will be met.
- Monitor service once implemented and adjust based on customer comments and performance.

RS3: Expanding Demand Responsive Services to All Rural Residents

Given the challenges of providing a fixed-route service in a large rural area, a dedicated Dynamic Transit Service model is the most feasible way of providing rural transit. Rural transit is generally cost-prohibitive, but is worth considering using a dedicated Dynamic Transit Service model. This type of service would use a combination of in-house Mobility Bus vehicles and third-party sedans and minivans. The following recommendations support this strategic direction:

- Further assess the cost versus benefit of providing a rural Dynamic Transit Service against other cost and benefit of other service recommendations. This should be completed after the

successful completion of the Dynamic Transit Service evening and weekend pilot in the Urban Service Area.

Implementation and Phasing Plan

The phasing plan to implement the Strategic Directions is displayed graphically in **Figure E1**. Some of the Strategic Directions can only be implemented once other prerequisite steps are in place. The immediate-term plan (2019) focus on further planning and research required before service modifications occur in the short- to medium-term horizon. Much of the immediate-term also involves steps under the 'Mobility Management' Strategic Direction, which focus on organizational changes to how Strathcona County Transit views its role in providing sustainable mobility and conducting further review of Dynamic Transit Services. The short-term plan (2020) is focused on the implementation of Dynamic Transit Service as well as a number of low-cost expansion opportunities to the Inter-municipal service. The medium-term plan (2021-2023) focuses on a number of demand management strategies such as the Family of Services concept, addressing the issue of paid parking at the Bethel Transit Terminal and Ordze Transit Centre, and continuing to expand the Dynamic Transit Service plan. Expansion of Local and Inter-municipal Routes (including to Cambrian Crossing and Bremner) is also a key priority, which extends into the long-term plan (2024-2028).

It should be noted that the timing of many of these are subject to a number of factors, including the pace of population and employment growth in Cambrian Crossing and Bremner, ridership growth and the success of pilot projects. The timing of each Strategic Direction should be reviewed annually and be subject to the annual business planning and budgeting process conducted by Strathcona County Transit.

Financial Plan

The financial plan is a summary of all the costs identified to implement the Strategic Directions in the implementation plan. These are in addition to Strathcona County Transit's existing annual operating costs.

Table E1 presents anticipated additional operating costs that should be considered in new operating budgets over the next 10 years. This does not include potential customer revenue that would be generated from improved and expanded service. No significant additional costs are anticipated for 2019 outside of one-time fees required to further operationalize the strategy.

Table E2 provides anticipated vehicle expansion and other capital costs to accommodate service improvements. This identifies only expansion vehicles and does not include any additional spare vehicles, and this should be continually reviewed by Strathcona County Transit to maintain a healthy spare ratio.

Strategic Direction	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Mobility Management										
MM1 - Explore the Introduction of Dynamic Transit Services										
MM2 - Explore Partnerships with Other Mobility Providers										
MM3 - Partnerships with Community Agencies										
MM4 - Travel Training										
MM5 - Manage Parking Demand through Transportation Demand Strategies										
MM6 - Continue to improve Eligibility based on a Family of Services Approach										
MM7 - Equity of Attendants										
MM8 - Integration of Mobility Bus and Dynamic Transit Service										
MM9 - Develop Integrated Scheduling and Mobile App for Demand-Responsive Services										
Mobility in the Urban Service Area										
US1 - Rethink Evening and Weekend Service										
US2 - Introduce Dynamic Transit Service options to BTT and Other Key Destinations										
US3 - Review Local Service in Sherwood Park										
US4 - Expand service to Cambrian Crossing and Bremner										
US5 - Expand Mobility Bus Service										
US6 - Improve Accessibility of Services										
Mobility for Inter-municipal Travel										
IM1 - Identify Integration Opportunities with Edmonton Transit Service (ETS)										
IM2 - Improve Evening Connections to UofA										
IM3 - Improve Weekend Service										
IM4 - Improve Connections to NAIT										
IM5 - Expand Service to Grow Ridership										
IM6 - Integration with Mobility Bus										
IM7 - Identify Opportunities to Expand Service to Other Destinations in Edmonton										
IM8 - Protect for Transit Priority/Rapid Transit										
Mobility in the Rural Service Area										
RS1 - Addressing the Needs of Rural Mobility Bus Registrants										
RS2 - Expand Service to Ardrossan										
RS3 - Expand Demand-Responsive Services to All Rural Residents										

Figure E1 - Strategic Directions Phasing Chart

A range is identified for all costs given the strategic nature of this plan. Each cost should be further reviewed as part of the annual business planning and budgeting process required each year before budgets are approved.

It is also anticipated that there will be a need for one-time consulting fees to help operationalize and market the strategy, depending on the availability of existing staff. The majority of these fees occur in the immediate-term to further refine the strategic plan, with a focus on operationalizing the Dynamic Transit Service strategy.

Table E1 - Annual Operating Costs

Strategic Direction	2019	2020	2021-2023 (annual)	2024-2028 (annual)
MM3 - Partnerships with Community Agencies (community grant program)	-	\$25,000	\$25,000	\$25,000
MM4 – Travel Training	-	-	\$10,000 - \$15,000	\$10,000 - \$15,000
MM6 - Continue to improve Eligibility based on a Family of Services Approach (Occupational Therapist)	-	\$15,000 - \$30,000	\$15,000 - \$30,000	\$15,000 - \$30,000
US4 - Expand Service to Cambrian Crossing and Bremner	-	-	\$344,000 - \$460,000	\$918,000 – \$1,377,000
US5 - Expand Service for Mobility Bus Registrants	-	-	\$112,000 - \$215,000	\$261,000 - \$500,000
IM2 - Improve Evening Connections to University of Alberta (UofA)	-	\$15,000 - \$23,000	\$15,000 - \$32,000	\$15,000 - \$32,000
IM3 - Improve Weekend Service	-	\$35,000	\$35,000 - \$89,000	\$35,000 - \$89,000
IM4 - Improve Connections to NAIT	-	-	\$10,000 - \$60,000	\$10,000 - \$60,000
IM5 - Expand Service to Grow Ridership	-	-	\$383,000 - \$577,000	\$1,004,000 - \$1,876,000
RS1 - Addressing the Needs of Rural Mobility Bus Registrants	-	\$27,000 - \$48,000	\$27,000 - \$48,000	\$27,000 - \$48,000
RS2 - Expand Service to Ardrossan	-	-	-	\$128,000 - \$277,000
Total	\$0	\$117,000 - \$161,000	\$976,000 - \$1,551,000	\$2,448,000 - \$4,329,000

Table E2 – Capital Plan (vehicle expansion and accessibility improvements)

Strategic Direction	2019	2020	2021-2023	2024-2028
US4 - Expand Service to Cambrian Crossing and Bremner (40' buses)	-	-	\$0 - \$670,000	\$0 – \$1,340,000
US5 - Expand Service for Mobility Bus Registrants	-	-	\$0 - \$405,000	\$135,000
IM4 - Improve Connections to NAIT (double-decker vehicle)	-	-	\$0 - \$1,200,000	-
IM5 - Expand Service to Grow Ridership (double decker vehicles)	-	-	\$1,200,000 - \$2,400,000	\$2,400,000 – \$4,800,000
US6: Improve Accessibility of Services (budgeted for accessibility improvements)	-	-	\$150,000	\$250,000
RS2 - Expand Service to Ardrossan (40' buses)	-	-	-	\$670,000
Total	\$0	\$0	\$1,350,000 - \$4,825,000	\$3,455,000 - \$7,195,000

1.0 Introduction

1.1 Study Purpose and Objectives

Dillon Consulting Limited was retained by Strathcona County Transit to conduct an update of the 2012 Transit Master Plan (TMP).

The purpose of this study is to develop a plan that will provide direction to the County on the delivery of transit service over a ten year period. This includes local transit services, Mobility Bus services, Inter-municipal services to Edmonton, and rural service. The plan includes:

- A comprehensive engagement strategy of both transit customers and residents that do not take transit;
- A review of existing conditions in relation to transit services and ridership, current policies in place, planned growth and improvements and other pertinent information;
- An understanding of the mobility needs of Strathcona County residents;
- A policy framework defined through a vision, mission and goals and Service Standards; and
- Strategic directions and plans for all types of transit services.

The following report is split into four key sections:

Existing Conditions

The purpose of this section of the report is to set the stage and inform the strategic directions proposed later in the Transit Master Plan. This includes understanding the existing municipal context, the community's views on public transit and a review of the existing transit system.

Policy Framework

In order for the Transit Master Plan to be truly successful, it needs to be built on a sound policy framework that outlines the purpose of the transit system and provides guidance on how to plan, design, operate and maintain all of the components of the system. The purpose of these sections are to review the previous Transit Master Plan policy framework, discuss the success of the various policy framework elements, consider the community's recent input on the policy framework elements, and recommend an updated policy framework for the new Transit Master Plan.

Strategic Directions

The policies and standards of the preceding sections inform the setting of strategic directions. These are the concrete actions that are recommended to be taken over the course of the Transit Master Plan.

Phasing and Implementation Plan

In order for the plan to be effective, it requires a detailed implementation plan that lays out the steps to be taken to implement each strategic direction. These sections comprise the steps required to implement the strategic directions as well as estimated operating and capital costs the County should begin to budget for.

1.2 Municipal Context

Strathcona County is a specialized municipality located east of Edmonton in central Alberta within the Edmonton Metropolitan Region. Much of the County's population resides in Sherwood Park; an urban service area in Strathcona County located in close proximity to the City of Edmonton. According to the 2018 Municipal census, approximately 98,381 people live in Strathcona County, of which 71,332 (72.5%) people live in the Urban Service Area (Sherwood Park) and 27,049 (27.5%) live in rural areas of the County². The Edmonton Metropolitan Region is the second fastest growing major Census Metropolitan Area in Canada³.

Employment in Strathcona County is unique in that there are significant commuting flows both to and from Edmonton. Major employment in the County includes multiple large oil refineries and petrochemical processing facilities that attract workers from Edmonton and rural areas in Strathcona County and across the Edmonton Metropolitan Region. Capital projects at these facilities can result in a large but temporary influx of additional workers for months or even years. There are also many retail and service sector jobs in Sherwood Park that are filled by workers from Edmonton. In the rural areas of the County, there is also a large agricultural-based employment sector.

At the same time, there are significant numbers of Strathcona County residents who commute to downtown Edmonton for employment with the provincial government and other office and professional work. The majority of the County workforce works in Edmonton rather than in the County itself. Edmonton is also the location of the post-secondary institutions that students from Strathcona County attend. Effective transportation into Edmonton is required to allow those students who prefer to live at home to make that choice.

Strathcona County has the vision of "Becoming Canada's most livable community" in the 2013 – 2030 Strategic Plan. This includes the goal of building an efficient and effective multi-modal transportation network. Strathcona County Transit is an integral part of the transportation network in the county. Transit must continue to evolve to serve the transportation needs of Strathcona County.

² <http://www.strathcona.ca/departments/legislative-legal-services/census/>

³ http://capitalregionboard.ab.ca/Website/media/PDF/REF/Application%20Archives/2017/Growth_Plan_Interactive_03-16.pdf

2.0 Community Engagement

2.1 Engagement Strategy

Throughout the project, the project team engaged with participants in an open dialogue about the project using techniques to provide Input, Listen and Learn, Collaborate, and Empower, as appropriate. These levels of engagement are defined in Strathcona County's Public Engagement Continuum.

Throughout the Strathcona Transit Master Plan Update, a number of collaborative and interactive events, meetings and conversations about Strathcona County transit services have taken place between the project team and a diverse range of stakeholders. These include focus group discussions and meetings with Council, advisory committees, County departments, transit staff, and various stakeholders. The project also included thirteen public engagement events open to all residents of Strathcona County and beyond, online surveys, and a number of supportive activities designed to generate interest, awareness, excitement, and meaningful conversation.

The first phase of public engagement was held from February 27 to March 25, 2018. The focus of this phase was to establish the needs of Strathcona County with regards to transit. A summary of the results from this phase is included in **Section 2.2**. The second phase (Setting the Policy Framework), resulted in the creation of a Service Standards document outlined in **Section 11.0**. The third phase was to develop the strategic directions and plans outlined in **Section 12.0**. This draft policy framework and strategic directions were shared with the Priorities Committee and the general public in late October 2018 in order to receive feedback and comments that informed the writing of this Final Report (Phase 4). The overall Community Engagement Plan for this project is shown in **Figure 1**.

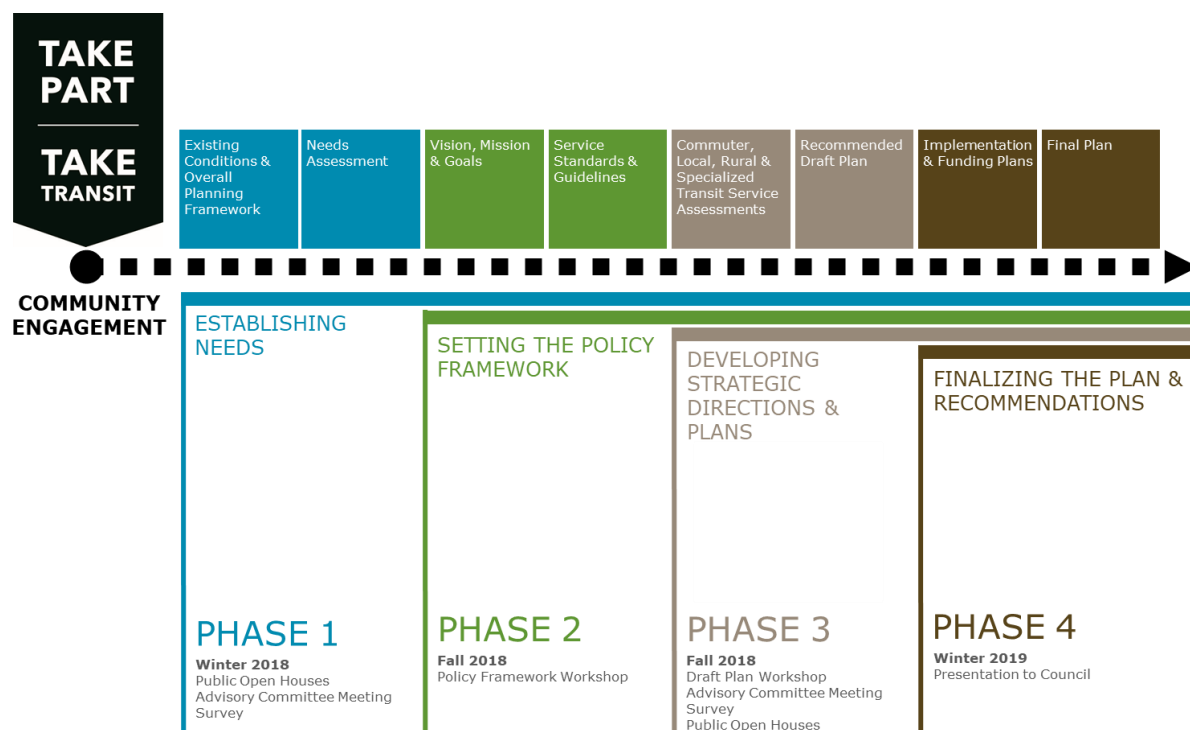


Figure 1 - Community Engagement for TMP

2.2 What We Heard: Establishing Needs

This section summarizes six key themes that were shared with the consultation team during the first phase of public engagement from February 27 to March 25, 2018. Meetings were held with the mayor, councillors, bus operators, a focus group of transit stakeholders, and through several public open houses. The team also rode on Strathcona County Transit buses and spoke with customers. All of these groups were asked about their priorities for the future direction of Strathcona County Transit in the following areas:

- Big Picture and Vision;
- Local Service;
- Inter-municipal Service;
- Mobility Bus Service;
- Rural Service; and
- Passenger Amenities.

For each of these six topics that were put forth for discussion, the results shared during the consultation are summarized below.

Big Picture and Vision

- Transit has a social role to play in making Strathcona County accessible to all residents regardless of age or ability to drive a vehicle;

- Transit has an environmental role to play in reducing emissions and congestion;
- Electric or other alternatives to diesel buses should be considered and implemented if the cost is reasonable;
- Transit has an equity role to play in providing an affordable means of transportation for all residents regardless of means;
- Transit is an important service that allows people at all life stages (particularly youth, students, and seniors) to live in the community;
- Transit needs to continue to grow and evolve to meet changing transportation needs;
- Transit service is an important component of Sherwood Park developing as a more urban and walkable community in the future;
- Future urban development in Strathcona County such as Cambrian Crossing and Bremner need to consider and incorporate transit service; and
- Strathcona County should not be afraid to be on the leading edge of new transit technologies but should avoid the unproven “bleeding edge”.

Local Service

- Many trips around Sherwood Park take unreasonably long by transit and require a transfer;
- The transit terminals are not destinations or located near to destinations;
- Actual destinations such as Millennium Place and Festival Place are awkward to access by transit;
- There is a negative perception of local buses running almost completely empty during the day;
- Service is poor in evenings and on weekends with reduced frequencies;
- It is more convenient to drive to the transit terminals rather than take local transit;
- Although local ridership is low, it is an important service and should continue to be provided; and
- Replacing some fixed-route service with on-demand service should be considered where appropriate, especially in the evenings and weekends.

Inter-municipal Service

- Inter-municipal service works very well for commuters to downtown Edmonton;
- Travel time is comparable to driving;
- The high cost of parking is a major incentive to take transit;
- Free parking and low-cost reserved parking at the transit terminals make it convenient to park-and-ride;
- Some combination of more parking, paid parking, or improvements to local service may be necessary to accommodate increasing demand for Inter-municipal service;
- Additional service is desired at the Ordze Transit Centre, especially continuing later in the evening;

- Additional service hours and frequency are desired for the University of Alberta main campus and Campus Saint-Jean in the evening (as evening transit schedules do not align with class schedules);
- There is no direct service to the University of Alberta on weekends;
- Spring/Summer schedules for Inter-municipal buses are reduced for the University of Alberta service, which doesn't meet the needs of students taking classes and employees that work at the University of Alberta campus;
- Additional direct service to Northern Alberta Institute of Technology (NAIT) is desired;
- There is some demand for Inter-municipal service between Sherwood Park and Fort Saskatchewan; and
- In the long-term, plans should be considered for a Rapid Transit connection between Sherwood Park and Edmonton.

Mobility Bus Service

- Providing door-to-door service is essential;
- Need to evaluate the eligibility requirements and trip purpose restrictions for rural Mobility Bus customers;
- There are a few rural riders who cannot access community events on weekends and would like Mobility Bus service expanded;
- Need better ways to contact Mobility Bus service;
- Not having to book rides well in advance (currently minimum two days) is desired;
- Fares should be standardized with conventional transit (this occurred July 1, 2018);
- Additional destinations in Edmonton are desired, particularly NAIT, and Misericordia Hospital;
- Mobility Bus should not have an 18+ age restriction;
- Mobility Bus attendants are required to pay a fare when riding the conventional service, but not the Mobility Bus service. This should be standardized between both systems; and
- People are open to the idea of using Mobility Bus vehicle to provide an integrated Mobility Bus and conventional transit service for customers in low demand areas (e.g. Rural Service Area) or periods. This would mean that the same Mobility Bus could provide on-demand door-to-door service for registered Mobility Bus customers, while accommodating on-demand stop-to-stop service for conventional customers in the same vehicle when demand does not warrant the justification of a separate fixed-route service.

Rural Service

- Some people are strongly in favour of providing transit service to rural areas of Strathcona County;
- Some people are willing to provide rural transit service only if the demand is there;
- Demand for rural transit service appears to be minimal outside of Mobility Bus users; and
- Ardrossan is the most likely candidate for connection to Sherwood Park as it grows, perhaps with a park-and-ride facility.

Passenger Amenities

- Praise for the customer service and professionalism of drivers and staff;
- Praise for the high level of amenities on Strathcona County Transit buses such as air conditioning and plush seats;
- Offering modern communications with customers is critical, students are a key part of the transit market; and
- Wifi on buses (especially Inter-municipal Routes) is desirable if the cost is reasonable.

2.3 Online Survey #1

An online public survey was also developed and made available to the public between February 26 and March 25, 2018. Customers and residents were able to complete the survey online or on tablets set up at the transit terminals, engagement events, and municipal facilities. The survey was very successful with over 1,000 responses, of which just over 800 were complete.

The survey captured a range of demographic perspectives with participants from the following age groups:

- Under 18 (2.2%);
- 18-24 (18.5%);
- 25-44 (33.3%);
- 45-64 (35.4%);
- 65 and older (8.4%); and
- N/A (2.1%).

The majority of respondents (77.5%) live in Sherwood Park, with the remainder living in the Rural Service Area of Strathcona County (16.3%), the City of Edmonton (4.0%) or other (2.2%). Of those who completed the survey:

- 42.6% take Strathcona County Transit regularly (5-7 times a week);
- 7.8% take Strathcona County Transit occasionally (1-4 times a week);
- 9.4% take Strathcona County Transit infrequently (less than once a week);
- 24.7% have not taken Strathcona County Transit in the past three months; and
- 15.4% never take Strathcona County Transit.

A detailed summary of the survey results is provided below.

2.3.1 Role of Transit in the Community

The community was asked about their perceptions of public transit and their views on the role transit should play in the County.

Most residents expressed a positive perception of public transit and its role in society. The majority of participants agreed that public transit is of value to their community and is a good investment of tax dollars, whether they use it or not. Public transit is also seen as a catalyst for other community benefits and should be expanded to promote economic development, quality of life and the environment. Regardless of the benefits of public transit, the majority do not think that it should be made more difficult to drive a car in order to encourage the use of public transit.

The question around raising taxes to increase transit service did not generate a common public opinion. The most common responses from the 871 participants are as follows:

- 77.3% agree (37.3% somewhat, 36.4% strongly) that public transit should be expanded to help the environment;
- 73.1% agree (36.7% strongly, 36.4% somewhat) that Strathcona County should actively encourage residents to make more environmentally sustainable transportation choices;
- 71.3% disagree (47.4% strongly, 23.9% somewhat) that it should be made more difficult to drive a car in order to encourage people to use transit;
- 69.5% agree (40.2% somewhat, 29.3% strongly) that public transit contributes to the economic well-being of my community;
- 71% agree (42.0% somewhat, 29.2% strongly) that public transit provides good value for the investment of local tax dollars;
- 86.4% agree (39.7% somewhat, 46.7% strongly) that my community benefits from having good public transit, whether I use it or not; and
- 40.6% agree (26.6% somewhat, 14.0% strongly), 36% disagree (18.3% strongly, 17.7% somewhat) and 23.4% did not agree nor disagree that they would support higher local taxes to increase transit service.

2.3.2 System Design Questions

The survey included a number of questions that probed high-level system design considerations. Designing transit systems often result in trade-offs as the individual needs of all customers cannot be fully met when designing a public service that promotes shared rides. The purpose of these questions was to understand customer preferences on strategic decisions about the system design. The questions and responses are noted in **Table 1**.

For a number of system design questions, the responses were fairly split, showing no clear preference in how the service should be designed. There were two areas where respondents showed a preference in direction the study should take:

Table 1 - System Design Input from On-line Survey

Topic	Majority preference	Minority preference
Direct Travel vs. Shorter Walking Distance	Direct and frequent routes along major roads with few deviations onto local streets (longer walks to bus stops to access faster bus services are acceptable) 51.8%	Service closer to my home and/or final destination (short walks to bus stops - less than five minutes - are needed even if it results in less direct and longer travel times) 48.2%
Peak Period Service. Vs. Off-Peak Service	More frequent weekday peak service(6:00 am – 9:00 am and 3:00 pm – 6:00 pm) 52.4%	Later service in the evenings and more weekend service 47.6%
Current Fares vs. Service Improvements	Service improvements, such as more frequent service or extended hours of service (which may require periodic increases to passenger fares) 55.1%	Passenger fares remaining low (which may result in existing level of service remaining the same) 44.9%
Transit Terminal Parking vs. Transit Terminal Local Service	Frequency and convenience of local transit service is improved to avoid having to expand parking and introducing a parking fee 76.2%	The number of parking spaces are expanded, even if that involves introducing parking fees to help pay for the expansion 23.8%
Rural Transit Service	A rural park-and-ride lot be built with a more frequent fixed-route bus connection to the Bethel Transit Terminal and/or Ordze Transit Centre 53.7%	An accessible on-demand shared ride service be introduced in the rural areas of Strathcona County where customers call or use smart phone apps to schedule a pick-up and connection to the Bethel Transit Terminal and/or Ordze Transit Centre 46.3%
Off-Peak Transit Service	An on-demand shared ride service where customers call or use smartphone apps to schedule a pick-up 64.2%	A fixed-route bus service that operates infrequently (e.g. every hour) 35.8%

9.9% or less difference in opinion

10-49.9% difference in opinion

50% or greater difference in opinion

Access to the Two Transit Terminals

A clear majority of respondents prefer improving local transit service instead of increasing the number of parking spaces. Parking at both terminals is at capacity during the Fall and Winter periods.

On-Demand Shared-Ride Service

Most respondents are interested in exploring the option of an on-demand shared-ride service over the existing fixed-route structure in Sherwood Park.

Service Improvements

Service improvements were also seen as a priority, even if it means an increase in passenger fares over maintaining the existing status quo and not raising fares.

2.3.3 Transit Fares

Participants were asked the extent to which they agree or disagree with a number of transit fare-related questions. A pronounced majority of participants (73.8%) agreed that fares should be set to encourage environmentally sustainable travel choices and should be lowered to encourage transit ridership (55%). In line with the above two questions, only 19% of respondents agree with the statement that fares should be higher to support funding from taxpayers. The use of electronic fare cards was primarily seen as a positive way to encourage customers to ride more often (47% agree). There were mixed feelings about raising fares to help fund improved transit service.

2.3.4 Parking at Transit Terminals

Participants were asked about their views of parking at transit terminals. Most participants agreed that park-and-ride lots should be introduced in rural areas (66%), likely to alleviate some of the demand at the two existing terminals. For the two existing park-and-ride lots, approximately 45% of respondents indicated that they would support the County to encourage walking, cycling or buses to the transit terminals rather than invest in additional park-and-ride options (32% disagreed).

The idea of charging parking fees at the Bethel and Ordze Transit terminals were mixed. Forty-three percent (43%) of respondents support this initiative if local bus services are improved, while 43% would not support this action (the remaining are undecided). When asked the question about parking fees without mention of corresponding local transit improvements, only 28% supported this strategy while 57% would not support this strategy.

Transit Fares. To what extent do you agree or disagree with the following statements?		Strongly Disagree	Disagree Somewhat	Neither Agree nor Disagree	Agree Somewhat	Strongly Agree	Responses
Fares should be increased annually to help fund improved transit service	Count Row%	99 11.4%	202 23.2%	215 24.7%	304 34.9%	50 5.7%	870
Fares should be set to encourage environmentally sustainable travel choices	Count Row%	39 4.5%	65 7.5%	133 15.3%	394 45.3%	239 27.5%	870
Electronic fare cards (smartcards) would encourage me to ride transit more often	Count Row%	123 14.1%	78 9.0%	264 30.3%	227 26.1%	178 20.5%	870
If some passengers pay more, it is acceptable to provide them a higher level of service	Count Row%	204 23.4%	196 22.5%	170 19.5%	199 22.9%	101 11.6%	870
Fares should be lower, to encourage transit ridership	Count Row%	37 4.3%	112 12.9%	242 27.8%	296 34.0%	183 21.0%	870
Fares should be higher, to reduce funding support from taxpayers	Count Row%	135 15.5%	304 34.9%	264 30.3%	116 13.3%	51 5.9%	870
Totals Total Responses							870

Figure 2 - Transit Fare Responses from On-line Survey

Parking at Transit Terminals. To what extent do you agree or disagree with the following statements?		Strongly Disagree	Disagree Somewhat	Neither Agree nor Disagree	Agree Somewhat	Strongly Agree	Responses
The County should strongly encourage customers to walk, cycle or use local buses rather than using the park-and-ride lots	Count Row%	106 12.2%	174 20.0%	200 23.0%	256 29.4%	134 15.4%	870
Charging a fee to park is acceptable as long as Local Bus connections are improved	Count Row%	217 24.9%	165 19.0%	114 13.1%	265 30.5%	109 12.5%	870
Parking fees should be introduced at the Bethel Transit Terminal and Ordze Transit Centre to help manage parking demand at these locations	Count Row%	310 35.6%	186 21.4%	134 15.4%	166 19.1%	74 8.5%	870
Park and ride lots should be introduced in rural areas	Count Row%	37 4.3%	65 7.5%	189 21.7%	363 41.7%	216 24.8%	870
Totals Total Responses							870

Figure 3 - Transit Terminal Parking Responses from On-line Survey

2.3.5 Views of the Existing Local Service

Existing local transit customers provided 323 survey responses. Customers were asked a number of questions about why they use the service, their existing experience on the service, and what improvements could be made to make them use the service more often. The top ranking responses in this section are based on the number of times that participants selected a response and the rank that it was assigned. For example, the top choice for using local service was ranked by participants a total of 175 times, and it received a cumulative score of 443 points based on the number of times that participants ranked it as their top reason (3 points), second reason (2 points), or third reason (1 point). The top five reasons and scores for using the local service were:

- Local transit allows me to avoid parking hassles when connecting to an Inter-municipal Route to Edmonton (443 score);
- Local transit service is more affordable than driving (228 score);
- Local transit allows me to avoid the hassle of parking (225 score);
- Taking transit is better for the environment (184 score); and
- Local transit service is convenient (155 score).

Improvements that customers would like to see include:

- Shorter travel time/more direct service (349 score);
- Increased frequency of weekday daytime service (330 score);
- More reliable service (buses arrive on time) (266 score);
- Increased frequency of weekday evening service (264 score); and
- Better understanding of current routes and services (251 score).

2.3.6 Views of the Existing Inter-municipal Service

Existing Inter-municipal Route customers provided 495 responses, of which 466 (94.1%) have taken Strathcona County Transit's Inter-municipal Route service to Edmonton at least once in the past three months. Customers were asked a number of questions about why they use the service, their existing experience on the service, and what improvements could be made to make them use the service more often. The top ranking responses in this section are based on the number of times that participants selected a response and the rank that it was assigned. For example, the top choice for using the service was ranked by participants a total of 343 times, and it received a score of 813 points. The top five reasons and scores for using the service were:

- Inter-municipal transit allows me to avoid the hassle or cost of parking (813 score);
- Inter-municipal transit service is more affordable than driving (640 score);
- Inter-municipal transit service provides direct service to my destination (303 score);
- Riding Inter-municipal transit is comfortable/relaxing (302 score); and

- Inter-municipal transit service is convenient (237 score).

Improvements that customers would like to see include:

- Increased frequency of weekday daytime service (381 score);
- Increased frequency of weekday evening service (309 score);
- Increased frequency of Saturday service (207 score);
- More reliable service (buses arrive on time) (257 score); and
- Lower transit fares (249 score).

2.3.7 Use of Mobility Bus Service

Out of 495 participant responses, nine (1.8%) said that they are registered for Strathcona County Transit's Mobility Bus service. These existing Mobility Bus service customers were asked about the purpose of their trips, the reasons for those trips and what improvements they would like to see. Most participants use the service to make trips for personal use and provides customers of varying accessibilities with independence. The prioritized improvements that customers want to see include reduced fares and improved service (holidays, hours, convenient booking confirmation). Note: the number indicated beside each bullet represents the cumulative score based on number of responses and ranking of each answer. The top five purposes for using the Mobility Bus service were:

- Travel to/from shopping or services in Sherwood Park (6 responses);
- Travel to/from personal visits, dining, entertainment in Sherwood Park (5 responses);
- Travel to/from medical appointments in Sherwood Park (4 responses);
- Travel to/from medical appointments in Edmonton (3 responses); and
- Travel to/from schools or work in Sherwood Park or Edmonton (2 responses).

The top five reasons and scores for using the Mobility Bus service were:

- Mobility Bus provides me with independence (12 score);
- I am not able to drive (10 score);
- Mobility Bus service provides direct service to my destination (8 score);
- Mobility Bus service is more affordable than taxis (7 score); and
- Mobility Bus service is convenient (4 score).

Improvements and scores that customers would like to see:

- Reduced fares (11 score);
- Holiday service (8 score);
- Service hours in Sherwood Park (7 score);
- Service hours in rural areas (6 score); and

- Booking confirmation through phone/email/text (4 score).

2.3.8 Fixed-route Transit Service Accessibility Review

Participants were asked to identify areas for accessibility improvements on the fixed-route transit. Note: the number indicated beside each bullet represents the cumulative score based on number of responses and ranking of each answer. The top three accessibility improvements and scores were:

- Flexible routing that allows pick-ups and drop-offs closer to desired destinations (12 score);
- More wheelchair-accessible bus stops (larger paved surfaces connected to sidewalks) (12 score); and
- Travel training (free program that trains Mobility Bus registrants to use the Strathcona County Transit fixed-route service) (7 score).

2.3.9 Comments from Residents that do not use Strathcona County Transit

The 349 survey participants who do not take Strathcona County Transit were asked for the reason why they do not use the service and what improvements could be made to get them to use the service. Increasing convenience, reducing travel time and providing better information of current routes and services were top priorities for improving Strathcona County Transit local and Inter-municipal service. Note: the number indicated beside each bullet represents the cumulative score based on number of responses and ranking of each answer. The top three reasons for not using Strathcona County Transit and scores were:

- I own a car and prefer to drive (482 score);
- I need a car for my job or after work/school activities (390 score); and
- Travel times are far too long on the bus (226 score).

The top five improvements that would get participants to use Strathcona County Transit local service and scores were:

- Shorter travel time (more direct service) (343 score);
- Better understanding of current routes and services (298 score);
- Access to destinations in rural Strathcona County (197 score);
- Lower transit fares (181 score); and
- Bus stops located closer to my home or destination (164 and 150 score).

The top five improvements that would get participants to use Strathcona County Transit Inter-municipal service and scores were:

- Better understanding of current routes and services (315 score);
- Shorter travel time (more direct service) (241 score);
- Better connections to Edmonton Transit Services (205 score);
- Lower transit fares (198 score); and
- Service to other destinations in Edmonton (141 score).

3.0 Existing Transit System

This section provides an overview of existing transit service in place in Strathcona County on a local and inter-municipal level. The overview of the routes, service and market is based on data received from Strathcona County Transit as well as information collected through the community engagement strategy.

Strathcona County Transit operates a reservation based demand responsive service for persons with disabilities (Mobility Bus) and two conventional fixed transit services: Local and Inter-municipal Routes. Local Routes serve the Sherwood Park community, while Inter-municipal Routes connect Sherwood Park to Edmonton. Prior to the Summer of 2016, Strathcona County Transit also operated a local dial-a-bus service during the evenings and weekends. This service has since been replaced by fixed-route service.

3.1 Local Services

The local service is designed to connect residents of Sherwood Park to one or both of the two transit terminals, providing opportunity for customers to connect to the Inter-municipal Routes or other Local Routes in the system, and to provide access to a number of destinations within Sherwood Park, including schools, retail areas and employment opportunities. The route structure is designed as a fixed-route service which balances the need for coverage to residential neighbourhoods and direct connectivity to one or both of the transit terminals.

3.1.1 Route Network

There are 11 Local Routes and six peak hour variations (denoted with an “A” or “B” after the route number) currently in operation. The majority of routes connect to the Bethel Transit Terminal and three routes also connect to the Ordze Transit Centre. The existing route structure is illustrated in **Figure 4**.

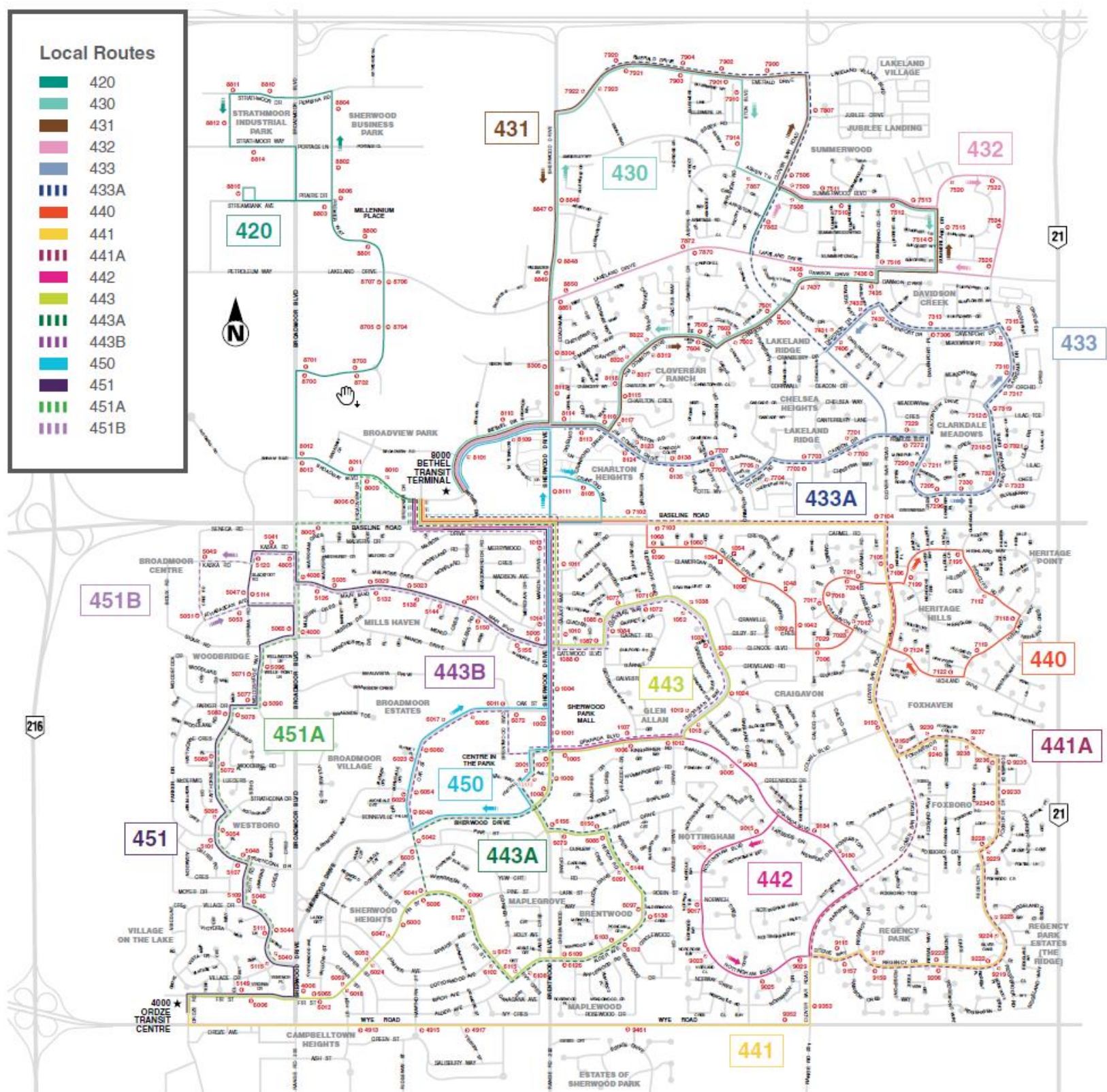
Local Routes operated by Strathcona County Transit in the daytime are:

- **Route 420:** This route connects Strathmoor Industrial Park, Sherwood Business Park, and Millennium Place to Bethel Transit Terminal via Premier Way and Broadmoor Boulevard;
- **Route 430:** This route connects Palisades, Archbishop Jordan Catholic High School, Emerald Hills, Summerwood, Davidson Creek, Lakeland Ridge, Clover Bar Ranch and Charlton Heights to Bethel Transit Terminal;
- **Route 431:** This route links Charlton Heights, Clover Bar Ranch, Lakeland Ridge, Davidson Creek, Summerwood, Emerald Hills, Archbishop Jordan Catholic High School and Palisades to Bethel Transit Terminal. It follows the same route as Route 430 in the opposite direction to provide two-way service;
- **Route 432:** This route provides the connections between Aspen Trails and Summerwood to Bethel Transit Terminal along Sherwood Drive and Lakeland Drive;

- **Route 433:** This route connects Bethel Transit Terminal to Charlton Heights, Chelsea Heights, Lakeland Ridge, Clarkdale Meadows and Davidson Creek;
- **Route 433A:** This route joins the neighbourhoods of Charlton Heights, Lakeland Ridge, Chelsea Heights, Clarkdale Meadows, Davidson Creek and Archbishop Jordan Catholic High School which is primarily run to connect residents to schools;
- **Route 440:** This route connects Bethel Transit Terminal to Glen Allan, Craigavon, Heritage Hills communities via Baseline Road, Craigavon Drive and Highcliff Road;
- **Route 441:** This route serves Bethel Transit Terminal and Ordze Transit Centre at the start or end of the trip and serves the neighbourhoods of Foxboro, Foxhaven, Regency Park, and Salisbury Village along Clover Bar Road, Foxhaven Drive and Regency Drive;
- **Route 441A:** This route services the communities of Foxboro, Foxhaven, Regency Park in the southbound direction in the counter-clockwise direction in the morning and the clockwise direction in the evening to connect with Bethel Transit Terminal;
- **Route 442:** This route primarily serves the community of Nottingham and connects a major retail destination – Sherwood Park Mall to Bethel Transit Terminal via Sherwood Drive and Granada Boulevard;
- **Route 443:** This route services Bethel Transit Terminal and Ordze Transit Centre. The route also connects the communities of Glen Allan, Centre in the Park, Brentwood, Maplewood, Maplegrove and Sherwood Heights;
- **Route 443A:** This route connects the neighbourhoods Brentwood, Maplewood, Maplegrove, Sherwood Heights and Centre in the Park to Bethel Transit Terminal. This route runs in a counter-clockwise direction in the morning and clockwise in the evening;
- **Route 443B:** This route connects the communities of Broadmoor Estates and Glen Allen to Sherwood Park Mall and Bethel Transit Terminal along Georgian Way, Granada Boulevard and Oak Street during peak periods;
- **Route 450:** This route connects Bethel Transit Terminal to Centre in the Park and Sherwood Park Mall along Oak Street and Cranford Way;
- **Route 451:** This route terminates at both Bethel Transit Terminal and Ordze Transit Centre and connects the communities of Mills Haven, Broadmoor Centre, Woodbridge, Westboro and Village on the Lake;
- **Route 451A:** This route connects Bethel Transit Terminal to Woodbridge, Westboro and Village on the lake during peak periods; and
- **Route 451B:** This route connects the communities of Mills Haven and Broadmoor Centre to Bethel Transit Terminal during peak periods.

The existing evening and weekend route structure is illustrated in **Figure 5** . Local Routes operated by Strathcona County Transit in the evenings and weekends are:

- **Route 490:** This service connects the northwest areas of Sherwood Park including Bethel Transit Terminal to Sherwood Business Park, Strathmoor Industrial Park, Emerald Hills, Summerwood, Davidson Creek and Aspen Trails;
- **Route 491:** The service connects the northeast areas of Sherwood Park including Bethel Transit Terminal to Clover Bar Ranch, Lakeland Ridge, Emerald Hills, Summerwood, Davidson Creek, Clarkdale Meadows, Chelsea Heights and Charlton Heights;
- **Route 492:** This route serves the southeast quadrant of Sherwood Park including Bethel Transit Terminal, Nottingham, Regency, Foxboro/Foxhaven, Heritage Hills, Craigavon, Glen Allan, and Sherwood Park Mall;
- **Route 493:** This service serves the southwest of Sherwood Park including Bethel Transit Terminal, Glen Allan, Centre In The Park, Sherwood Park Mall, Maplegrove, Brentwood, Sherwood Heights and Oak Street; and
- **Route 494:** This route also services the southwest including Bethel Transit Terminal, Mills Haven, Broadmoor Centre, Woodbridge, Westboro, Village on the Lake, Ordze Transit Centre, Wye Road, Granada Blvd, and Sherwood Park Mall.



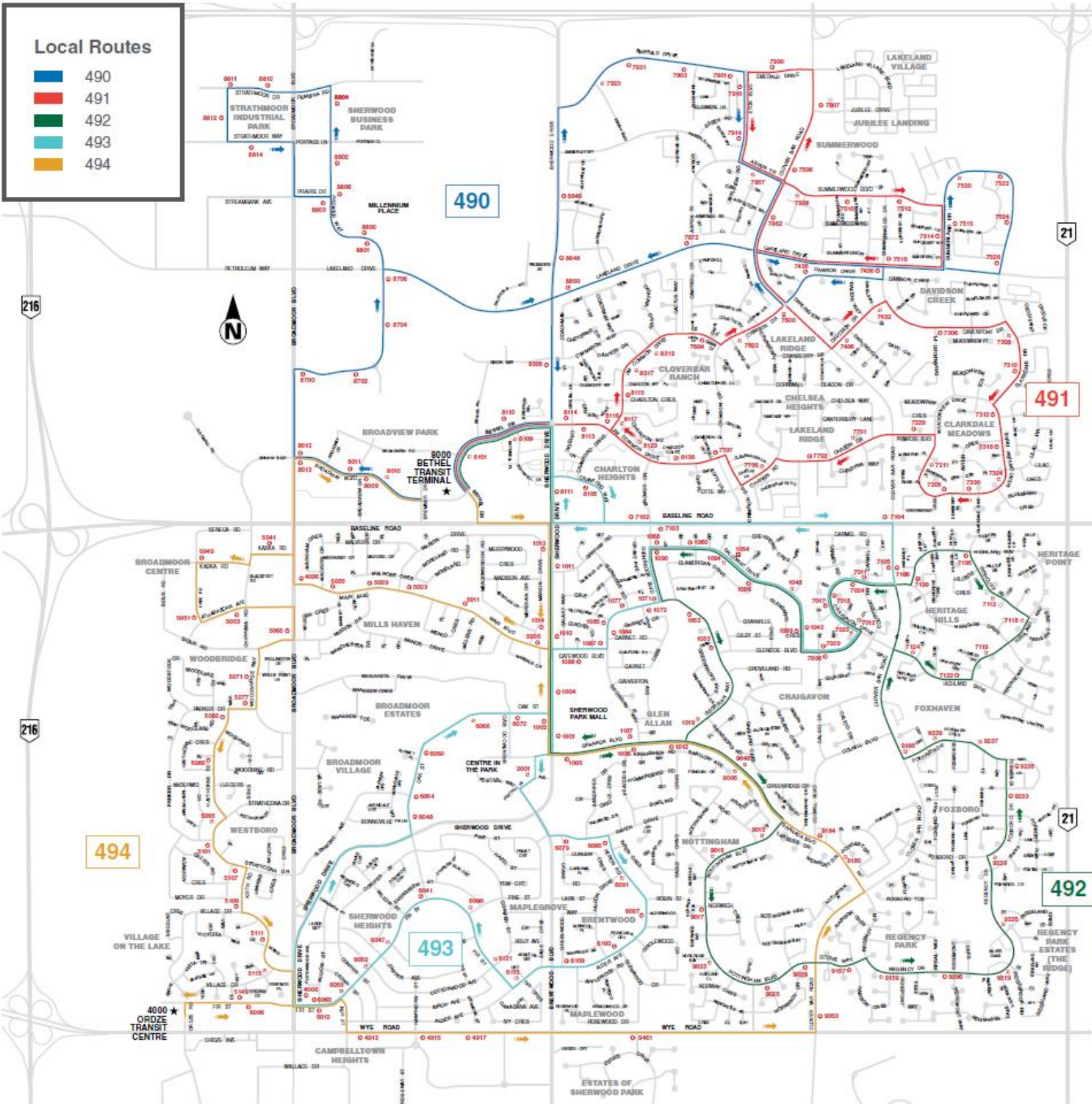


Figure 5 - 2017 Local Evening and Weekend Routes

3.1.2 Resource and Service Levels

Local Routes operate from Monday to Friday, between 5:30 am and 7:15 pm. **Table 2** outlines the route characteristics, including the service hours, headway, peak bus requirements and daily revenue vehicle hours. Service is reduced during the evening period, with only five routes in operation, as shown in **Figure 5**.

Table 2 - Local Transit Weekday Resource Levels

Route	Span of Service	Daily Revenue Vehicle Hours	Peak Headway	Off-Peak Headway	Peak Bus Requirement
420	6:45 - 19:15	13.0	30	30	1
430	5:30 - 18:45	16.6	15 (AM only)	30	2
431	6:00 - 19:15	17.2	15 (PM only)	30	2
432	6:00 - 19:15	13.4	30	30	1
433	5:30 - 19:15	19.1	15	30	2
433A	8:00 - 8:20 and 15:20 - 15:40	1.5	Single Trip	Not Applicable	2
440	5:30 - 19:15	19.3	15	30	2
441	6:00 - 19:15	26.5	30	30	2
441A	5:30 - 9:00 and 15:30 - 18:15	6.4	30	Not Applicable	1
442	5:30 - 19:15	19.4	15	30	2
443	5:45 - 19:15	27.3	30	30	2
443A	5:30 - 9:00 and 16:00 - 18:15	5.7	30	Not Applicable	1
443B	5:30 - 9:00 and 16:00 - 18:15	3.8	30	Not Applicable	1
450	6:00 - 19:15	13.4	30	30	1
451	5:45 - 19:15	27.5	30	30	2
451A	5:45 - 9:00 and 16:00 - 18:15	3.1	30	Not Applicable	1
451B	5:30 - 9:00 and 16:00 - 18:30	6.0	30	Not Applicable	1

3.2 Inter-municipal Routes

The spine of the Strathcona County Transit system is the Inter-municipal Route service, which connects residents to key destinations in Edmonton from the two transit terminals and park-and-ride lots in Sherwood Park, the Bethel Transit Terminal and Ordze Transit Centre. There are six Inter-municipal Routes providing this service, utilizing double decker buses operating frequently during the weekday AM and PM peak periods. These services are very direct, with limited stops in Sherwood Park and Edmonton. Ridership on this service has been steadily growing over the past decade.

3.2.1 Route Network

The Inter-municipal Routes operated by Strathcona County Transit are:

- **Route 401:** This route connects Ordze Transit Centre to Edmonton City Centre and MacEwan University along Sherwood Park Freeway, Connors Road, 100 Street, and 104 Avenue (weekdays);
- **Route 403:** The route connects Ordze Transit Centre to Government Centre and MacEwan University along Sherwood Park Freeway, Connors Road, 97 Avenue, 107 Street (weekdays);
- **Route 404:** This route connect Ordze Transit Centre to University of Alberta along Sherwood Park Freeway and 82 Avenue (weekdays);
- **Route 411:** This route connects Bethel Transit Terminal to MacEwan University and Edmonton City Centre along Baseline Road / 98 Avenue, 100 Street, 104 Avenue and 107 Street (weekdays, weekends);
- **Route 413:** This route connects Bethel Transit Terminal to Government Centre and MacEwan University along Baseline Road / 98 Avenue and 107 Street. The route also includes a second pattern which services Northern Alberta Institute of Technology (NAIT) along 109 and 106 Street (weekdays); and
- **Route 414:** This route connects Bethel Transit Terminal to the University of Alberta via Baseline Road / 98 Avenue, River Valley Road, Groat Road, 87 Avenue, and Waterdale Hill, (weekdays).

These routes are illustrated in **Figure 6**.

3.2.2 Resource and Service Levels

Inter-municipal routes operate all week, from Monday to Friday between 5:45 am and 7:40 pm on most routes. Route 414 also provides weekday service until 10:10pm and Route 411 also provides weekday service until 12:10am. All Inter-municipal Routes run only during weekdays with the exception of Route 411 which also runs on Saturdays and Sundays.

Table 3 outlines the route characteristics, including the service hours, headway, peak bus requirements and daily revenue vehicle hours.

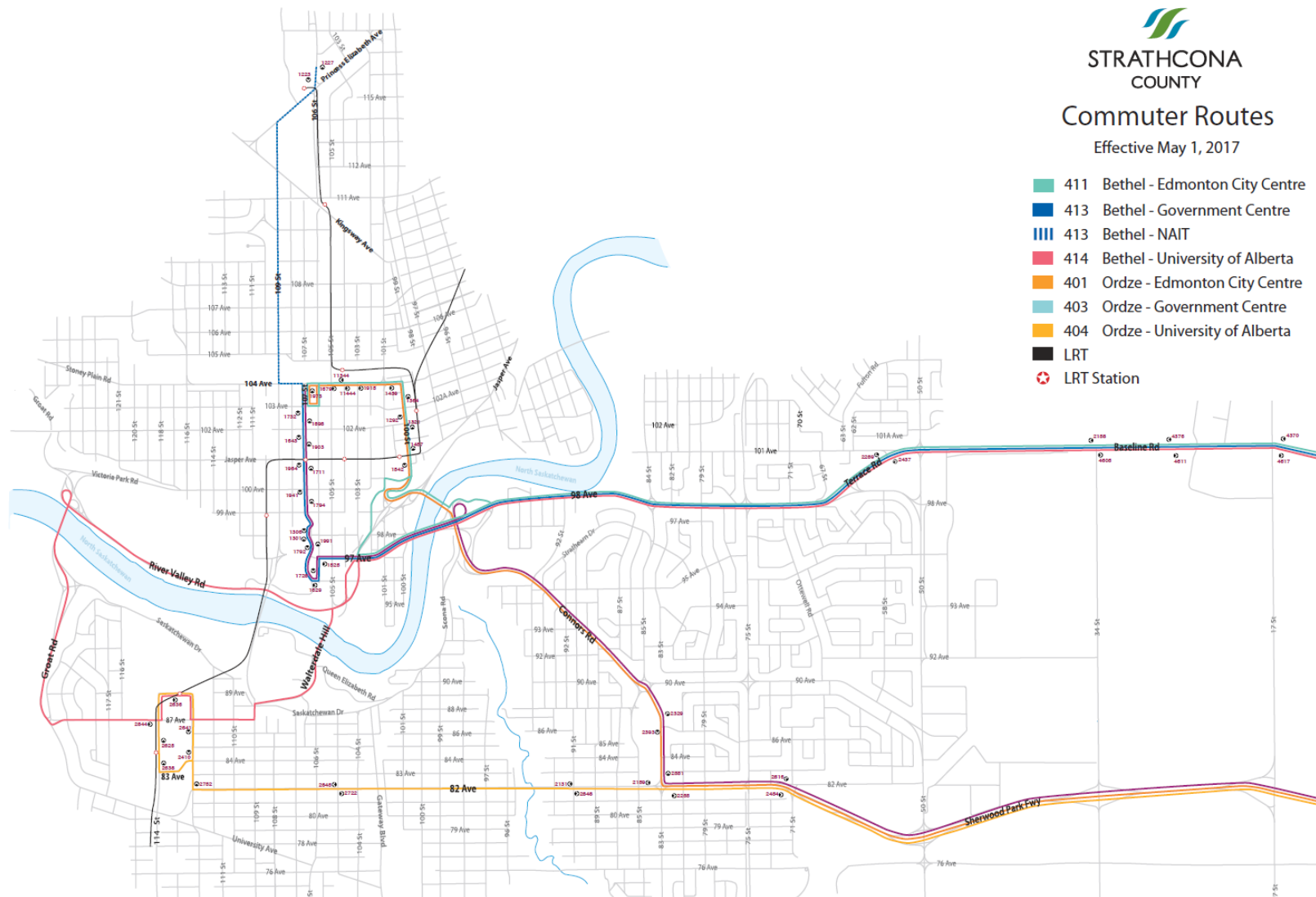


Figure 6 - 2017 Inter-municipal Routes

Table 3 - Inter-municipal Weekday Route Characteristics

Route	Span of Service	Daily Revenue Vehicle Hours	Peak Headway	Off-Peak Headway	Peak Bus Requirement
401	5:45 - 19:40	21.9	30	60	3 (PM only)
403	7:15 - 7:47 and 16:38 - 17:10	1.2	Single Trip	Not Applicable	1
404	5:45 - 19:10	21.3	30	60	3 (PM only)
411	5:45 – 00:10	49.8	15	30/60	7
413	6:45 – 18:10	14.3	15	Not Applicable	7
414	6:15 – 19:10	45.5	15	30/60	7

3.3 Mobility Bus Services

Strathcona County Mobility Bus provides specialized transit service to eligible Strathcona County residents with disabilities or mobility challenges for travel within Sherwood Park, between Sherwood Park and Edmonton, and between rural areas and Sherwood Park or Edmonton.

3.3.1 Service Areas

Mobility Bus provides service:

- Within Sherwood Park;
- Between rural areas of Strathcona County and Sherwood Park;
- Between Sherwood Park and certain areas of Edmonton;
- Between rural areas of Strathcona County and certain areas of Edmonton; and
- Supplemental destinations, including the Royal Alexandra Hospital, Glenrose Rehabilitation Hospital, HYS Medical Centre, Grey Nuns Hospital, Cross Cancer Institute, General Hospital, Northgate Centre, Buchanan Centre, MS Society, and Shopper's Medical Supply.

The Sherwood Park service area is shown in **Figure 7** and the Edmonton service area is shown in **Figure 8**. It includes destinations within 400 metres of fixed-route bus stops in downtown Edmonton and the University of Alberta areas, as well as Capilano Mall and Bonnie Doon Mall. The remainder of Strathcona County outside the Sherwood Park service area falls under the Rural Service Area. The Rural Service Area does not receive service on weekends or holidays.

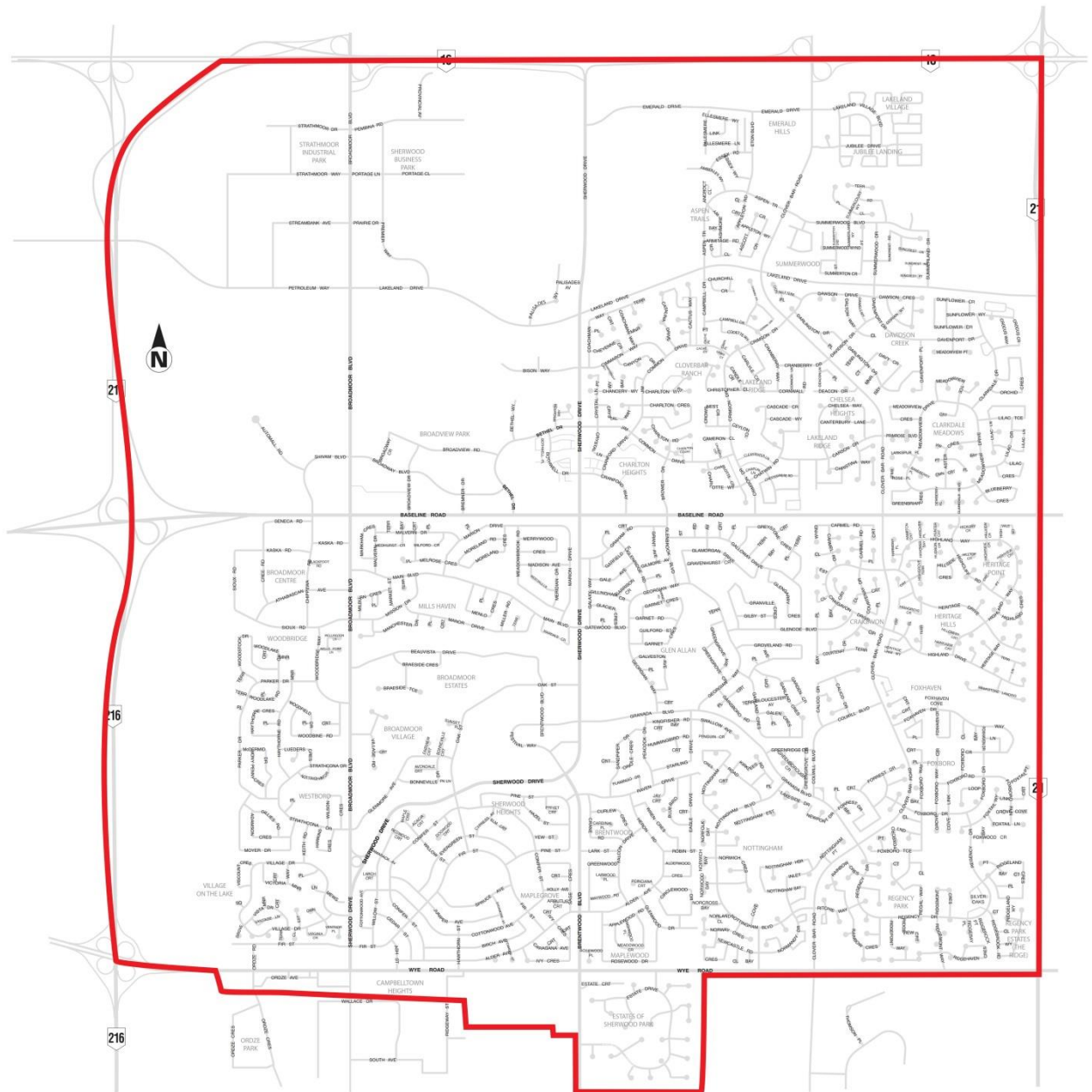
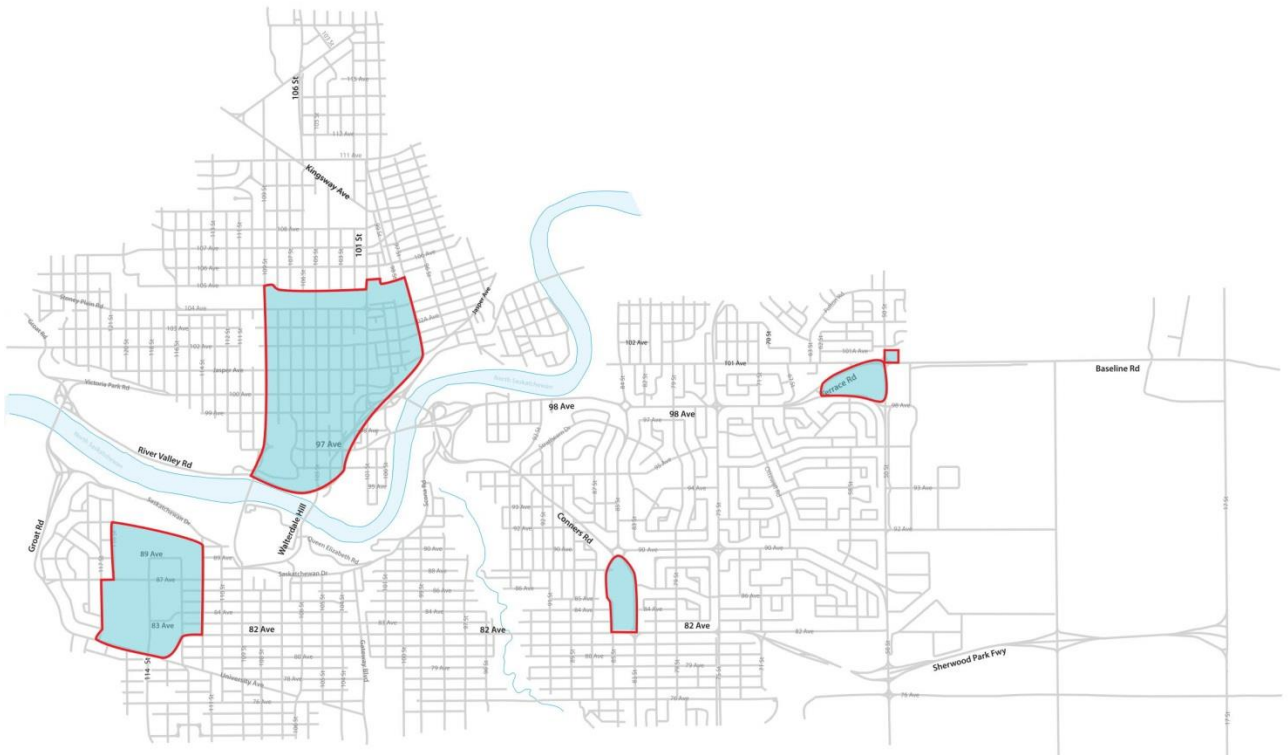


Figure 7 - Mobility Bus Service Area in Sherwood Park



3.3.2 Hours of Operation

Within Sherwood Park and Edmonton, Mobility Bus operates Monday to Saturday from 6:00 am to midnight, and Sunday from 7:00 am to 8:00 pm (excluding statutory holidays). This generally aligns with the hours of operation for the Local and Inter-municipal conventional transit routes.

Within the rural service area, Mobility Bus operates Monday to Friday from 6:00 am to 10:00 pm (excluding statutory holidays). There is no conventional transit provided in the Rural Service Area.

3.3.3 Eligibility and Registration

Mobility Bus is available to persons 18 years of age or older, who are able to demonstrate that they are not able to use the fixed-route bus service. Eligibility is considered on a case-by-case basis – it is not based on any particular disability or income level, or the availability of accessible public transit in any area.

There are three categories of eligibility for Mobility Bus services:

- Conditional Eligibility, wherein Mobility Bus can only be used for trips which the customer could not use fixed-route transit (e.g., Winter only, night-time only);
- Temporary Eligibility, wherein Mobility Bus can only be used for a limited period of time (e.g., post-surgery, while visiting); and
- Unconditional Eligibility, which does not impose any restrictions on the customer.

Interested persons can apply to become a Mobility Bus registrant through an application form, which includes several questions on the applicant's level of mobility and accessible needs. Part of the form must be completed by a healthcare professional.

3.3.4 Reservations and Scheduling

Registrants must call the Mobility Bus dispatch office to book a trip. The office is open Monday to Friday between 8:00 am and 5:00 pm, excluding statutory holidays. Mobility Bus requires that registrant's book two days in advance, and recommends that registrants book as early as possible to guarantee the trip. If registrants request same-day trips, Mobility Bus will accommodate where possible.

Registrants can book subscription trips for trips that are:

- Taken between the same origin and destination;
- Taken at the same time for every trip;
- Taken at least once per week; and
- Taken for at least four weeks in a row.

Registrants only have to call in once to book subscription trips – all following trips in the subscription are scheduled at once.

When a trip is booked, the Mobility Bus scheduler provides the registrant with the pick-up time. A pick-up window of 15 minutes before and after the pick-up time applies, meaning that the bus may arrive up to 15 minutes earlier or 15 minutes later than the designated pick-up time.

3.3.5 Policies and Procedures

Mobility Bus maintains the following policies with regard to safety:

- All locations served by Mobility Bus must be accessible (having no more than one step at an entrance);
- It is the registrant's responsibility to provide a ramp where there is more than one step;
- To ensure the safety of customers and operators, temporary or portable ramps are not acceptable;
- All locations must be kept free of snow and ice or Mobility Bus will not be able to provide service;
- It is mandatory to use a secure safety system for any mobility aids and to wear a seatbelt/shoulder belt; and
- All mobility aids must be secured using the restraint systems provided. Operators will not provide service to anyone who is not secured.

3.3.5.1 Personal Care Attendant and Companion Policy

Mobility Bus allows mandatory attendants to travel with the Mobility Bus registrant for no charge. It should be noted that policy is not consistent with conventional transit service, where a personal care attendant is charged a fare when travelling with a Mobility Bus registrant.

If a Mobility Bus registrant chooses to bring a companion (non-mandatory), they are permitted to travel with the registrant if space permits, but the companion must pay the regular fare. The companion must be mentioned at the time of booking so that space can be adequately reserved.

3.3.5.2 No-shows and Cancellations

Mobility Bus recommends that cancellations are made at least 24 hours before the trip pick-up time. A late cancellation is defined as a trip cancelled less than one hour prior to the scheduled pick-up time.

A no-show is defined as when:

- The registrant cancels at the door; or
- The operator arrives at the scheduled pick-up time and pick-up location, and no one is there.

3.3.5.3 Customer Pick-ups (wait time window)

The wait time window for Mobility Bus service is from 15 minutes before the specified time to 15 minutes after the specified time.

3.4 Fare Structure

Strathcona County Transit offers conventional transit, and Mobility Bus service at the same fares as of July 1, 2018 when Mobility Bus fares were reduced to align with conventional transit fares. Strathcona County Transit offers a variety of fare passes including: annual, monthly, day passes and multi-trip ticket packages. There are some differences in pricing between Inter-municipal and Local Routes. The fare structure for conventional and Mobility Bus service are shown in **Table 4**.

Local service is half the price of Inter-municipal service and customers transferring between conventional service types must pay the difference in cost. For instance, a customer holding a local service Youth Monthly Pass must pay \$3.00 to board an Inter-municipal Route. Another distinguishing feature of the local fares is that seniors ride free during off-peak periods. Strathcona County Family and Community Services provides subsidized fares for residents with limited income or who are receiving AISH (Assured Income for the Severely Handicapped) through the Everybody Rides program. Qualifying applicants can purchase Everybody Rides monthly local and Inter-municipal passes at a discounted rate for all registered members of the household.

Table 4 - Strathcona County Transit Fare Structure

Fare Type	Local (2018)	Inter-municipal (2018)	Mobility Bus (2018)
Cash - One Way	\$3.10	\$6.20	Same as conventional
Everybody Rides Monthly Pass	\$12.00	\$24.00	Same as conventional
Adult Monthly Pass	\$54.25	\$108.50	Same as conventional
Senior Monthly Pass	\$16.30	\$32.55	Same as conventional
Youth Monthly Pass	\$40.70	\$81.40	N/A
Youth Summer Pass	\$30.50	N/A	N/A
Adult Ticket Book (10)	\$23.30	\$46.50	Same as conventional
Youth/Senior Ticket Book (10)	\$17.40	\$34.90	Same as conventional
Senior Annual Off Peak Pass	FREE	N/A	N/A
Senior Annual Commuter Pass*	N/A	\$156.00	N/A
Cash - One Way Rural Strathcona County to Sherwood Park	N/A	N/A	\$7.25
Ticket Book (10) Rural Strathcona County to Sherwood Park	N/A	N/A	\$65.00
Cash - One Way Rural Strathcona County to Edmonton	N/A	N/A	\$13.45

*Note: Can also be used on all Local Routes

Since the 2006-2007 academic year, Strathcona County Transit, Edmonton Transit Services and St. Albert Transit have had a collective U-Pass agreement that now includes the University of Alberta, NAIT, Grant MacEwan University, and NorQuest College. These institutions have Fall-term passes (September to December) and Winter-term passes (January to April). The University of Alberta and Grant MacEwan University also have a Summer-term U-Pass from May to August.

3.5 Vehicle Fleet

Strathcona County Transit currently has 76 conventional transit buses in operation. Fifty-two (52) are low-floor 40-foot buses manufactured by Novabus between 2005 and 2011. The remaining 24 are low-floor double decker high capacity buses manufactured by Alexander Dennis between 2013 and 2017. The double decker buses are used primarily for Inter-municipal services, and occasionally for overload trips from Archbishop Jordan Catholic High School.

Mobility Bus service operates 13 specialized transit buses manufactured by Chevrolet and Ford between 2011 and 2015.

3.6 Facilities

3.6.1 Stops and Shelters

Strathcona County Transit currently operates 315 active bus stops. This does not include the stops in the City of Edmonton used by Inter-municipal Routes. There are 177 benches and 60 shelters at the stops. Major stops include amenities such as a shelter, bench and concrete pad. While most stops include a concrete or asphalt pad, some stops only consist of a bus stop sign and a grass landing which are inaccessible by people using mobility devices.

3.6.2 Terminals

There are two transit terminals in Strathcona County, Bethel Transit Terminal and Ordze Transit Centre. The terminals act as a major connection point between Local and Inter-municipal Routes and provide a better level of service to customers than conventional on-street stop amenities. Each terminal has a park-and-ride facility, where residents can park and use Inter-municipal services while leaving their vehicle behind in Sherwood Park.

Bethel Transit Terminal

Bethel Transit Terminal is located on the northwest side of Sherwood Park and it connects with all Local Routes and three Inter-municipal Routes (Routes 411, 413 and 414). It is the major connection point to the majority of Inter-municipal Routes and all Local Routes. Terminal features include a climate controlled building with transit staff, a curbside drop-off/taxi area and a kiss-and-ride. The terminal has a central platform with a capacity of up to 22 transit vehicles, a second platform with additional capacity

for loading and layover, and 1,200 park-and-ride spaces. Pedestrians and cyclists can make convenient connections to transit with bicycle lockers available to store bicycles and belongings.

Ordze Transit Centre

Ordze Transit Centre is located on the southwest side of Sherwood Park, north of Wye Road and west of Ordze Road. The terminal acts as a connection point to three Local Routes, including Routes 441, 443 and 451 and three Inter-municipal Routes (Routes 401, 403 and 404). The station is also a park-and-ride facility with a capacity of 200 parking spaces, enclosed inside a two-storey parkade. The station includes a climate-controlled indoor waiting area, a drop-off/taxi area and pedestrian and cyclist access.

3.6.3 Garage and Maintenance Facility

Strathcona County Transit operates one garage and maintenance facility at 200 Streambank Avenue in the northwest corner of Sherwood Park. All transit operations functions are located here along with operator facilities. Due to space constraints, the transit planning and administrative functions are primarily located in office space about 800m east of the garage on Premier Way.

4.0

Service Analysis

This section provides an overview of some of the performance measures that can be used to evaluate Strathcona County Transit. System ridership shows different trends for Inter-municipal and Local service, as well as significant changes in ridership over the course of the calendar year. Service productivity is analyzed for each route and at different times of day. Park-and-ride utilization follows similar monthly patterns in line with ridership fluctuations.

4.1

System Ridership

The ten year annual ridership for all Strathcona County Transit Inter-municipal and Local services is summarized below in **Figure 9**. Although Inter-municipal Route ridership has been steadily increasing over the past decade, Local Route ridership has been in decline, with both remaining fairly stable over the past two years. Local Route ridership has declined from 396,000 boardings in 2008 to 291,000 boardings in 2017. It should be noted that Strathcona County Transit used to transport all high school and junior high school students in Sherwood Park. With a transition to yellow bus transportation, Strathcona County Transit currently only transports students to Archbishop Jordan Catholic High School. This accounts for the majority of the decline in local ridership since 2008. Inter-municipal Route ridership between these periods has increased significantly – from 1,074,000 in 2008 to 1,334,000 in 2017. Mobility Bus ridership has increased significantly from 2008, from 13,600 annual rides in 2008 to 20,100 annual rides in 2017. Over the next few years, the introduction of fare parity, which was introduced in mid-2018, is expected to contribute to a significant increase in Mobility Bus ridership.

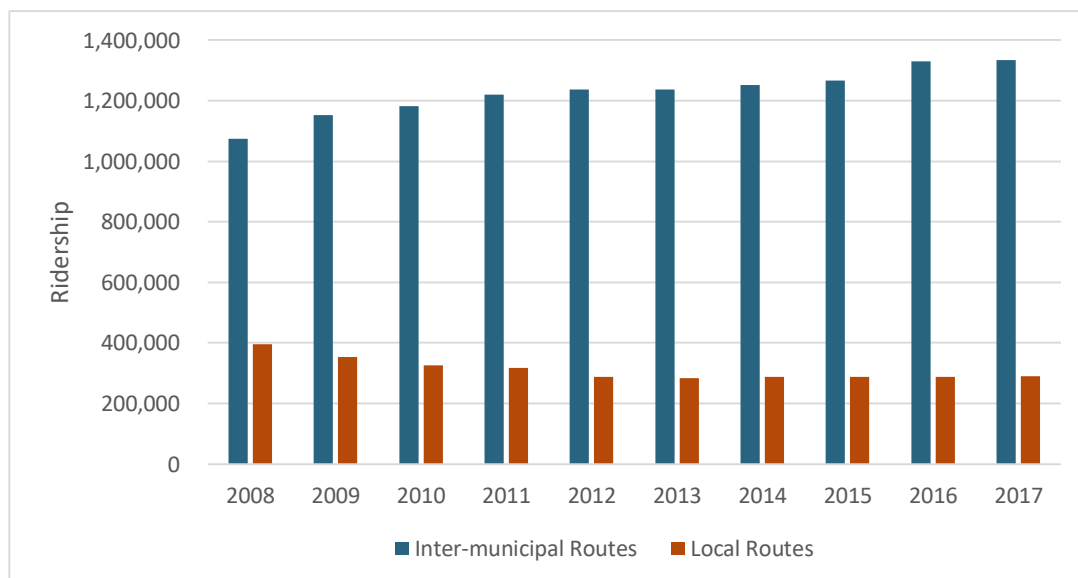


Figure 9 - Ten-year Annual Ridership (2008-2017)

On a monthly basis, there are pronounced variations in ridership. Inter-municipal ridership peaks strongly during the university terms of September to November and January to April. Fall is the season with the highest ridership and the Summer season from June through August is the period with the lowest ridership.

4.2 Service Productivity

Strathcona County Transit's most productive routes are the Inter-municipal Routes, with an average of 36.6 customer boardings per revenue vehicle hour on weekdays. The most productive route is Route 411, which runs between Bethel Transit Terminal and Edmonton City Centre and has an average of 49.0 customer boardings per revenue vehicle hour on weekdays. It is also the only Inter-municipal Route to operate on the weekends.

It should be noted that the ridership on the Inter-municipal Routes is heavily peak directional during the AM and PM peak periods, with the majority of customers traveling to Edmonton in the mornings and the majority of customers travelling to Sherwood Park in the afternoons. Overall, 74% of ridership is concentrated in the peak direction. Some routes exhibit even stronger peak direction ridership, particularly during the AM peak. For example, on Route 411 in the AM peak period, 93% of all customers are traveling towards Edmonton. This results in higher vehicle occupancy in the peak direction, with many double decker buses operating at full capacity.

Local Routes have a lower productivity, with an average of 14.3 customer boardings per revenue vehicle hour on weekdays. Half of the Local Routes have productivity levels above 10 customer boardings per revenue vehicle hour, while the lowest productivity routes operate on weekday evenings and all-day weekends. Morning and daytime weekday productivity are 15.7 and 17.5 customer boardings per revenue vehicle hour respectively. The highest performing Local Route by far is Route 433A, which serves Archbishop Jordan Catholic High School. Route 433A is a dedicated school service that only operates a single run in the morning and a single run in the afternoon, which is why its utilization is so high at 100 customer boardings per revenue vehicle hour.

Productivity levels for each route and time of day are shown in **Table 5**.

Table 5 - Routes Ranked by Productivity (2017 data)

Route Type	Customer Boardings per Revenue Vehicle Hour							
	Route	Weekday	5:00-9:00	9:00-16:00	16:00-19:00	19:00-25:00	Sat	Sun
Inter-municipal Routes	411	49.0	49.5	58.5	46.2	21.4	25.5	22.5
	413	43.4	54.0	19.3	38.1			
	403	37.1	37.9		36.2			
	414	32.4	29.9	41.0	25.7	22.3		
	404	25.9	36.2	25.8	18.6			
	401	23.1	28.9	20.9	19.6			
Inter-municipal Route Average		36.6	39.8	40.5	31.1	21.8	25.5	22.5
Local Routes	433A	100.0	85.7		114.7			
	431	28.6	20.7	43.0	13.6			
	430	24.7	31.1	22.3	13.2			
	420	17.0	13.3	20.9	11.7			
	450	16.9	15.2	19.6	12.7			
	433	15.9	15.3	19.0	12.6			
	451A	15.9	24.6		4.5			
	443	15.3	18.6	15.2	11.7			
	451	13.8	13.3	15.1	11.1			
	442	12.0	9.9	16.4	8.4			
	432	11.3	14.4	10.7	9.0			
	441	11.0	15.6	9.2	9.5			
	441A	9.4	8.0		11.1			
	443A	9.0	10.4		6.9			
	440	8.9	8.1	11.1	6.8			
	443B	5.9	6.4		4.9			
	451B	5.5	6.7		4.0			
	491	7.0				7.0	5.9	7.8
	492	5.6				5.6	4.4	3.6
	493	5.0				5.0	5.8	4.9
	490	4.2				4.2	4.9	4.0
	494	3.2				3.2	6.2	4.2
Local Route Average		14.3	15.7	17.5	11.4	5.0	5.4	4.9
System Average		22.5	25.1	25.3	19.7	9.1	8.6	7.6

4.3 Park-and-Ride Utilization

The Bethel Transit Terminal offers 1,200 parking spaces. Due to increased demand, Advantage Parking (or permit parking) is available for those who pay to reserve spaces. Advantage Parking passes are sold for 100 spaces on a monthly basis and are purchased for a price of \$35. Ordze Transit Centre offers park-and-ride capacity for up to 200 vehicles in a two storey parkade. Both park-and-rides are currently operating near capacity during the Fall and Winter bookings and about half capacity during the Spring and Summer bookings, as shown in **Figure 10**.

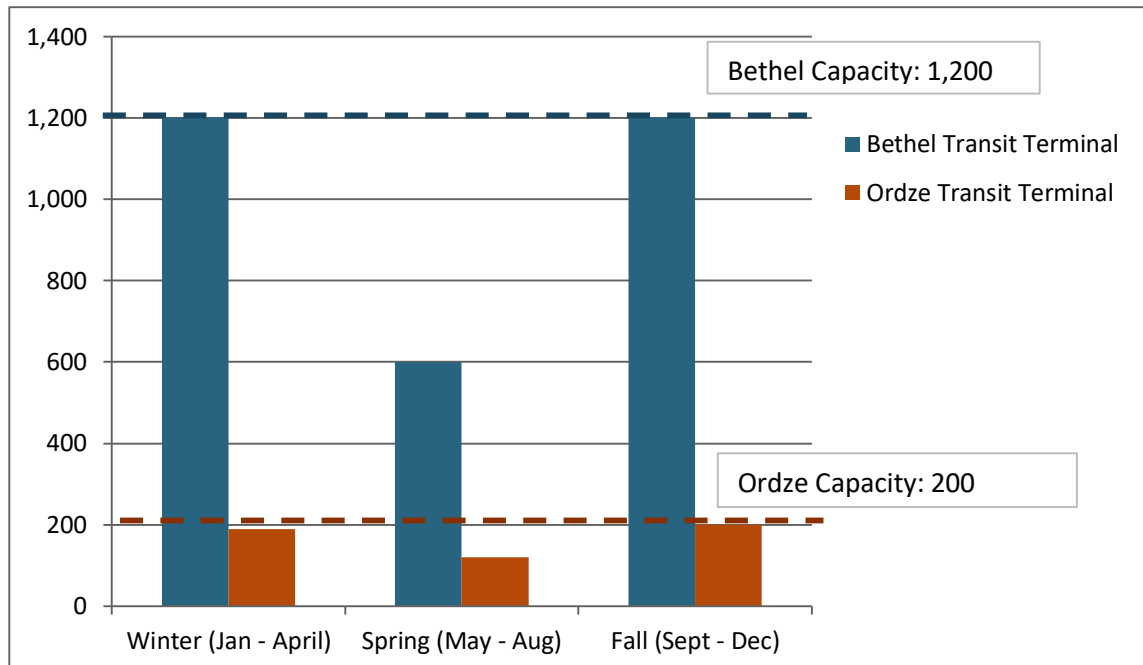


Figure 10 - Park-and-Ride Capacity and Utilization (2016 data)

5.0

Transit Market and Future Demand

A key part of developing a transit master plan is to understand the existing market of travellers within Strathcona, including the key destinations within the County and in the City of Edmonton. The following section provides a short summary of this market, including comments on how it feeds into the development of a master plan for Strathcona County Transit.

5.1

Population and Employment Growth

According to the 2018 Municipal Census, approximately 98,381 people live in Strathcona County, of which 71,332 (72.5%) people live in Sherwood Park and 27,049 (27.5%) live in rural areas in the remainder of the County. Within the Rural Service Area, the population is fairly spread out, with the majority of residents living in country residential estates (87%), 7% living in one of eight hamlets noted in **Figure 11** below and 6% living on farms. Of the hamlets noted below, by 2046, Ardrossan is planned to grow to about 6,000 people, South Cooking Lake to 1,012 and Josephsburg to 2,400. The rest of the Rural Service Area is projected to remain stable over the next 10 years.

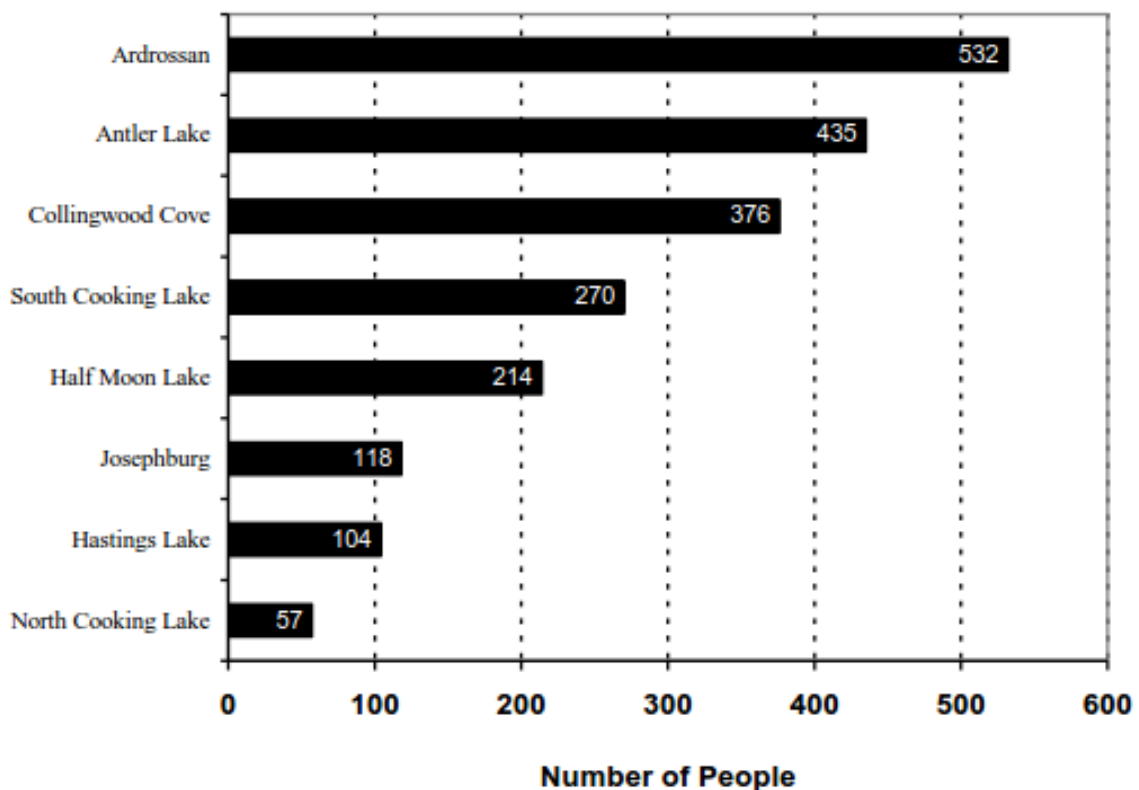


Figure 11 - 2018 Population Distribution in Strathcona County Hamlets in the Rural Service Area

In 2013, the Capital Region Board, now the Edmonton Metropolitan Region Board, identified key growth and employment projections for Strathcona County into the 2044 planning horizon shown in **Table 6**⁴.

Table 6 - Population and Employment Growth Scenarios

Year	Low-Growth				High-Growth			
	Population	% Change	Employment	% Change	Population	% Change	Employment	% Change
2014	96,800	-	37,400	-	98,100	-	38,100	-
2018 Census	98,381	-	38,849	-	98,381	-	38,849	-
2019	104,000	7.4%	39,000	4.3%	108,300	10.4%	40,500	6.3%
2029	117,900	13.4%	43,100	10.5%	128,800	18.9%	47,000	16.0%
2044	138,000	17.0%	47,600	10.4%	160,000	24.2%	54,800	16.6%

Source: 2014, 2019, 2029 – Strathcona County; 2044 - Capital Region Board

The County also outlined two growth projections for population and employment which include low-growth and high-growth cases informed by a multitude of assumptions regarding migration, agriculture, tourism, oil and gas, trading partner growth and the government. The high-growth scenario assumes the best case for the economy in migration rates and economic performance. The low-growth scenario assumes that growth will continue to occur, but at a rate well below Alberta's strong growth of recent decades. As with most predictions of this nature, the actual growth is likely to fall somewhere in between the high-growth and low-growth scenarios.

Strathcona County's actual population from the 2018 Municipal Census of 98,381 is roughly the same as the high-growth scenario prediction of 98,100 for 2014, four years earlier. Actual population growth is four years behind the high-growth scenario and appears to be lower than the predictions of the low-growth scenario as well, since the population is unlikely to reach the low-growth forecast of 104,000 people in 2019. Of the two scenarios, the rate of population growth over the past few years is more in line with the low-growth scenario (likely due to the downturn in the Alberta economy). The future, at least for the short-term, is also likely to remain more in line with the low-growth scenario. Restructuring within the oil and gas sector means that it is unlikely to revert to the levels of rapid expansion seen prior to 2014. Therefore, the low-growth forecast was used to assess any future service requirements.

5.1.1 Municipal Development Plan

The Municipal Development Plan (MDP) identifies growth and development in Strathcona County over the next 20 years. The document also sets general visions, goals and policies for land use in the County

⁴<http://capitalregionboard.ab.ca/Website/media/PDF/About%20Us/What%20we're%20working%20on/CRB-Population-and-Employment-Projections.pdf>

where investments should occur. The MDP is the County's highest level long-range planning and policy document that all subsequent plans, such as Area Concept Plans and Area Structure Plans, must be consistent with.

Strathcona County is broken into two areas in the MDP - the Urban Service Area, which encompasses the communities of Sherwood Park and Bremner, and the Rural Service Area which includes a conglomeration of hamlets, farming and other important policy areas (see **Figure 12**). These two policy areas are distinctively different – the majority of the residential and employment growth is directed toward the Urban Service Area where transit currently operates in Sherwood Park, while the Rural Service Area includes dispersed communities where conventional transit does not currently operate. While the introduction of conventional transit service was assessed in the Rural Service Area, it only gives consideration to transit service provision in growth hamlets where the need has been identified with the County Transportation or Transit Master Plan.

The MDP further delineates the Urban Service Area into three major zones – the Built-Up Urban Areas, Planned Areas and Greenfield Areas as shown in **Figure 13**. The Built-Up Areas (Sherwood Park) are lands located within the limits of the developed urban area with plans of subdivision registered before the end of 2016. Planned Areas include Cambrian Crossing, Hillshire, and Summerwood North which will likely see development within the next 10 years and are subject to previously adopted area structure plans under the MDP. The MDP includes the provision of medium density residential by requiring that planned areas are limited to a maximum of 70% of their developable area as low density development. Greenfield Areas are places for future growth within the Urban Service Area that are outside of the Built-Up Urban Area or Planned Areas. This area is also known as the Bremner Policy Area.

Within the Urban Service Area, the Compact Development Policy Area and Urban Centre Policy Area (**Figure 14**) include policies which promote compact urban form, intensification, high density residential and mixed-use buildings, transit-oriented development, and a multi-modal transportation system including public transportation.

The Compact Development Policy Area is located along Emerald Drive, Clover Bar Road between Emerald Drive and Lakeland Drive, Sherwood Drive between Yellowhead Highway and Baseline Road, and Wye Road between Sherwood Drive and the western boundary of Sherwood Park (just east of Highway 216). These areas contain a number of medium to high density residential areas such as Emerald Hills Urban Village, Palisades Urban Village and Salisbury Village; major public services including Emerald Hills Regional Park and the Strathcona Community Hospital; as well as employment and retail areas including Centennial Business Park, Emerald Hills Shopping Centre and Wye Road Commercial sites. Opportunities for intensification are encouraged along these corridors, along with transit-oriented development.

The Urban Centre Policy Area is located at the intersection of Sherwood Drive and Festival Drive. The area contains a number of existing amenities and services including the Broadmoor Lake Park, Festival

Place, the Community Centre, Library, County Hall, Sherwood Park Arena and the Kinsmen Leisure Centre. The area also contains medium and high density residential, mixed-use development, education and health care services, as well as retail and office space. This area is also currently experiencing intensification with a mid-rise residential development taking place on Festival Drive. The existing Centre in the Park Area Redevelopment Plan for the Urban Centre is currently being updated.

The MDP indicates that the Urban Centre may have a potential for a transit priority corridor that will service the Urban Centre, including an on-street, at grade bus transfer facility.

The MDP also notes that transit priority corridors should be considered on long, direct routes where a large number of people want to travel along one street such as those connecting the Urban Centre Policy Area and Compact Development Policy Area.

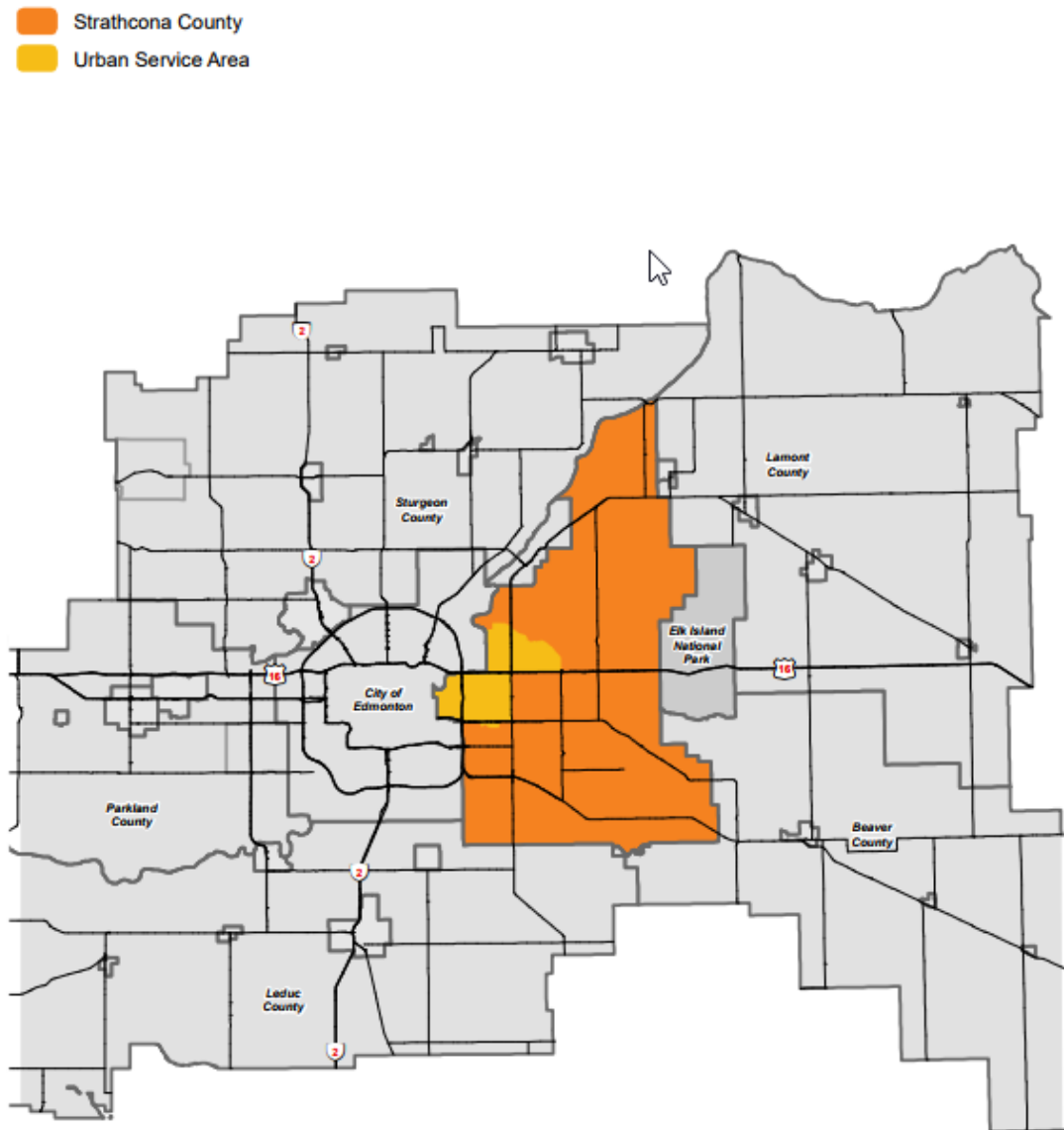


Figure 12 - Regional Setting of Strathcona County

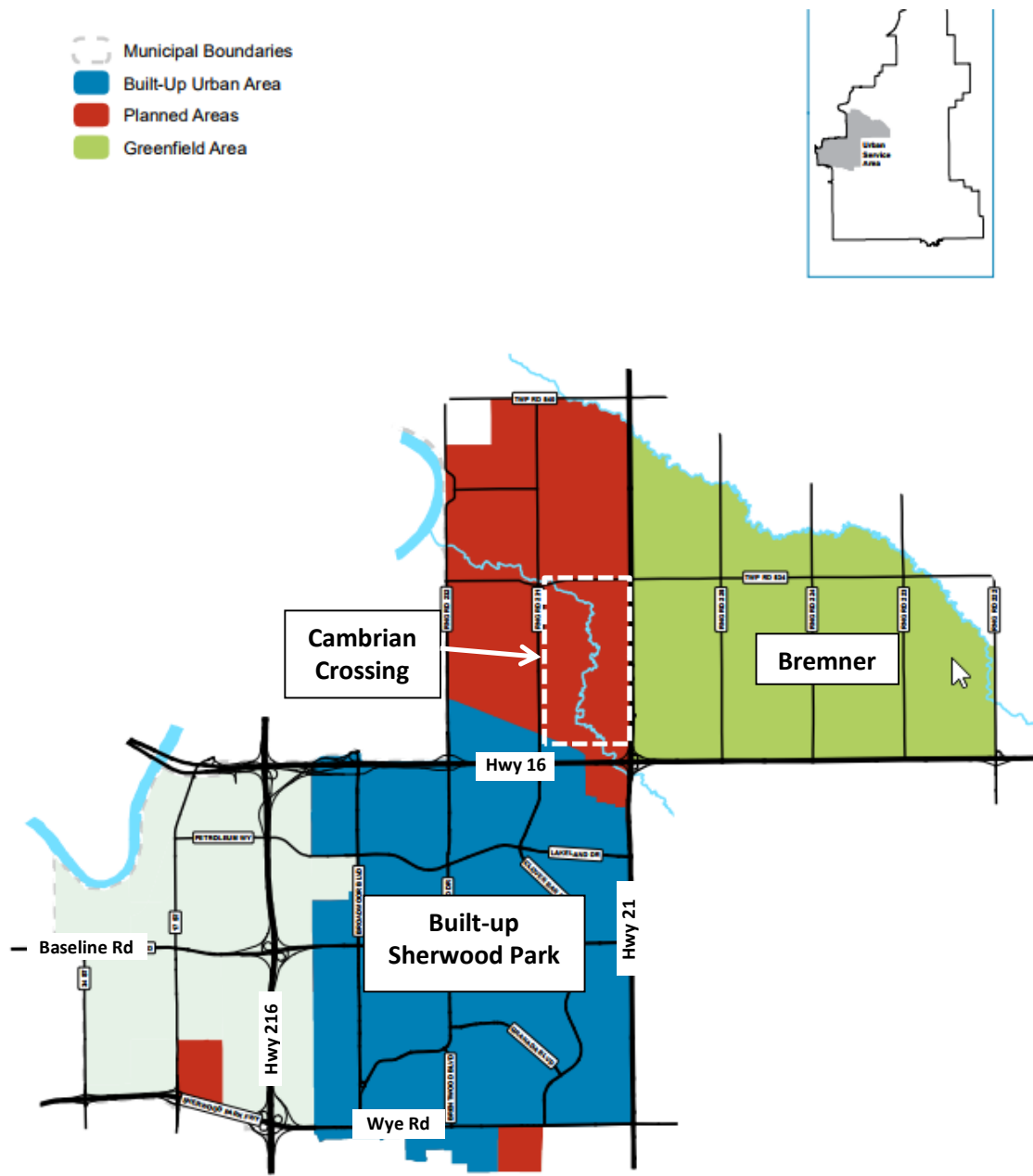


Figure 13 - Urban Service Area in Strathcona County

5.1.2

Planned Area

The Planned Area north of Highway 16 noted in **Figure 13** is identified as Cambrian Crossing and will contain future residential growth. Due to the slow-down in the economy, this area has not yet developed. It is anticipated that applications to develop will be received by 2021, with the community fully developed to a population of more than 13,000 by 2037. The approved development concept as of February 2019 for the Cambrian Crossing Area Structure Plan is noted in **Figure 15**. It is worth noting

that there are proposed amendments currently ongoing but they have not yet been approved by Council.

This area will represent significant expansion in Strathcona County's population and will need to be serviced by Strathcona County Transit. It is anticipated that this area will reach a population of approximately 5,500 within the next 10 years.

The small parcel of land in the southeast is a new development called Hillshire. This area will consist of residential development and is currently not serviced by transit.

The area just east of 17 Street and north of Sherwood Park Freeway is an industrial growth area that may see some intensification. With the economic slow-down, development in this area is not moving as quickly as anticipated. Transit service expansion to this area may not be required over the next 10-years.

5.1.3 Bremner Area Project

The County has directed growth toward a new Greenfield Area called Bremner. Bremner is a part of the Urban Service Area located east of Highway 21 and north of Highway 16. This area, which is currently the subject of the Bremner Area Project, is informed by the Bremner Growth Management Strategy (2014), which was endorsed by Council in 2016. The area is expected to have the potential for approximately 80,000 people and 17,000 jobs by 2061. As shown in **Figure 16**, the draft plan includes provision for mixed-use, medium density and low density residential developments, business parks, major retail centres and other essential community amenities. The draft plan refers to the expansion of transit services of various forms and the provision of transit oriented developments. While this growth area will have significant long-term implications for transit, development is not expected to break ground until 2023, with a forecasted 2028 population of 4,600.

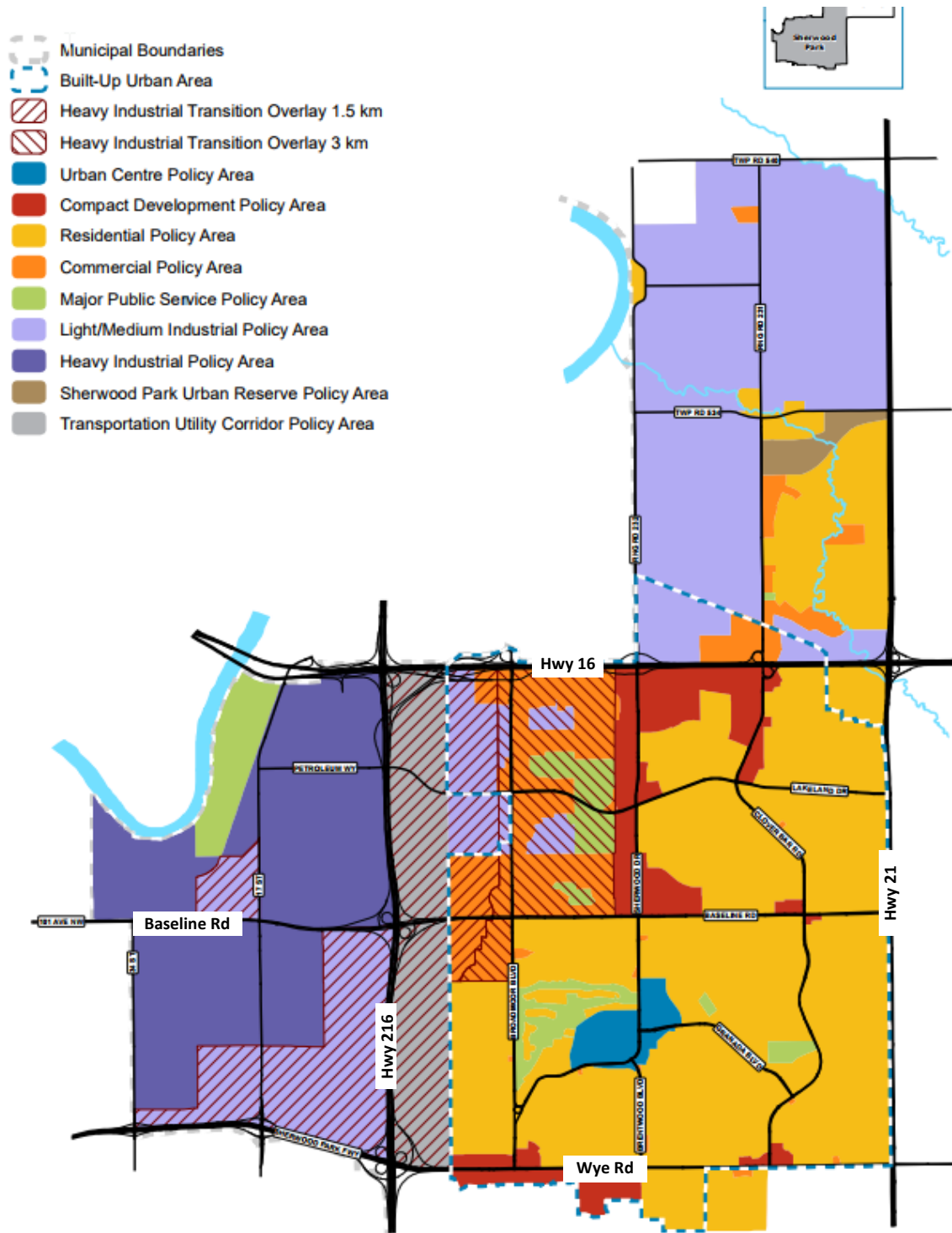


Figure 14 - Urban Service Area – Sherwood Park Policy Areas

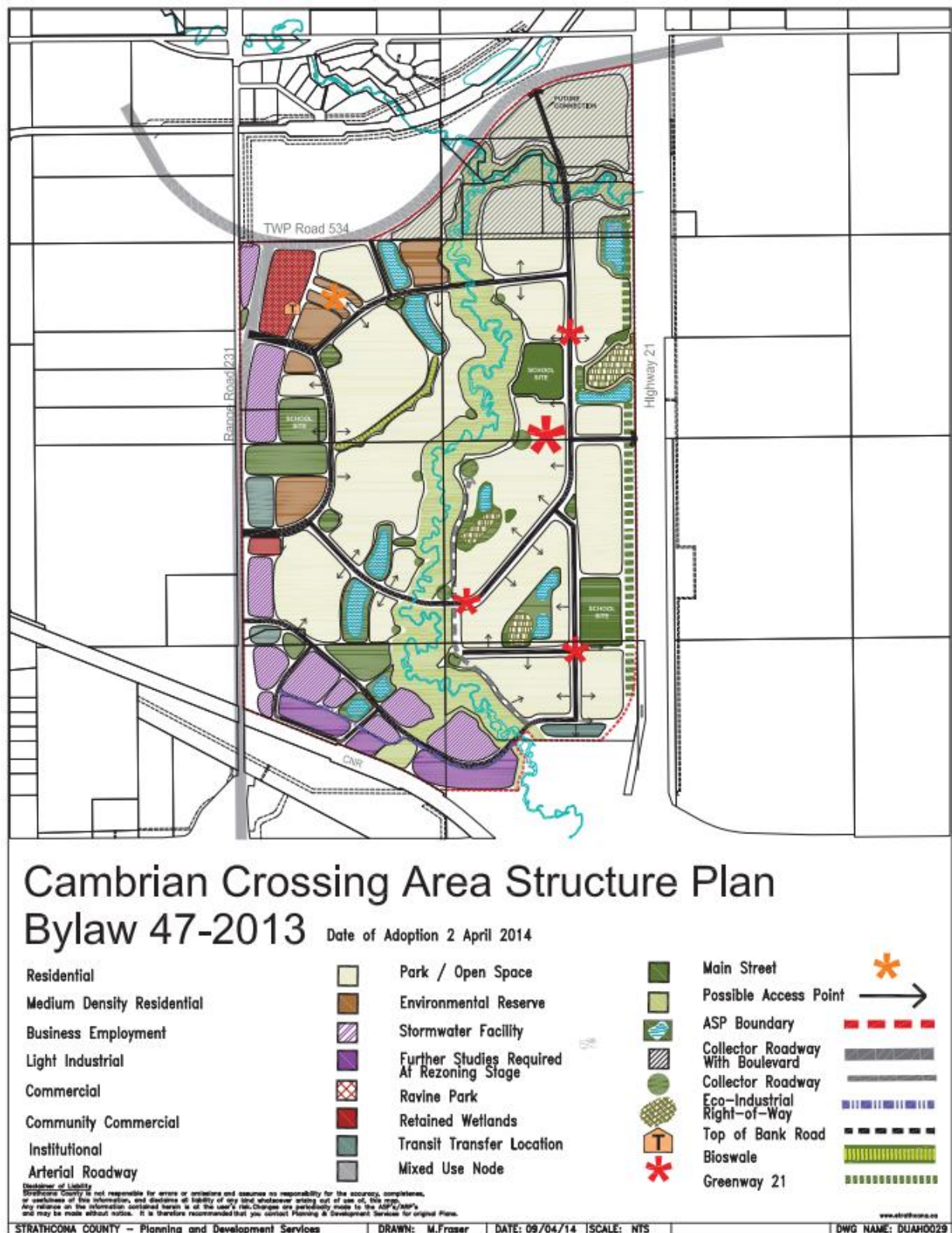


Figure 15 - Cambrian Crossing Development Concept Plan

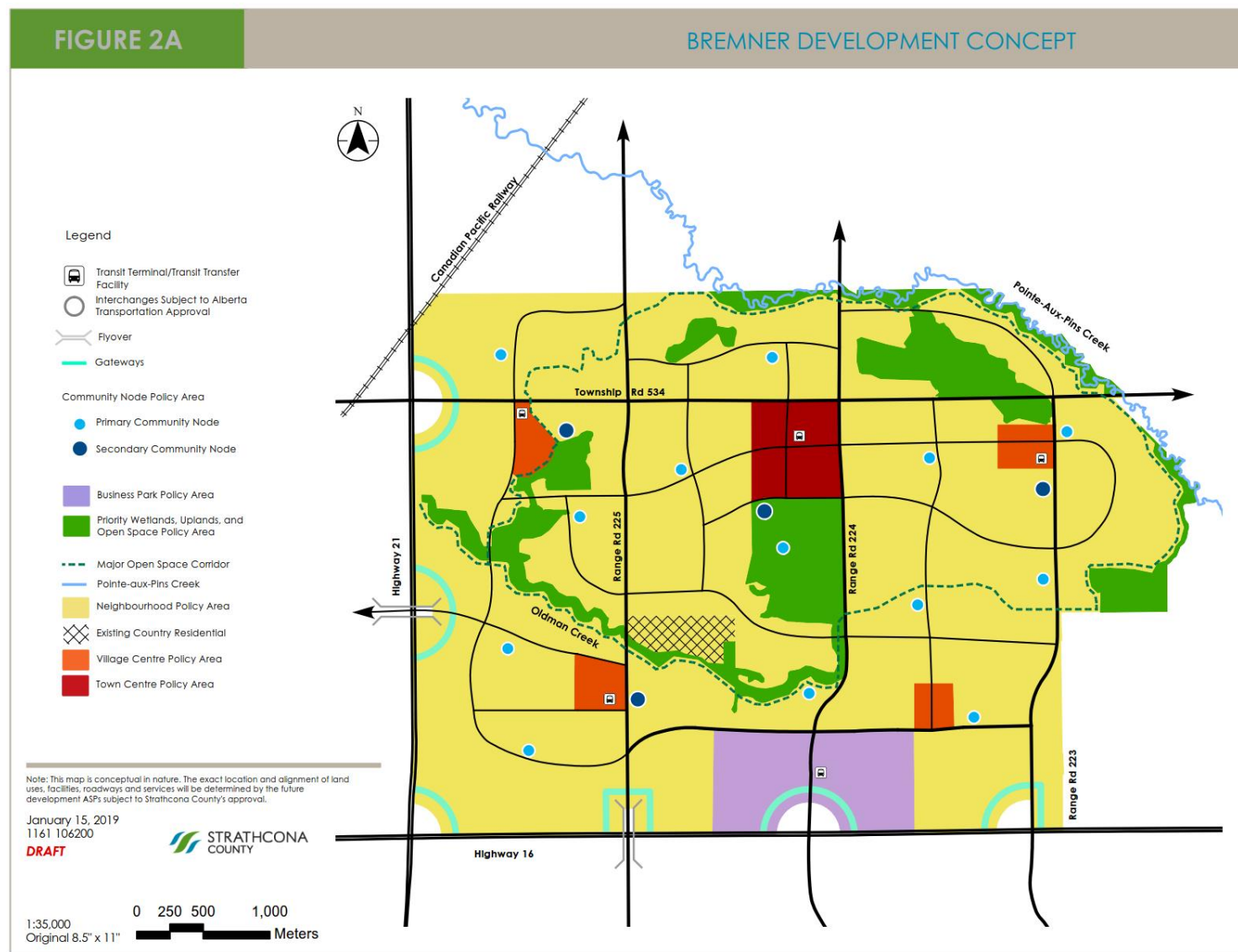


Figure 16 - Draft Bremner Area Concept

5.2 Ridership Growth Targets

The existing transit mode share is identified in both the 2015 Edmonton and the Region Household Travel Survey (HTS) as well as the Strathcona 2012 Integrated Transportation Master Plan (ITMP).

The 2015 Edmonton and the Region Household Travel Survey (HTS) identifies the following existing transit mode share:

- 1% for local trips within Sherwood Park;
- 7% for Inter-municipal trips between Sherwood Park and Edmonton; and
- 3.3% average for local and Inter-municipal trips. This increased from 3.0% in 2005.

Strathcona's 2012 Integrated Transportation Master Plan (ITMP) also identifies the existing transit mode share as well as a 20-year target. The existing mode share reported appears to be measured differently than what is reported in the 2015 HTS. The existing mode share is based on both trips within Strathcona County as well as to Edmonton. These are noted below.

- 1.8% in the Rural Service Area; and
- 4.6% in the Urban Service Area (Sherwood Park).

Targets are also established for transit ridership in the ITMP, which identify a vision for transit in 20 years. These are reported as both ridership per capita and transit mode share. Transit mode share targets for 2032 identify a desire to grow ridership in both the Rural Service Area as well as the Urban Service Area (Sherwood Park). This will require an investment in service levels for both trips within the County and to/from Edmonton. Emphasis is also placed on transit ridership in Bremner and Cambrian Crossing, which are future residential growth areas that will see higher density and transit supportive development.

Investment in transit services will be required to meet this target. The mode share targets for transit in 2032 are noted below and also shown in **Figure 17**:

- 3.5% in the Rural Service Area;
- 8.0% in the Urban Service Area (Sherwood Park); and
- 11.0% in future residential growth areas (Bremner/Cambrian Crossing).

These targets are based on past mode share growth projections and are scheduled to be updated in 2019/2020 using more current population growth projections.

In General, attracting a larger transit mode share is a key to meeting the strategic goal of optimizing transportation expenditures and other aspects of sustainability."

2012 Strathcona County Integrated Transportation Master Plan

	"Existing" [Federal Census 2006]	Proposed Target [Twenty Years]
WALK		
Strathcona County Rural Service Area	1.5 %	2.0 %
Sherwood Park Urban Service Area	3.2 %	5.0 %
Urban Growth Area	-	8.0 %
BICYCLE		
Strathcona County Rural Service Area	0.4 %	1.0 %
Sherwood Park Urban Service Area	0.8 %	2.0 %
Urban Growth Area	-	4.0 %
TRANSIT		
Strathcona County Rural Service Area	1.8 %	3.5 %
Sherwood Park Urban Service Area	4.6 %	8.0 %
Urban Growth Area	-	11.0 %
PASSENGER		
Strathcona County Rural Service Area	6.5 %	8.5 %
Sherwood Park Urban Service Area	6.7 %	10.0 %
Urban Growth Area	-	12.0 %
LOW-OCCUPANCY MOTOR VEHICLE		
Strathcona County Rural Service Area	89.8 %	85.0 %
Sherwood Park Urban Service Area	84.7 %	75.0 %
Urban Growth Area	-	65.0 %

Figure 17 - Integrated Transportation Master Plan Mode Share Conditions and Targets

The ITMP also identifies a 10-year passenger trips per capita performance indicator. Passenger trips per capita is an effective measure that tracks how well transit is being used relative to the size of the community. This also provides a direct correlation to transit mode share and can be used to annually track whether Strathcona County is achieving its targets.

The ITMP states that in 2012, Strathcona County Transit was achieving 39 passenger trips per capita, with a 10-year target of 50 passenger trips per capita. Based on the projected population in 2022 (as identified in **Table 6**), this would require in a 136% increase in ridership between 2017 and 2022 (as noted in **Table 7**). This significant amount of growth would be very difficult to achieve over such a short period of time, even with substantial investment in the system, and is not considered realistic.

It should be noted that the calculation of existing passenger trips per capita documented in the 2012 ITMP does not accurately reflect what was reported by Strathcona County Transit in the 2012 CUTA Fact Book (23.31 passenger trips per capita). Since the base year of 2012 was reported higher than actual, this means that the 2022 target of 50 passenger trips per capita is also likely too high and not reflective of existing conditions. To adjust for this and still account for the principle of the plan, the 10-year target was adjusted based on the ratio of the documented 2012 performance measure (39 passenger trips per capita), to the 2022 target (50 passenger trips per capita), multiplied by the actual 2012 performance measure (23.31 passenger trips per capita). This results in an adjusted 2022 target of 29.88 passenger trips per capita. When this is applied to the 2022 population projection, a 41% growth in ridership from 2017 is required to meet the goals of the ITMP.

Table 7 - Ridership Growth Based on Annual Passenger Transit Trips per Capita Target

	2012	2017	2022 (ITMP target)	2022 (revised target)
Population	92,403	98,213*	105,479	105,479
Service Area Population	65,465	70,975*	76,529	76,529
Ridership per capita	23.31	22.89	50***	29.88**
Annual Ridership	1,525,767	1,624,806	3,826,460	2,286,713
Ridership Growth (%)		6.5%	136%****	41%****

* Estimate 2017 population based on difference between 2016 and 2018 census

**Adjusted 10-year passenger trips per capita target identified in the ITMP

***Source: Documented 10-year passenger trips per capita target identified in the ITMP

****Ridership growth noted from 2017

While more realistic than the documented ITMP target, this is still a significant growth in ridership (8% annually) compared to the 1.3% annual growth that occurred between 2012 and 2017. Achieving this target would require a substantial increase in transit service hours (25% to 38%) over this same period to attract both existing residents and new residents to the service. While this would be difficult to achieve in a short-period of time, the passenger trip per capita and transit mode share targets as well as the transit strategic directions identified in the ITMP do identify various improvements to local, rural and Inter-municipal transit services that is required to grow ridership and reduce vehicle congestion, the cost of roadway expansion and rising environmental impacts of single occupant vehicle travel. ***To be in alignment with the ITMP, increases in transit services are required over the next 10 years with a focus on ridership growth.***

Transit Strategic Directions from ITMP

1. ***Make transit an attractive, competitive alternative to the low-occupancy motor vehicle for commuter and local trips.***
2. ***Optimize transit linkages between Edmonton and the Sherwood Park Urban Service Area and any future urban growth area(s) through infrastructure, information, and service design.***
3. ***Improve transit service for local trips within the Sherwood Park Urban Service Area, and capitalize on integration with land use planning to support high-quality local transit service in future urban growth area(s).***
4. ***Assess the need for transit connectivity to the growth hamlets, possibly through development of small-scale mobility hubs.***
5. ***Assess the feasibility of high-speed transit between Strathcona County and Edmonton, then plan for any identified high-speed transit solutions accordingly.***

5.3 Travel Patterns and Markets

According to the 2018 Municipal Census, the majority of work trips from Strathcona County are to a location outside Strathcona County, primarily to the City of Edmonton. There is a distinct split between those working full-time (65.8% work outside Strathcona County) and those working part-time (57.7% work within Strathcona County). Because there are more than five times as many residents who work full-time as do part-time, 62.2% of all workers travel outside Strathcona County for employment.

When school trips are included with work trips, 49.8% of residents commute within Strathcona County, and 50.2% commute outside of Strathcona County, primarily to Edmonton.

Transit service between Sherwood Park and Edmonton is well-served by Strathcona County Transit, due in part to an effective service strategy with large Inter-municipal buses and park-and-ride facilities, along with high parking prices in downtown Edmonton. The lower density nature of Sherwood Park and rural Strathcona County make these areas more difficult to service by transit.

5.3.1.1 Employment Travel

The Government Centre, downtown Edmonton and the University of Alberta area represent the most significant destinations for work trips by transit customers. This is primarily due to high density of destinations in a smaller area and the high price of parking.

Within Strathcona County, the majority of employment is scattered throughout the Sherwood Park Urban Service Area, representing retail, health care, educational services and manufacturing. Most industrial jobs are associated with hydrocarbon processing, with 10,822 businesses located within County, including 220 manufacturing companies⁵. Much of these developments are located on the peripheries of Sherwood Park to the west towards Edmonton or north towards Fort Saskatchewan. These major employment areas, however, are largely unserved by Strathcona County Transit due to the low density nature of the development and high employee wages. There have been few requests to service this area.

5.3.1.2 Secondary Education Travel

Approximately 6,565 people or 7% of the population is between the ages of 15 and 19 years of age⁶. These students are serviced by five major high schools: Archbishop Jordan Catholic High School, Bev Facey Community High School, Salisbury Composite High, Strathcona Christian Academy and Ardrossan Junior Senior High School. Strathcona County includes schools regulated by Elk Island Catholic School division and Elk Island Public School division.

⁵ <http://www.strathcona.ca/files/files/at-edt-economicdirections-2017.pdf>

⁶ 2016 Census

Archbishop Jordan Catholic High School is the only Catholic high school in Sherwood Park. This new high school is located on 4001 Emerald Drive and services large areas of new development. The high school is primarily serviced by Route 430/431, 433A and 490. Archbishop is also serviced by Elk Island Catholic School buses.

Bev Facey Community High School is located at 99 Colwill Boulevard and services a major catchment area in southeast Sherwood Park. Service is provided along Granada Boulevard on Route 442. Students at Bev Facey are serviced by Elk Island Public School buses.

Salisbury Composite High is located in Centre in the Park on Festival Way. This high school is also accessible by public transit; Routes 443A, 450 and 493 serve the vicinity. Students are serviced by Elk Island Public School buses.

Strathcona Christian Academy is located on the south-east periphery of Sherwood Park. Routes 441 and 494 service this high school and students are provided school transportation by Elk Island Public School buses.

5.3.1.3

Other Destinations

There is one hospital located in Strathcona County - Strathcona Community Hospital - which is located at 9000 Emerald Drive in Sherwood Park south of the Yellowhead Highway and is currently served by Routes 430/431, 433A and 491. The Hospital offers 27 beds and is open 24 hours a day, seven days a week. There are a few other health centres and medical clinics dispersed around the County.

The majority of retail related activities in Strathcona County are located in Sherwood Park. There are four major retail destinations: Emerald Hills Shopping Centre, Baseline Village Mall, Sherwood Park Mall, and Wye Road commercial developments.

Emerald Hills Shopping Centre is located on 7000 Emerald Drive which is currently serviced by Routes 430/431. This centre is of a typical big box or power centre style which is characterized by large setbacks and a surplus of surface parking, which makes it difficult to service by transit.

Baseline Village Mall is a major big box retail destination with the majority of stores set well back from the transit service which is located on Baseline Road, requiring a longer walk by transit customers. The majority of Local and Inter-municipal Routes serve this shopping centre which makes it the most accessible shopping area in Strathcona County by public transportation.

Sherwood Park Mall is an indoor shopping facility in the centre of Sherwood Park which is a part of the Centre in the Park redevelopment area. The mall includes 94 stores and is also highly accessible by transit; routes include 442, 443, 443A, 443B, 450, 492, 493 and 494.

The Wye Road commercial developments are in southwest Sherwood Park along Wye Road. They are served by Route 441 which travels along Wye Road between Ordze Transit Centre and Bethel Transit Terminal.

6.0 Planned Transportation Improvements

A number of existing policy and master plan documents have been completed which identify recommended improvements to the transit network both within Strathcona County and for trips to/from Edmonton. These are described in more detail below and were used in the development of a transit strategy for Strathcona County Transit.

6.1 Municipal Development Plan

Map 8 of the Municipal Development Plan outlines the transportation and infrastructure concept for Strathcona County (see **Figure 18**). The concept illustrates Highway 16 as a corridor for a potential Inter-municipal bus route and Baseline Road west of the Bethel Transit Terminal as a potential transit priority corridor. The Inter-municipal bus route on Highway 16 would likely not be in place until after significant development occurs in the Cambrian Crossing and Bremner areas to the north. This could either provide a direct connection to downtown Edmonton or to a transfer point on Edmonton's LRT network.

6.2 Integrated Transportation Master Plan

The ITMP provides a number of strategic directions and actions for transit to help increase transit mode share. Some of the more relevant actions that need to be noted for this plan include:

1. Support future transit service levels with appropriate investments in roads, transit vehicles and facilities, and pedestrian and bicycle connections
 - a. Invest in transit services that will increase ridership
 - b. Encourage the use of monthly and annual passes
 - c. Invest in transit customer information systems
 - d. Invest in accessible services and facilities
 - e. Enhance connections with active transportation
2. Incorporate transit priority within Strathcona County and support integrated transit priority initiatives elsewhere in the Region
3. Consider economic levels to shift demand from driving to transit
 - a. Charge for parking or introduce a tax on parking spaces, especially in areas that are well served by transit
 - b. Consider (in the longer term) road tolls, increased car registration fees, and increased gas taxes for Strathcona County within the framework of the Edmonton Metropolitan Region as a whole.
4. Encourage ridership with transit-friendly land use planning

Of interest in the above noted actions is an intent to increase investment in transit to support ridership growth and the potential to introduce parking fees in areas well serviced by transit. This could include the Bethel Transit Terminal or Ordze Transit Centre.

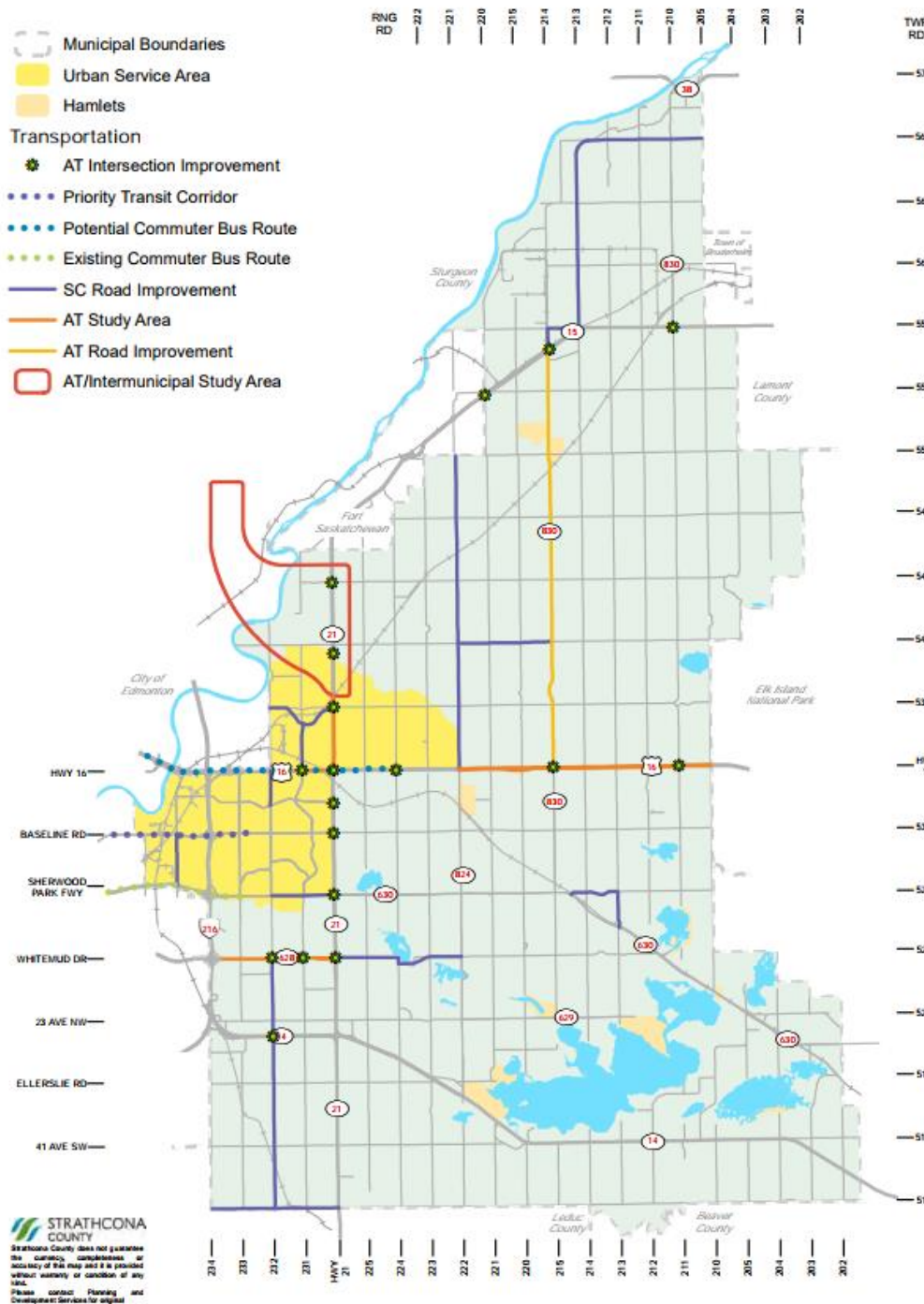


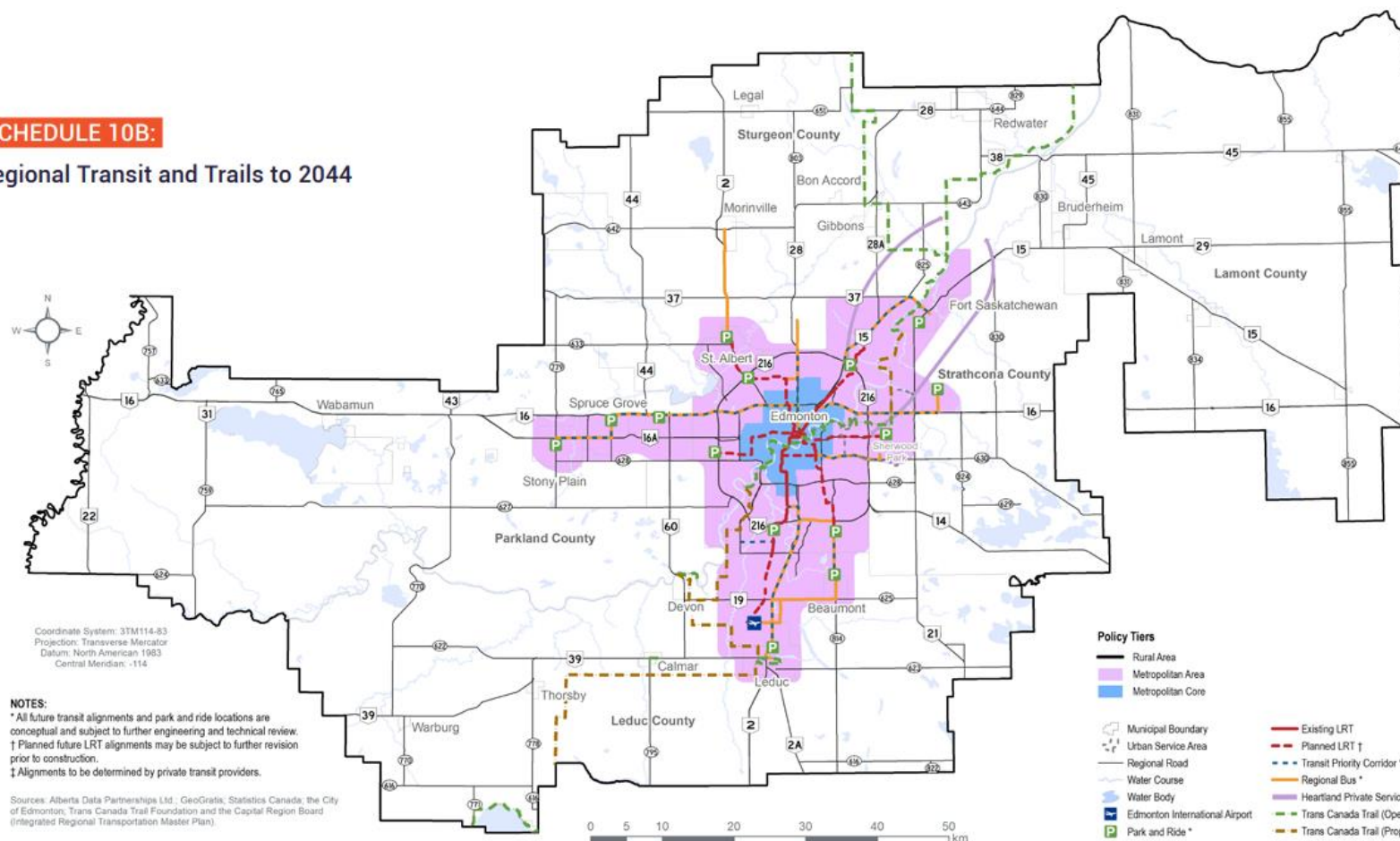
Figure 18 - Transportation Infrastructure Concept (Strathcona County Municipal Development Plan)

6.3 Edmonton Metropolitan Region Growth Plan

The Edmonton Metropolitan Region Growth Plan encompasses all areas in the Edmonton Metropolitan Region including Edmonton and Strathcona County. The plan includes a long-term plan for public transit in the region as illustrated in **Figure 19**. The plan proposes Inter-municipal bus connections along Yellowhead Highway and Sherwood Park Freeway. There is also an LRT alignment planned along Baseline Road to Bethel Transit Terminal. A park-and-ride facility is identified for Bremner along with the existing park-and-ride at the Bethel Transit Terminal.

SCHEDULE 10B:

Regional Transit and Trails to 2044



EDMONTON METROPOLITAN REGION GROWTH PLAN RE-IMAGINE. PLAN. BUILD.

Figure 19 - Regional Transit and Trails to 2044 (EMRB)

6.4 Edmonton Transportation Master Plan

The LRT extension to Sherwood Park noted in the Capital Region Inter-municipal Transit Network Plan is also referenced in the City of Edmonton Transportation Master Plan. **Figure 20** illustrates an easterly light rail connection to Strathcona County by 2040. While this will not be in place over the 10-year timeframe of this master plan, it does form an important long-term consideration for the strategy.

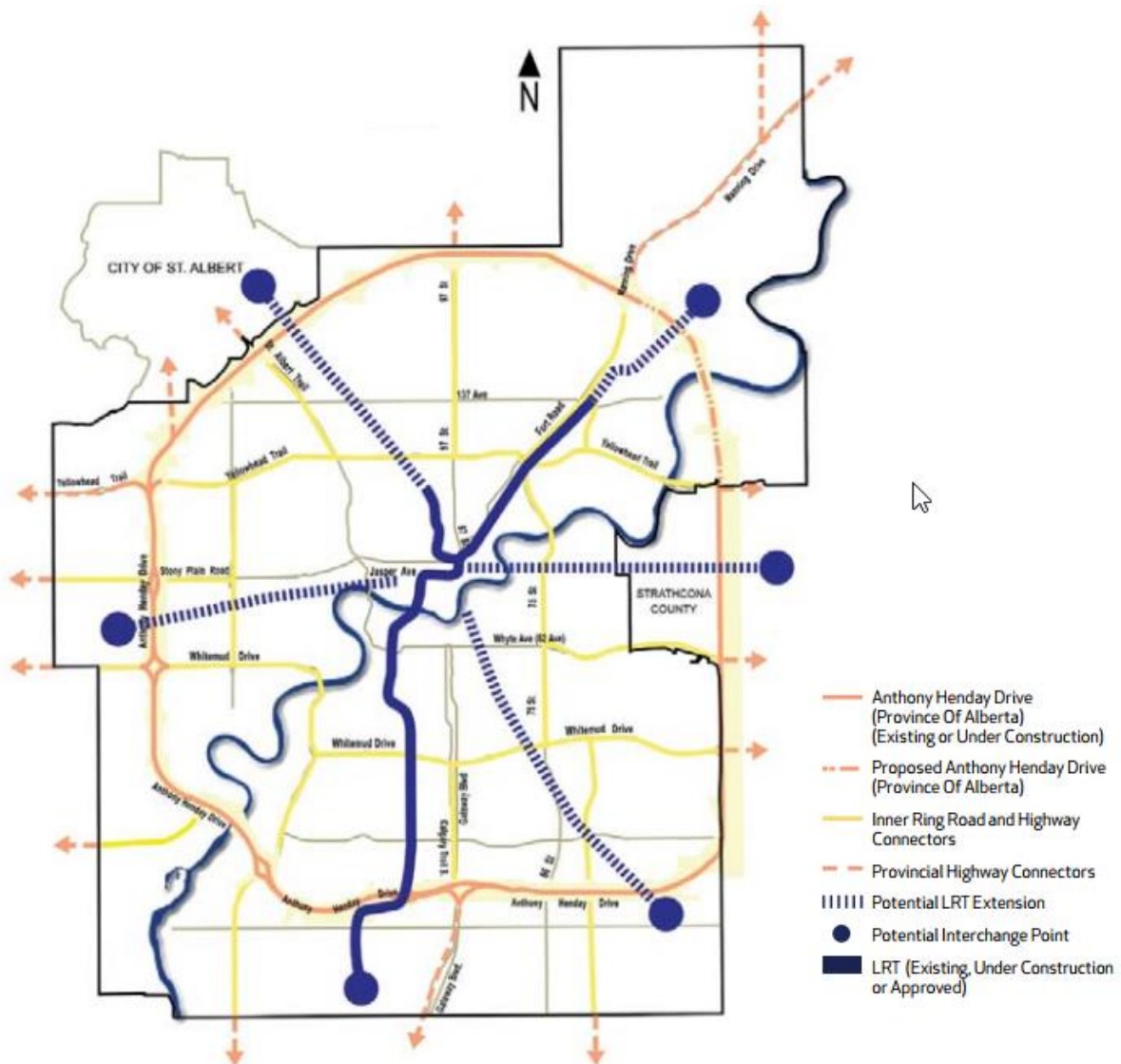


Figure 20 - Potential LRT Expansion by 2040 (Edmonton TMP)

7.0

The Role of Strathcona County Transit

7.1 Roles According to the County Integrated Transportation Master Plan

The primary purpose of the transit service in Strathcona County is summarized in the community's Integrated Transportation Master Plan (ITMP). This document states that transit currently provides service for travel within the County's Urban Service Area and for trips between the Urban Service Area and key destinations in the City of Edmonton. It notes that these services are mainly designed for people making trips for work or school.

In the future, the ITMP suggests that transit service could also connect the larger hamlets and rural areas to the Urban Service Area, and that services could be designed to serve a greater variety of trips purposes such as medical visits, recreation or shopping. The plan also notes the potential for transit to shape land use and a desire to improve modal share.

To meet these needs, the ITMP provides five strategic directions:

1. Make transit an attractive, competitive alternative to the low-occupancy motor vehicle for commuter and local trips;
2. Optimize transit linkages between Edmonton and the Sherwood Park Urban Service Area and any future growth area(s) through infrastructure, information, and service design;
3. Improve transit service for local trips within the Sherwood Park Urban Service Area, and capitalize on integration with land use planning to support high-quality local transit service in future urban growth area(s);
4. Assess the need for transit connectivity to the growth hamlets possibly through development of small-scale mobility hubs;
5. Assess the feasibility of high-speed transit between Strathcona County and Edmonton, then plan for any identified high-speed transit solutions accordingly.

Each of the above strategic directions is, in turn, supported by appropriate strategic actions:

1. Implement the Transit Master Plan;
2. Support future transit service levels with appropriate investments in roads, transit vehicles and facilities, and pedestrian and bicycle connections:
 - a. Invest in transit services that will increase ridership;
 - b. Encourage the use of monthly and annual passes;
 - c. Invest in transit customer information systems;
 - d. Invest in accessible services and facilities;
 - e. Enhance connections with active transportation (e.g. bicycle racks on buses, sidewalk connections at bus stops, bicycle lockers/parking at transit centres);

3. Incorporate transit priority within Strathcona County and support integrated transit priority initiatives elsewhere in the Edmonton Metropolitan Region;
4. Consider economic levers to shift demand from driving to transit:
 - a. Charge for parking or introduce a tax on parking spaces, especially in areas that are well served by transit;
 - b. Consider (in the longer term) road tolls, increased car registration fees, and increased gas taxes for Strathcona County within the framework of the Edmonton Metropolitan Region as a whole;
5. Encourage ridership with transit-friendly land use planning.

7.2 Roles According to the Previous Transit Master Plan

The previous Transit Master Plan used an internal visioning workshop and vision-related questions from a community survey to assist in identifying appropriate roles for the transit system. The Plan described three main roles for Strathcona County Transit in the community:

1. **Social** – Transit plays a crucial role in helping Strathcona County to be an inclusive, accessible, connected and healthy community. Transit connects people to a variety of opportunities such as employment, shopping, recreation, and medical destinations. It is especially important for residents and visitors that do not have access to a car such as youth, seniors, persons with disabilities, and persons with low incomes. Without transit access, these groups would be at risk of becoming isolated or choosing to live in other municipalities where better transit exists.
2. **Economic** – Transit plays an important role in the economic vitality of Strathcona County. Transit is a critical link for regional and local labour mobility and for connecting workers with employers. Because transit is largely funded by taxpayers, it is very important that services are planned and provided in an efficient and cost-effective manner.
3. **Environmental** – Transit plays an important role in helping to preserve the environment by attracting new riders and thereby reducing the number of cars on the road. Fewer cars help to reduce greenhouse gases and other polluting emissions.

7.3 Roles According to the Community

The first phase of community engagement for the update of the Transit Master Plan was held during February and March of 2018 and included meetings with the mayor, councillors, and County staff; a focus group of transit stakeholders; public open houses; and an online survey. These activities resulted in a broad range of discussions and ideas for all aspects of the transit service. Those related to the policy framework of Strathcona County Transit and the roles of the service included:

- A social role making Strathcona County accessible to all residents regardless of age or ability to drive a vehicle;
- An environmental role in reducing emissions and congestion;

- An equity role in providing an affordable means of transportation for all residents regardless of means;
- An urban development role in support of a more urban and walkable community in the future, and the growth of urban expansion areas;
- An economic role in providing access to employment opportunities;
- An inter-municipal service role connecting the Urban Service Area with key destinations in Edmonton and, potentially, other locations such as Fort Saskatchewan;
- A local service role within the Urban Service Area (and future urban growth areas) to easily connect residents to local shopping, recreation, employment, and medical destinations; and
- A rural community service role to ensure that residents in the rural portions of the county are offered basic mobility.

7.4 Proposed Roles

It is clear that none of the Integrated Transportation Master Plan, the previous Transit Master Plan, or the recent community engagement activities provide by themselves a comprehensive statement of roles for Strathcona County Transit. Rather, they need to be brought together to develop an appropriate set of roles that provides the starting point for development of the policy framework. In addition, the organization's role should look beyond the past planning framework and recognize that the roles of transit systems throughout the world are changing – many are becoming broad mobility coordinators for their community through leadership in building partnerships with new mobility providers and approaches.

The following role statement is proposed.

The primary purpose of Strathcona County Transit is to meet the mobility needs of the residents and businesses in the community. It provides service that supports:

- ***Equity – Available and affordable for all residents regardless of their age, ability, or means;***
- ***Economic Opportunity – Provides access to employment and education within the community and regionally;***
- ***Environmental Sustainability – Provides a convenient alternative to driving that reduces emissions and congestion.***

To achieve this, Strathcona County Transit's role is to provide the following types of services:

- Local Transit Service – A mixture of accessible conventional and on-demand services within the existing Sherwood Park Urban Service Area and future Planned Areas and Greenfield Areas;

- Inter-municipal Transit Service – High capacity and accessible transit services connecting the current and future Urban Service Area with key destinations in Edmonton or other areas of the Edmonton Metropolitan Region;
- Rural Transit Service – A mixture of accessible conventional and on-demand services linking rural settlements in the County with each other and the current and future Urban Service Area;
- Implementing partnerships with other mobility providers and identifying approaches that enhance mobility for residents; and
- Programs that influence greater use of sustainable mobility approaches.

8.0

Vision Statement

A vision statement for an organization should be a clear and concise statement of the desired future that the entity provides to the community it services. Every action that is taken by the organization should then reflect the vision. The vision statement from the previous Transit Master Plan states:

As a recognized leader in the transit industry, Strathcona County Transit takes pride in providing excellent service to the community while enhancing quality of life and promoting sustainability.

This statement is good in that it speaks to excellent service, quality of life and sustainability, all desirable qualities for a preferred future. However, it does not address the full purpose and roles discussed in the previous section as directly as it might. The following updated vision statement is proposed:

Provide access to opportunities for all residents and businesses in the community through the provision of sustainable mobility services.

Mission Statement

The mission statement of an organization builds on the broad vision statement by succinctly describing how it achieves the vision. The mission statement from the previous Transit Master Plan stated:

Strathcona County Transit provides local, inter-municipal and specialized public transit services for the community that are Customer-focused, Accessible, Reliable, Efficient and Safe (CARES).

This is an excellent statement that describes what the organization does and the values that it adheres to while delivering the service. These values describe what is important to the organization in terms of how it approaches its customers, its operations, and its employees. Specific value statements include:

- **Customer-focused** – The experience of the customer drives decision making. When considering how to proceed with any decision, the experience that the customer will have as a result of that decision will always be top of mind;
- **Accessible** – The services, following universal design principles, will be available to everyone in the community regardless of their age, ability or means to the greatest extent possible;
- **Reliable** – Customers have access to real-time bus information which allows them to conveniently plan their trip. Customers that do not use real-time data can still rely on the transit service to operate according to the schedule and manner advertised, and planning and operational decisions will be made with this requirement in mind;
- **Efficient** – The equipment used and services provided will be planned and operated in a manner that recognizes the public financial contributions of customers and the community;
- **Safe** – No equipment or service will be operated or project undertaken if it will knowingly compromise the health or safety of customers or employees.

It is appropriate to maintain a mission statement that continues the focus on the CARES values described above. Slightly modified to reflect the broader mobility focus described in the roles and the vision statement, the proposed mission statement is:

Strathcona County Transit provides sustainable mobility services for the community that are Customer-focused, Accessible, Reliable, Efficient and Safe (CARES).

10.0

Goals and Objectives

Having established the roles for Strathcona County Transit and identified appropriate vision and mission statements to guide activity in the future, the next step is to establish a set of goals and corresponding objectives that will guide the activities of the organization. **Table 8** lists goals organized into the primary purposes of equity, economic opportunity and environmental sustainability, and indicates objectives to reach each goal that collectively address all of the roles and reflect the CARES values.

Table 8 - Proposed Goals and Objectives

	Goal	Objective
Equity	1. Ensure a safe and healthy workplace, environment and service for all customers, employees and others	a) Work to maintain and improve the safety of all vehicles and facilities used by customers b) Work to promote a workplace culture that will increase the enjoyment and reduce stress of customers using the Strathcona County Transit service c) Work to maintain and improve the health, well-being and safety of all workplaces used by employees d) Work to maintain and improve the safety of all road users
	2. Ensure that transit services are available, accessible and affordable for all residents regardless of age, ability, or means	a) Provide transit facilities, vehicles and services that adhere to the principles of universal design to maximize accessibility for customers b) Provide Mobility Bus Services for those who need an accommodation c) Offer an equivalent service for persons with disabilities by advancing the accessibility of its fleet and facilities and making service levels and fares equivalent for Mobility Bus and conventional bus services d) Set fares that are equitable and affordable for all customers, including youth, seniors, persons with disabilities and persons with low incomes e) Enhance the proximity and span of service for all members of the community.
	3. Provide services that can meet the needs of residents and customers	a) Provide local transit service within the Urban Service Area, including the future Planned Areas and Greenfield Areas b) Provide Inter-municipal transit service connecting the Urban Service Area with key destinations in Edmonton or other areas of the Edmonton Metropolitan Region c) Provide rural transit service linking key rural settlements in the County with the Urban Service Area based on demand and the ability to provide a reasonable service utilization which meets approved Service Standards

	Goal	Objective
		d) Provide information about services that is easy to use and accessible
Economic Opportunity	4. Ensure access to employment and education within the community and regionally	a) Provide transit service to major employment areas and educational institutions within the Urban Service Area, in Edmonton, and elsewhere in the Edmonton Metropolitan Region
	5. Ensure an appropriate balance between the amount of service offered and financial resources	a) Balance user fees with tax support b) Maintain appropriate Service Standards that balance service and financial goals to ensure most effective use of resources
	6. Maximize the efficient use of resources	a) Provide transit priority measures and bus rapid transit approaches to improve speed, reliability and the customer experience b) Employ proven technology to improve service control, provide information and improve the customer experience c) Develop partnerships and provide connectivity with other mobility providers and modes in order to expand mobility choice and potential ridership d) Critically examine and assess opportunities to introduce technological advancements that will help enhance the customer-experience (access to information, fare payment, etc.), improve operations and/or reduce Strathcona County Transit's environmental footprint e) Plan and operate service that makes the most effective use of system resources f) Stress innovation and the creation of partnerships in the planning, delivery and funding of services
	7. Reinforce the County's distinct identity	a) Provide a consistent brand for all transit services and programs Promote a positive image of Strathcona County Transit in the community as the preferred transportation mode and an integral part of quality of life
Environmental Sustainability	8. Provide an alternative to reliance on personal automobiles	a) Provide services that can attract new users away from their cars b) Provide services that can enable a car-free lifestyle c) Provide a reliable and dependable service that provides customers with a sense of trust that they will arrive at their destination as planned d) Strive to deliver a service that minimizes end-to-end travel

	Goal	Objective
		<p>times by implementing transit priority features on key corridors, minimizing route deviations and reducing transfer time</p> <p>e) Continue to integrate transit services with active transportation, including connections to trails and cycling facilities and the use of bike racks on buses</p> <p>f) Continue to improve seamless inter-municipal travel opportunities between local services and inter-municipal services</p> <p>g) Market the environmental, economic, and stress-reducing benefits of transit travel to residents</p>
	9. Adopt transit supportive measures throughout the County	<p>a) Encourage transit-oriented development that is compact, mixed-use, and walkable</p> <p>b) Respond to development, growth pressures and changing demographics in a proactive and innovative manner, recognizing that transit is an integral part of urban development and environmental sustainability</p> <p>c) Provide and support demand management strategies and programs that can influence and encourage greater use of sustainable mobility approaches</p>
	10. Maximize transit's environmental performance	<p>a) Minimize pollution from transit operations</p> <p>b) Maximize energy conservation of all transit facilities</p> <p>c) Minimize environmental footprint through green procurement and business operations</p> <p>d) Purchase vehicles of the appropriate size to use resources more efficiently</p> <p>e) Encourage the procurement of electric or other alternative fuel buses to minimize the environmental footprint of the transit fleet</p>

11.0

Service Standards

Service Standards provide for a consistent and fair evaluation of both existing and proposed services, and establish a framework for guiding decisions on how to best serve customer's diverse travel needs within prevailing budgetary and resource limits. The standards discussed in this document are intended to provide guidelines governing the planning and design of the overall service strategy for a growing Strathcona County Transit system that are linked to the Vision, Mission and Goals and Objectives of the system. Definitions and details of the standards and how they are used in decision making are also identified. The priorities that the Service Standards establish reflect the values of the community and provide for a consistent and fair evaluation of both existing and proposed services.

Because markets, customer expectations, and Strathcona County Transit's resources change over time, Service Standards are evolutionary by nature. Strathcona County Transit must be responsive to these changes in order to retain current customers and achieve and sustain ridership growth. Balancing customer expectations and budget constraints is a difficult challenge. Existing services must be monitored and modified continually to match service levels to demand and respond to opportunities for new or improved services. The dynamic nature of new urban developments and changing travel markets in Strathcona County Transit's service area requires constant review of new service strategies, service expansion, or service re-alignment options. Strathcona County Transit must be able to rationally evaluate service changes and make adjustments to service within the constraints of budget and equipment availability, in order to provide the highest quality service in the most efficient manner possible, using established Service Standards as a guide.

These Service Standards should be reviewed and updated, as necessary, in conjunction with a five-year strategic review of the system to ensure that the established criteria are still relevant to Strathcona County Transit's operating environment, customer needs and expectations and reflect current transit industry trends.

The following Service Standards document was updated as part of the Transit Master Plan Update (2019-2028). It is based on a review of current performance and future goals and directions and input provided through the public engagement process.

To ensure consistency in the decision-making process and alignment with the vision, mission and goals and objectives of the plan, it is recommended that the Service Standards document be adopted by Council.

11.1

Transit Service Area

Service Standards will be applicable to transit services provided in the Strathcona County Urban Service Area, as defined in the Municipal Development Plan Bylaw 20-2017.

Service may be provided outside of the Urban Service Area in the following circumstances:

- To downtown Edmonton;
- To major destinations in Edmonton or connections to Edmonton Transit Services (ETS), if warranted;
- To other significant employment areas within Strathcona County, if warranted;
- To other significant areas in the Edmonton Metropolitan Region outside of Strathcona County, if warranted; and
- To rural portions of Strathcona County in the Rural Service Area as defined in the Municipal Development Plan Bylaw 20-2017, if warranted.

These services outside the existing Sherwood Park and future growth areas within the Urban Service Area will only be provided if warranted by demand as defined in the Introduction of Service to New Areas standard (**Section 11.4.6**) or Service Utilization Standard (**Section 11.4.4**). Service Standards describing this are included in the following sections.

11.2 Service Types

Standards are defined for different types of routes and services that Strathcona County Transit may operate, now or in the future, as part of their overall family of services. These route and service types include:

Inter-municipal Routes

These fixed-routes connect the Urban Service Area with high demand destinations in Edmonton or other areas of the Edmonton Metropolitan Region with direct non-stop or limited-stop service, and are focused on commuters and people attending major post-secondary institutions.

Local Routes

These fixed-routes provide service within the Urban Service Area, connecting communities with each other, with local activity centres, and with transit terminals where transfers to and from Inter-municipal Routes can be made.

Dynamic Transit Services

These shared-ride demand-responsive services provide flexible routing and scheduling in the Urban Service Area or Rural Service Area during periods of the day and/or areas of the County where it is difficult to justify the operation of a Local Route or if it is deemed a better alternative to fixed-route service. Dynamic Transit Services provide stop-to-stop or curb-to-curb services that connect areas of the community that do not have a Local Route, as a supplement to a Local Route, or provide connections to major transit focal points to facilitate transfers to other fixed-routes for longer-distance trips. These typically use dedicated or non-dedicated small/medium-sized vehicles (including buses, taxis, vans or sedans) operating in shared-ride mode (according to customer needs). To access the

service, the customer must call a dispatch office or use their mobile phone to request a trip in advance of the trip pick-up time.

Special Services

These are routes or services that are operated at specific times or on specific days and accommodate high numbers of customers making the same trip (examples include special school services to or from a high school and supplementing Local Routes, or special event services).

Rural Services

These are fixed-route or Dynamic Transit Services connecting one or more rural communities in the Rural Service Area to the Urban Service Area.

Mobility Bus Services

These are shared-ride, accessible, door-to-door demand-responsive services designed for Strathcona County residents with disabilities who are unable to use any of the other Family of Services noted above and meet specific eligibility criteria.

11.3 Service Design Standards

Service Design Standards set out specific criteria for route design and service levels, including system proximity, route directness, service frequencies, and span of service.

11.3.1 Eligibility

Table 9 identifies the eligibility criteria that apply to each type of service provided by Strathcona County Transit.

LINK TO GOALS AND OBJECTIVES
EQUITY: Provide services that can meet the needs of all residents and customers

Table 9 - Strathcona County Transit Eligibility Criteria

Type of Service	Eligibility Criteria
Inter-municipal Routes	No restrictions (open to all residents, employees and visitors of Strathcona County)
Local Routes	
Dynamic Transit Services	
Special Services	
Rural Services	
Mobility Bus Services	Persons who can demonstrate that because of a disability they are not able to use conventional bus services for some or all of their trips, are 18 years of age or older and are a resident of Strathcona County

For Mobility Bus Services, the eligibility criteria are further defined by specifying the type of disabilities that are considered and the various levels of eligibility. Disabilities that may prevent a resident from using the conventional transit service (defined as Inter-municipal Routes, Local Routes, Rural Services, Dynamic Transit Services and Special Services) include:

- **Visual** – Residents who are legally blind and have unsuccessfully travel-trained on conventional transit services.
- **Sensory** – Residents experiencing sensory motor area conditions (e.g. Parkinson’s disease) that impact their physical ability to use conventional public transit.
- **Cognitive** – Residents with cognitive disabilities who are unable to take conventional transit.
- **Physical** – Residents who have a physical disability that prevents them from:
 - walking or rolling 175 metres,
 - standing or waiting 15 minutes for a bus, or
 - accessing a bus stop due to environmental barriers such as inclement weather or physical barriers such as non-accessible bus stops or streets connecting to bus stops.

Three levels of eligibility exist for Mobility Bus service. Levels of eligibility are provided to ensure that Mobility Bus resources are allocated to individuals based on need, encouraging the use of accessible conventional transit services when appropriate.

1. **Unconditional** – A resident with a disability that prevents them from using conventional transit at all times.
2. **Temporary** – A resident with a temporary disability (e.g. recovering from surgery) that prevents them from using conventional transit for all or part of their trip.
3. **Conditional** – A resident with a disability for which environmental or physical barriers limit their ability to use conventional public transit (e.g., "in Winter only," "in dark conditions only" or "for certain trips that do not have accessible bus stops").

11.3.2 Hours of Service

The hours of service is defined for each service area instead of by service type. By defining span of service by each service area, Strathcona County Transit has the ability to use any of its service offerings to deliver the service, based on both the effectiveness of the service and the accessibility of the service. Minimum hours of service standards

LINK TO GOALS AND OBJECTIVES

EQUITY: Provide services that can meet the needs of all residents and customers

ECONOMIC OPPORTUNITY: Ensure access to employment and education within the community and regionally

ECONOMIC OPPORTUNITY: Ensure an appropriate balance between the amount of service offered and financial resources

ENVIRONMENTAL SUSTAINABILITY: Provide an alternative to reliance on personal automobiles

are applicable to the Inter-municipal Routes, Local Routes, Dynamic Transit Services and Mobility Bus Services.

Strathcona County Transit will provide service on all days of the year except designated statutory holidays. Service will generally operate during the following periods illustrated in **Table 10**. It should be noted that these represent minimum hours of service, and service can be operated beyond these hours if they meet minimum Service Utilization targets (**Section 11.4.4**).

Table 10 - Minimum Hours of Service

Service Area	Weekdays	Saturdays	Sundays and Holidays
Urban Service Area	6:00 am – 12:00 am	7:00 am – 12:00 am	8:00 am – 8:00 pm
Inter-municipal (to Edmonton)	6:00 am – 12:00 am	7:30 am – 12:00 am	8:30 am – 8:00 pm
Rural Service Area and other destinations within the Edmonton Metropolitan Area	Based on minimum service utilization targets being met	Based on minimum service utilization targets being met	Based on minimum service utilization targets being met

Note: minimum service hours reflected above represent the first departure and last arrival time of the vehicle

For Special Services within the Urban Service Area, minimum hours of service standards do not apply. Service performance standards will determine the service level.

11.3.3 Headway (Frequency of Service)

Table 11 illustrates the maximum headway that will be operated for both Inter-municipal Routes and Local Routes. More frequent service can be operated if the appropriate Service Utilization targets can be met (see **Section 11.4.5**). Service levels are not recommended to go above the maximum headway referenced in **Table 4** below.

If a Local Route operating at the maximum headway falls below the minimum Service Utilization target (see **Section 11.4.5**), the route should be modified or removed from service only if the Proximity to Service standard is maintained (see **Section 11.3.6**). Consideration will also be made to converting the route to a Dynamic Transit Service. If both options are not feasible and do not result in an improved service and/or Service Utilization level, the maximum headway should be maintained and other efforts will be undertaken by Strathcona County Transit to increase ridership.

Special Services and Rural Services will all be planned and maintained based on forecast or observed demand – operating times and headways will be organized accordingly.

LINK TO GOALS AND OBJECTIVES
ENVIRONMENTAL SUSTAINABILITY: Provide an alternative to reliance on personal automobiles

ECONOMIC OPPORTUNITY: Ensure an appropriate balance between the amount of service offered and financial resources

Headways do not apply for Mobility Bus Services and Dynamic Transit Services. Instead, the availability of service is measured by the Trip Booking Window (**Section 11.3.4**) and Trip Denials/Missed Trips (**Section 11.4.1**).

Table 11 - Maximum Headway

Operating Period	Service Period	Inter-municipal Routes	Local Routes
Weekday AM Peak	6:00 am – 9:00 am	30 minutes	30 minutes
Weekday Midday	9:00 am – 3:00 pm	60 minutes	60 minutes
Weekday PM Peak	3:00 pm – 7:00 pm	30 minutes	30 minutes
Weekday Evening	7:00 pm – Midnight	60 minutes	60 minutes
Saturday Morning	7:00 am – 9:00 am	60 minutes	60 minutes
Saturday Midday	9:00 am – 6:00 pm	60 minutes	60 minutes
Saturday Evening	6:00 pm – Midnight	60 minutes	60 minutes
Sunday/Holiday Morning	7:00 am – 11:00 am	60 minutes	60 minutes
Sunday/Holiday Midday	11:00 am – 6:00 pm	60 minutes	60 minutes
Sunday/Holiday Evening	6:00 pm – Midnight	60 minutes	60 minutes

11.3.4 Trip Booking Window

For Mobility Bus Services and Dynamic Transit Services, customers must book a trip ahead of their desired pick-up time. Notice (booking window) is required to mobilize and optimize the vehicle to deliver the trip and accommodate similar shared-ride trips that may be requested at the same time.

Mobility Bus Services will typically have a longer booking window due to the door-to-door service offering, which requires more time for each vehicle to complete a passenger trip. Booking windows for Dynamic Transit Services are typically shorter as services can accommodate more ridesharing when services connect to fixed-route stops.

The following minimum booking windows will be planned for each service:

LINK TO GOALS AND OBJECTIVES
ENVIRONMENTAL SUSTAINABILITY: Provide an alternative to reliance on personal automobiles

EQUITY: Ensure that transit services are available, accessible and affordable for all residents regardless of age, ability, or means

Table 12 - Booking Window Policies

Service Type	Maximum Booking Window	Minimum Booking Window
Mobility Bus Services	One week prior to trip request (with the exception of subscription trips)	Two business days prior to trip request (same day trips accommodated based on availability)
Dynamic Transit Services	One week prior to trip request	Recommended 30 minutes prior to trip request (on-demand service accommodated based on availability)

11.3.5 Travel Time (Directness of Service)

Travel Time (Directness of Service) is a measure of service quality. The design of routes and services should minimize the amount of time a customer needs to be in a vehicle compared to the direct path between an origin and destination pair.

LINK TO GOALS AND OBJECTIVES
ENVIRONMENTAL SUSTAINABILITY: Provide an alternative to reliance on personal automobiles

Fixed-route services such as Inter-municipal Routes and Local Routes are measured based on how much a route deviates from the most direct road path between the start and end points of a route. The measure indicates a desire to limit additional travel time and distance resulting from route deviations and indirect or circuitous route design. It is measured as the ratio of the length of the proposed route (with deviation) to the length of the route along the most direct road path:

$$\frac{\text{Travel Time of Proposed Route with Deviation}}{\text{Travel Time of Route Corridor without Deviation}} = \text{Travel Time Factor}$$

e.g. $\frac{30 \text{ min}}{25 \text{ min}} = 1.2$

The directness of service standard for both Inter-municipal Routes and Local Routes should be used as a guideline, recognizing that there are other factors that influence route planning (e.g. need to maintain the Proximity to Service standard (**Section 11.3.6**)).

Deviations on Inter-municipal Routes should be avoided, with the route directness measuring within a range of 1.0 to 1.1. Deviations are permitted to service a major terminal or trip generator; to connect to another route for the purposes of accommodating a major transfer movement; match travel demands or to use a transportation corridor that will reduce travel time.

The configuration of Local Routes should be designed to provide as direct a service as possible between two points or communities, with deviations to serve local areas and major destinations as warranted by demand or to achieve the Proximity to Service standard (**Section 11.3.6**). The target for Local Routes is between 1.0 and 1.5. A higher deviation is permitted due to the more circuitous design of the local roadway network, which makes it difficult to maintain a close proximity to residential areas without

deviating from the direct path. One way loops should only be used at the extremities of the routes to allow for turn-around; to service a major terminal or trip generator; to connect to another route for the purposes of accommodating a major transfer movement; to provide necessary coverage to achieve Proximity of Service standard (**Section 11.3.6**) and/or match travel demands. As a guideline, Local Routes should be designed such that the maximum travel time around a one-way loop at the extremity should not exceed 10 minutes. Where Local Routes cannot meet this minimum design standard, consideration should also be made to introduce Dynamic Transit Services.

Special Services are expected to be more circuitous in order to provide service to area residences, terminals and schools. While the directness of service value should always be minimized, no specific directness of service standard for Special Services is recommended.

Rural Services may operate as fixed-route or Dynamic Transit Service. Since the service area is fairly large with low densities and long travel distances required, no route directness of service standard will be applied. In general, Strathcona County Transit will strive to design routes as direct as possible, while meeting minimum Service Utilization targets (**Section 11.4.2**).

Dynamic Transit Services are based on the average in-vehicle travel time of a person travelling with other customers compared to the time it would take for the same customer to travel alone on the same vehicle. This provides a balance between increasing service productivity (vehicle occupancy) versus service quality (travel time).

For Dynamic Transit Services, trips are generally direct unless a ride is shared with another customer. The standard places a maximum target on the amount of time a customer is in a vehicle for a shared-ride service relative to the direct travel time if the person was travelling in the vehicle alone. As a general guideline, a customer sharing a ride with more than one customer should not be in a vehicle 1.5 times longer than the travel time of the customer travelling alone between their origin and destination.

For Mobility Bus Services, trips are generally longer due to the 'door-to-door' level of service provided and the need for the operator to ensure the customer is escorted to and from the front of the door of their origin and destination. This results in longer trips for the operator for each customer trip. As a result, there is an expectation that travel times may be longer. As a general guideline, no customer should have a trip longer than 90 minutes.

Table 13 summarizes the guidelines for travel time when designing and setting policy for each service type offered by Strathcona County Transit.

Table 13 - Travel Time (Directness or Service) Factor

Service Type	
Inter-municipal Route	1.0 – 1.1 Route Directness Factor
Local Routes	1.0 – 1.5 Route Directness Factor
Special Services	Not Applicable
Rural Services	Not Applicable
Dynamic Transit Service	Trips no more than 1.5 times longer than the time required for a customer to travel alone in the vehicle
Mobility Bus Service	No individual trip longer than 90 minutes

11.3.6 Proximity to Service

The Proximity to Service standard is meant to address the accessibility of transit by targeting a maximum walking distance that a customer will have to travel to reach a transit stop. Strathcona County Transit will attempt to operate routes throughout the Urban Service Area, where economically and operationally feasible, so that this standard is met.

LINK TO GOALS AND OBJECTIVES
EQUITY: Provide services that can meet the needs of residents and customers

For Local Routes and Dynamic Transit Services, the maximum walking distance to the closest transit stop within the Urban Service Area will be 400 metres for at least 90% of residences and/or businesses.

For significant medium and high density residential developments, major activity centres, and large seniors' residences, the maximum walking distance to a transit stop will be 250 metres.

For large industrial areas within the Urban Service Area that warrant the provision of service (based on Service Utilization standards being met in **Section 11.4.4**), the maximum walking distance to a transit stop will be 800 metres.

The Proximity to Service Standard is important to maintain equity in the system, providing residents, students and employees within the Urban Service Area access to mobility. This standard should be maintained even if the performance of an existing route or service does not meet minimum Service Utilization standards (see Section 11.4.4).

Inter-municipal Routes generally provide limited stop service between the transit terminals and their ultimate destinations. The placement of stops on these routes should be based on areas where there is higher ridership demand. Therefore, the Proximity of Service standard does not apply.

Special Services will use the established bus stops within the Urban Service Area. Any additional necessary stops needed for these services will be considered by applying the same general walking distance guidelines described for Local Routes.

Rural Services will use appropriate established bus stops within the Urban Service Area. If new stops are required in a rural hamlet, they will be located centrally within the community. Given the large geographic area and low density of most rural areas, no maximum walking distance guideline will be applied in farm and estate home areas.

For Mobility Bus Service, door-to-door service will be available to 100% of the Urban Service Area and Rural Service Area for registered customers. For trips within the Rural Service Area, certain trip eligibility may apply.

11.3.7 Bus Stops

Bus stops should be located to maximize convenience for customers and support the service coverage standard, according to the following guidelines:

- At intersections, transfer points, and key facilities and destinations in order to reasonably minimize walking distance;
- Not less than 200 metres apart within the Urban Service Area, but averaging at least 300 metres apart along the length of a route;
- At locations that consider traffic and street conditions and, where possible, are close to signalized intersections, or pedestrian crosswalks; and
- At the far side of the intersection where there is reasonable room to accommodate the stop.

LINK TO GOALS AND OBJECTIVES

EQUITY: Provide services that can meet the needs of residents and customers

ECONOMIC OPPORTUNITY: Maximize the efficient use of resources

Bus bays will only be supported when there is a scheduled time point, a transfer point, or extremely busy stop location that may result in a bus stopping for an extended time at a bus stop. On streets where on-street parking creates a bus bay, designs that extend the sidewalk/customer waiting area to the travel lane and eliminate the bus bay will be supported.

A bus stop zone must be a minimum of 35 metres in length – 12 metres for a stopped bus plus 11 metres for the bus to pull into the zone and 12 metres for the bus to pull out of the zone.

Amenities at bus stops such as benches and shelters will be located where they make the most sense, with the following used as guiding criteria:

- All terminals and transfer points;
- Busy customer boarding locations;
- Unique exposure to inclement weather; and
- Close to senior's residences, hospitals, and other institutional facilities.

11.3.8 Accessibility

All conventional transit buses used to operate Inter-municipal Routes, Local Routes and Special Services will be low-floor, wheelchair accessible vehicles with automated stop announcements in visual and audible formats in order to accommodate all customers who may wish to use them⁷. Mobility Bus vehicles are also wheelchair accessible, but do not have automated stop announcements. Dynamic Transit Services, Rural Services and taxi vehicles used to provide Mobility Bus Services may use other types of smaller non-accessible vehicles as long as an accessible vehicle can be reasonably made available upon request during the service span of service and service area. Only mobility aids that are appropriately sized and can safely fit on transit buses and Dynamic Transit Service vehicles will be accommodated.

LINK TO GOALS AND OBJECTIVES

EQUITY: Provide services that can meet the needs of residents and customers

EQUITY: Ensure that transit services are available, accessible and affordable for all residents regardless of age, ability, or means

All transit terminals and other transit facilities will be barrier free and adhere to the principles of universal design.

New or reconverted bus stops and bus stop amenities and shelters will adhere to the universal design. They will be linked to accessible pedestrian access points.

Snow clearing at accessible bus stops and facilities will be a priority.

11.4 Performance Standards

Performance measures are used primarily to set desired and achievable goals for the performance of Strathcona County Transit and permit evaluation and feedback on how well these goals are met. The following section provides guidance on overall performance of the system in terms of the effectiveness of the service provided and the customer experience. This includes specific criteria for measuring trip denials/missed trips, customer comfort, service utilization, service reliability and guidelines for service expansion.

⁷ Automated stop announcements in visual and audible formats are being implemented as an element of the Smart Bus project to enhance accessibility for persons with vision, hearing and cognition loss.

11.4.1 Trip Denial / Missed Trips

Trip denials /missed trips occur when a customer is unable to board a Strathcona County Transit vehicle at the requested or scheduled pick-up time.

Missed trips occur when a customer is waiting at a bus stop for a scheduled service and their trip cannot be accommodated due to:

- Significant delays (vehicle is operating significantly behind schedule, resulting in the vehicle missing a scheduled trip); or
- Incidents or unplanned maintenance (vehicle is pulled from service due to an incident or unplanned maintenance, with no back-up vehicle available to accommodate the scheduled trip).

LINK TO GOALS AND OBJECTIVES

ENVIRONMENTAL SUSTAINABILITY: Provide an alternative to reliance on personal automobiles

EQUITY: Provide services that can meet the needs of residents and customers

On Mobility Bus and Dynamic Transit Services, trip denials occur if the customer's trip request made within the recommended Booking Window (**Section 11.3.4**) cannot be accommodated. This is typically due to a lack of available vehicles during each operating period or limited ability to share rides made during a similar period.

On Inter-municipal Routes, Local Routes and other fixed-route services, trips can also be denied if overcrowding occurs (buses that have reached peak occupancy on the vehicle and cannot accommodate additional customers waiting at the stop). **Table 14** illustrates the recommended performance standard for missed trips and trip denials.

Table 14 - Trip Denials / Missed Trip Performance Standards

Service Type	Maximum Standard
Inter-municipal Route	Less than 1% of transit riders on a route reported being denied a trip due to overcrowding (measured monthly)
Local Routes	
Special Services	
Rural Services	Less than 1% of vehicle trips by route arrived at the scheduled timing points more than 15 minutes late (measured monthly)
Dynamic Transit Service	Less than 1% of trips booked within permitted booking window reported that they cannot be accommodated up to half hour before or after the time requested
Mobility Bus Service	Less than 2% of trips booked within permitted booking window reported that they cannot be accommodated up to one hour before or after the time requested

When missed trips and trip denials consistently exceed the maximum standards in **Table 14**, Strathcona County will identify opportunities to make better use of existing resources (e.g. increased ridesharing) or add system resources to the service. If a trip is denied due to overcrowding on a bus, customers will be

required to wait at the bus stop for the next bus. This incurs an unexpected delay to a customer's trip. If the delay incurred due to crowding is more than 15 minutes on a regular basis with multiple customers, corrective action should be considered (e.g. the dispatch of "overload" services during targeted periods).

11.4.2 Customer Comfort / Vehicle Occupancy

The customer comfort / vehicle occupancy standard monitors crowding on vehicles and the number of customers that are unable to board buses at a stop due to overcrowding. This standard is used to guide the planning of service frequency over and above the minimum described in the previous section. If it is observed that acceptable customer comfort guidelines are exceeded, corrective actions can include adding trips to the schedule in the form of a frequency improvement or overloads and/or restructuring the service to distribute demand among several routes.

LINK TO GOALS AND OBJECTIVES
ENVIRONMENTAL SUSTAINABILITY: Provide an alternative to reliance on personal automobiles

Table 15 illustrates the seated and standing capacity of conventional transit vehicles in the system.

Table 15 - Vehicle Capacity on Conventional Transit Vehicles

Bus Type	Seated Capacity	110% of Seated Capacity	125% of Seated Capacity	150% of Seated Capacity
Double-Decker	80	88	Not Permitted ¹	Not Permitted ¹
Standard (12-metre)	38	42	47	57

¹ Standing on the upper level of a double decker bus is not permitted – routes operating double decker buses shall not be planned to exceed 110% of seated capacity

Vehicle occupancy will be measured at the busiest point on the route during the busiest hour of the time period being analyzed.

In order to maximize customer comfort, the level of service for Inter-municipal Routes will be designed to not exceed 110% of seated capacity on double decker buses and 125% of seated capacity on standard buses in all time periods. Overload vehicles can also be used to ensure that this standard is met.

Local Routes will be designed to not exceed 150% of seated capacity during peak periods.

For off-peak periods, it is appropriate to strive to provide a seat for all customers in consideration of generally less frequent service. A threshold of 100% of seated capacity is appropriate on all services during weekday off peak and weekends.

Special Services will be designed to not exceed 150% of seated capacity on standard buses or 110% of seated capacity on double decker buses during all periods.

Dynamic Transit Services and Mobility Bus Services use smaller buses, vans or even cars to carry customers, and these vehicles are not typically designed to carry standing customers. No standing customers will be permitted during the design of these services.

Rural services may use a variety of vehicles, depending on the nature of the service. If using the buses described in the above table, then these routes will follow the 110% maximum capacity standard. If smaller vehicles are used, then no standing customers will be permitted.

Vehicle occupancy standards for each service type are summarized in **Table 16** below.

Table 16 - Maximum Vehicle Occupancy Standards

Service Type	Weekday AM and PM Peak Periods	All Other Periods
Inter-municipal Route	110% of seated capacity (double-decker bus) 125% of seated capacity (standard transit bus)	100% of seated capacity
Local Routes	150% of seated capacity	100% of seated capacity
Special Services	110% of seated capacity (double-decker bus) 150% of seated capacity (standard transit bus)	110% of seated capacity (double-decker bus) 150% of seated capacity (standard transit bus)
Rural Services	110% of seated capacity (double-decker or standard transit bus) 100% of seated capacity (smaller transit vehicle)	100% of seated capacity
Dynamic Transit Service	100% of seated capacity	100% of seated capacity
Mobility Bus Service	100% of seated capacity	100% of seated capacity

11.4.3 Service Reliability

Strathcona County Transit is in the process of installing Smart Bus technology including real-time bus information, which will allow customers to conveniently plan their trip and monitor the location of their vehicle in real-time using their computers or mobile phones. The application of real-time data will reduce the reliance of static paper or online schedules, decreasing the uncertainty that customers experience when waiting for their bus to arrive. While this will increase the quality of the customer experience, there will still be the need for buses to operate on schedule, particularly for customers that do not use real-time data (e.g. may not have access to a mobile phone). The access of real-time data will allow Strathcona County Transit to better track the on-time performance of each route and make periodic adjustments to the schedule to match ongoing realities (e.g., if a bus is constantly running late). This will help maintain the Service Reliability standard noted below.

LINK TO GOALS AND OBJECTIVES
ENVIRONMENTAL SUSTAINABILITY: Provide an alternative to reliance on personal automobiles

Based on the above, all Strathcona County Transit services will be expected to adhere to the following service reliability performance standards for on-time performance. This is identified in **Table 17** below:

Table 17 - On-time Performance Standards

Service Type	Standard
Inter-municipal Routes, Local Routes, Rural Services, Dynamic Transit Services and Special Services	Depart from timed/scheduled stops 0 minutes early to 3 minutes late, 90% of the time
Mobility Bus Services	Arrive based on a pick-up window of 15 minutes before to 15 minutes after scheduled pick up time, 90% of the time
All Route and Service Types	Maintain accurate real-time automatic vehicle location (AVL) data of all vehicles in revenue service, to be on-line and accessible by customers 99% of the time

11.4.4

Service Utilization

Service Utilization is a measurement of the effectiveness of the application of the system's resources against established criteria. **Table 18** summarizes the minimum number of customer boardings per revenue vehicle hour that need to be achieved, unless the route or service is required to meet the service Proximity to Service standard (**Section 11.3.6**).

LINK TO GOALS AND OBJECTIVES
ECONOMIC OPPORTUNITY:
Maximize the efficient use of resources

Table 18 - Minimum Service Utilization Levels (Customer Boardings per Revenue Vehicle Hour)

Service Type	Weekdays (start to 7:00pm)	Weekday Evenings (after 7:00pm)	Weekend (all-day)
Inter-municipal Route*	25	20	20
Local Route	12	8	8
Special Services	25	20	20
Rural Services	10	7	7
Dynamic Transit Services			
<i>Non-dedicated service</i>	0 – 10 (max)	1-10 (max)	1-10 (max)
<i>Dedicated service</i>	4 - 6	3 - 4	3 - 4
Mobility Bus Services	2.5	1.5	1.5

**Note: The commuter nature of Inter-municipal Routes results in utilization on buses being significantly higher in the peak direction than the reverse peak direction. The lower utilization target accounts for this demand (each revenue hour bus travels can complete a return trip in approximately one hour).*

For Dynamic Transit Services, the minimum utilization target will be dependent on the service model implemented. There are two types of Dynamic Transit Services that will be considered:

1. **Service provided by non-dedicated vehicles:** These services are typically operated by a Taxi Operator or a Transportation Network Company (TNC) and charge a per kilometre rate for each trip delivered. The benefit of this service model is that if there is no trip requested, no operating expense is incurred. Therefore, there is no minimum service utilization service target for this type of service⁸. However, as ridership increases, operating costs also increase proportionally to the growth in demand. This is due to the smaller capacity vehicles (e.g. sedans) typically used which limits shared rides, and the cost per trip model (compared to the fixed hourly cost model with higher capacity vehicles used in the existing fixed-route service). As demand grows, the cost of service will eventually exceed the hourly cost of the existing fixed-route model. Based on a preliminary estimate of potential per-trip costs to provide non-dedicated Dynamic Transit Services, a maximum of 10 customer boardings per revenue vehicle hour is estimated to be a trigger to move back to a fixed-route service model⁹.
2. **Service provided by dedicated vehicles:** These services are typically operated using smaller capacity transit buses (similar to a Mobility Bus) based on a fixed hourly cost. A mobile app is used to allow customers to request their ride and to optimize the number of customer boardings per revenue vehicle hour. The service is typically implemented in low demand areas where the introduction of Dynamic Transit Services result in a reduction in fixed-route vehicles covering the same service area. This results in a lower cost per trip. The minimum utilization target is therefore dependent on the service design and the ability for a single Dynamic Transit Service vehicle to cover a larger service area than a fixed-route service. Minimum targets noted in **Table 18** reflect this concept and should be used as a starting point to service design. There is no maximum number of customer boardings per revenue vehicle hour in this model, but rather a trigger to increase the number of vehicles in service. This is dependent on the ability of the vehicle to accommodate trip requests while meeting the Trip Denial / Missed Trips standard (**Section 11.4.1**).

For Mobility Bus Services, minimum utilization levels identified in **Table 18** represent a target for vehicle occupancy in an effort to promote shared-rides while balancing the Travel Time (Directness of Service) standard (**Section 11.3.5**). Since Mobility Bus is considered a core service within the entire Urban and Rural Service Area, the minimum utilization target identified above should be considered an aspirational guideline, with no corrective measures required if the target is not achieved. Strathcona County Transit

⁸ This applies to the Urban Service Area where travel distances are relatively short. Minimum standards for the Rural Service Area where trips would be much longer are dependent on the cost per trip negotiated with the provider.

⁹ Note: This trigger should be revisited if a non-dedicated Dynamic Transit Service is implemented and a per trip rate is negotiated.

can still take actions to achieve this target, including the planned implementation of a scheduling software system in 2019, as long as those actions do not preclude Mobility Bus from performing its core function.

11.4.5 Modifications to Existing Services

Modifications to existing routes and services will be guided by the following considerations:

- Frequency improvements or use of vehicle overloads will be considered when the Customer Comfort / Vehicle Occupancy standard (**Section 11.4.2**) is being exceeded for more than 15% of the daily service hours over three consecutive months, or when the Service Utilization standard (**Section 11.4.4**) for Inter-municipal Routes, Local Routes, Special Services and Rural Services is being consistently exceeded by more than 50% of each average performance for each service type over three consecutive months;
- Earlier start and later finish times will be considered if analysis forecasts that the minimum Service Utilization standard (**Section 11.4.4**) for the new service can be achieved and maintained during the new service period after one year of operation;
- Service reductions, restructuring or adoption of new service typologies (e.g. introduction of Dynamic Transit Services) will be considered when the Service Utilization Standard (**Section 11.4.4**) is not being achieved on a consistent basis; and
- Service improvements on Mobility Bus and Dynamic Transit Services will be considered when Trip Denial / Missed Trips standard (**Section 11.4.1**) is not being achieved over three consecutive months.

LINK TO GOALS AND OBJECTIVES
ECONOMIC OPPORTUNITY:
Maximize the efficient use of resources

ENVIRONMENTAL SUSTAINABILITY: Provide an alternative to reliance on personal automobiles

11.4.6 Introduction of Service to New Areas

For new developments within the Urban Service Area, transit service will be introduced as soon as the road network can accommodate appropriate service and there are at least 500 residences or jobs in the area. The following progressive growth of transit service can be anticipated:

- Dynamic Transit Service operating only during weekday peak periods introduced initially;
- Dynamic Transit Service operating in other time periods introduced when there are enough residents or jobs to forecast support of the minimum Service Utilization standard (see **Section 11.4.4**); and then
- Convert Dynamic Transit Service to a Local Route if the minimum service utilization standard is forecast to be supported over the long-term.

LINK TO GOALS AND OBJECTIVES
EQUITY: Provide services that can meet the needs of residents and customers

ECONOMIC OPPORTUNITY:
Maximize the efficient use of resources

Services introduced in new areas not previously served by transit should be guaranteed for a minimum 12 months of operation to ensure adequate time for travel patterns to adjust and for year round ridership patterns to be assessed. At the end of the 12 months, the service must meet the minimum performance thresholds required for the type of service introduced.

Within this trial period, interim targets are set to ensure that a service which is clearly not capable of meeting the ultimate targets is identified as early as possible. Monitoring should be performed at three, six and nine month intervals to ensure that the new service is trending towards the appropriate standard. Targets for these interim periods are:

- Three months: 25% of the minimum target;
- Six months: 50% of the minimum target; and
- Nine months: 75% of the minimum target.

If the performance at the end of each period has not reached at least 75% of the target value, the route or service should be re-examined to identify potential changes to improve its performance. If the same standard is not met in the next period, the identified changes should be implemented.

Strategic Directions

Strathcona County Transit's Vision is:

Provide access to opportunities for all residents and businesses in the community through the provision of sustainable mobility services.

This Vision Statement reflects the changing nature of public transit - it is no longer solely focused on providing conventional and specialized bus transit services. Rather, it considers a broader purpose where the transit system is at the centre of planning and/or coordinating a broad range of sustainable mobility services in the community. These include conventional and specialized transit services as well as, potentially, car sharing services, ride sharing services, carpool coordination, active transportation integration, travel demand management, and other emerging approaches.

The focus of Strathcona County Transit's efforts, then, is to provide integrated sustainable mobility services and options while making the most effective use of resources. This is based on the concept of Integrated Urban Mobility, defined by the Canadian Urban Transit Association (CUTA) as:

The ability for people to move easily from place to place according to their own needs.

In doing so, *Integrated Urban Mobility is a people-focused goal that:*

- *Starts with public transport service connected to all modes of transport including walking, cycling, auto and alternatives to transportation;*
- *Enables door-to-door and seamless mobility throughout an urban area;*
- *Is designed for all segments of population.*

While the primary focus for Strathcona County Transit is always going to be the provision of its conventional and specialized transit services, its role will expand to:

- Provide greater emphasis on the needs of all potential customers as they seek out ways to take advantage of the best aspects of each service in order to provide better, more integrated mobility options in the community;
- Identify and be open to the potential offered by partnerships with other types of services such as taxis, other types of ride sharing, car sharing, and carpooling, and how these can work with transit services to improve mobility;
- Fully integrate with active transportation initiatives in the community;
- Actively coordinate a wide range of travel demand management programs that encourage sustainable mobility; and

- Be ready for emerging and transformative technologies, such as connected and automated vehicles, which will allow the transit system to incorporate the most useful and promising mobility approaches and ideas for the benefit of the community.

In order to accomplish this, a number of Strategic Directions were developed. These reflect the Vision described above, as well as the need to accommodate a growing population, further enhance what is working well, address issues noted through the community engagement process, address a shifting mindset in mobility, how people travel and the technology available to facilitate new approaches to shared, accessible and sustainable mobility. These strategic directions are organized into four themes, as follows:

- A. Mobility Management
- B. Mobility in the Urban Service Area
- C. Mobility for Inter-Municipal Travel
- D. Mobility in the Rural Service Area

12.1 Theme A: Mobility Management

The Canadian Urban Transit Association defines Mobility Management as the *‘Coordination and optimization of all modes of transportation to enable ease of travel in urban areas’*.

This means acknowledging all the ways that people can travel in a community and all of the different ways that these modes can be operated, and bringing them together for the benefit of the customer. For Strathcona County Transit, investing in Mobility Management means thinking beyond the primary role of providing public transit service and becoming the sustainable mobility integrator for the community. It means better integrating conventional and specialized transit services, considering how to use or partner with other service approaches or providers for new or improved service, and understanding the needs of all customers in order to provide better service.

There are a number of strategic directions developed that will help move towards this objective. Some are quick wins while others will require more time and are recommended in the long-term (from five to ten years).

12.1.1 Strategic Directions

12.1.1.1 Strategic Direction MM1: Explore the Introduction of Dynamic Transit Services

A number of transit systems across Europe and North America are rethinking how transit services are delivered. Customers are demanding greater customization of their mobility options; seeking more adaptable and flexible services that adjust to when they want to travel in real-time, without relying on a published schedule. Similarly, municipalities continue to seek solutions to reduce costs and improve productivity of services. Fixed-route transit solutions do not always meet these two goals, particularly in

evening and weekend periods when ridership demand is lower, and low demand areas characterized by low density neighbourhoods, employment areas designed around the private automobile and large tracts of open or greenfield space. This combination of factors makes it difficult to provide fixed-route service cost-effectively and in a manner that meets rising customer expectations.

To address these circumstances, a new Dynamic Transit Service model is recommended to be assessed. Dynamic Transit Services are shared-ride demand-responsive services that use smaller vehicles and mobile app technology to provide mobility to customers. The service model is considered a significant improvement to the previously used Dial-A-Bus service, primarily due to the use of a mobile app, which allows customers to plan, book, track and pay for their ride in real-time. This increases the convenience and reliability of the service over the previous Dial-A-Bus service. The mobile app is also used to help optimize trips, increasing the number of shared rides that can be accommodated without sacrificing service quality.

To better understand how customers would use the service, the following trip process is illustrated below:

Customer Trip Requests and Scheduling

- Customer trip requests are made and scheduled through a mobile app that links to Strathcona County Transit's real-time automatic vehicle location system. A customer provides the location of their origin and destination and desired pick-up time. The next available pick-up time (or several options) is provided to the customer, including anticipated arrival time. The customer chooses the most suitable option and the trip is scheduled. This can be completed within five minutes to one hour of the desired pick-up time. The more notice provided, the higher the probability of a customer getting their preferred pick-up time.
- If a customer does not have a mobile phone or access to the mobile app, a phone number is available to allow customers to book the trip directly with the Strathcona County Transit Customer Service Centre.
- The mobile app will optimize the vehicle by calculating the most direct route, balanced with the need to fill-up vehicle capacity. Strathcona County Transit would need to decide on the right balance between shorter travel times and the need to fill-up the capacity of the vehicle (which may add travel time to a customer's trip).
- Once the trip is booked, the mobile app will allow the customers to track the location of their vehicle in real-time.

Travel on Dynamic Transit

- Dynamic Transit Service would replace one or more fixed-route services during a specified period and geographic area. A marked vehicle would arrive at a marked or virtual communal stop. The vehicle would typically be a smaller sedan, minivan or accessible Mobility Bus vehicle.

- Transit dispatchers and customers are able to track their vehicle in real-time through the use of the mobile app (which has GPS/AVL technology).
- Dynamic Transit Service is a shared-ride service, and customers may need to share a ride with other customers.
- The trip does not follow a predefined fixed-route. The operator will take customers in the vehicle to their destination as directly as possible, picking-up and dropping off customers that are in close proximity. A maximum travel time is identified through the Travel Time (Directness of Service) Service Standard (see **Section 11.3.5**) and programed into the mobile app to enhance the customer experience.

Fare Payment

- Fares are integrated between Dynamic Transit Service and fixed-route services. A customer making a local trip pays a Local Route fare and there is no increased cost to the customer for using Dynamic Transit Services.
- Integration with the Regional Smart Fare system would need to take place, ensuring both technologies work together.
- There is the potential to introduce future dynamic pricing models if customers request a higher level of service. For example, customers that would prefer a pick-up or drop-off at the curb of their home instead of at a communal pick-up point could do so by paying a higher fare.

Operations

- Dynamic Transit Service trips may be completed by a Mobility Bus accessible vehicle, third party ridesharing services, community based transportation services, taxis, or combination of the above.
- There is a potential to contract all or part of the service to a local taxi operator and/or a rideshare service (e.g. Uber). When this occurs, a fixed price per trip is recommended to be negotiated with the service provider as part of a service contract. Customers will pay the driver a standard transit fare (or provide a transfer) and the County will reimburse the operator for the difference. If this model of service provision is selected, consideration should be given to accommodating persons with disabilities through either an accessible taxi or an existing Mobility Bus vehicle.

Advantages of Dynamic Transit Services

There are several advantages to exploring the implementation of Dynamic Transit Services:

- **Cost Effective:** Dynamic Transit Services are typically planned in areas where there is low ridership in a larger geographic area. This allows the transit agency to reduce the number of resources required to provide service.

- **Improved Coverage:** Dynamic Transit Service offers a significant advantage in terms of coverage area. Since the vehicle is not tied to a fixed-route, this increases the number of residents within a five-minute walk of a Dynamic Transit stop.
- **Early Introduction of Service:** Dynamic Transit Service allows for early introduction of transit service in newly developing areas without committing significant resources to provide mobility for new residents.

When to Use Dynamic Transit Services

Dynamic Transit Services do not entirely replace the need for fixed-route services. Fixed-route transit services require customers to make travel decisions based on pre-set transit routes and schedules. This model is effective when:

- Residents are in close proximity to a service;
- The route provides relatively direct service with minimal deviations that increase travel times;
- Higher frequencies are provided to increase the flexibility of the service; and
- There is a high demand for service between similar origins and destinations, which requires a high capacity vehicle to service.

The fixed-route model does not work when the land use and demand cannot support this high level of service and demand.

Dynamic Transit Service is effective when it operates in low-demand areas and operating periods. As ridership grows, a trigger point may be reached where it is more cost-effective to operate a fixed-route service.

Dynamic Transit Services are not effective on high ridership routes that operate on major corridors or between major origin and destination pairs (such as downtown Edmonton or a secondary school in Sherwood Park). In these instances, a high-capacity and frequent fixed-route vehicle is better suited to cost-effectively meet the needs of customers.

Type of Operating Models to Consider

The Dynamic Transit Service would be operated using either a dedicated service model (operators are paid an hourly wage) or non-dedicated service model (operators are only paid for each trip delivered). Dedicated service models can either use existing Strathcona County Transit operators and vehicles, or can be contracted to a third-party operator. The non-dedicated service model is almost exclusively contracted out to a third-party operator.

The choice of which model of operation will depend on the operational, financial, and legal considerations of Strathcona County Transit. The primary characteristics of each model are described in **Table 19** below.

Table 19 - Comparison of Dynamic Transit Service Operating Models

Dedicated Service Model	Non-Dedicated Service Model
Fixed hourly cost to ensure availability of vehicles in low-demand areas/periods	Cost per trip delivered (highly variable depending on ridership)
More cost effective as ridership increases (focus becomes on increasing vehicle occupancy)	More cost effective in low ridership periods/areas
Potential to use existing fleet or have a third-party operator use their own fleet	Vehicles owned and operated by a third-party operator
Can use existing Mobility Bus vehicles and/or sedans and minivans	Typically uses customer sedans and/or minivans
More control by Strathcona County Transit over the service provided (Strathcona County Transit can budget for specified operating hours. Fluctuations in demand change vehicle occupancy and not number of vehicles).	Less control by Strathcona County Transit over the service provided. Increases in demand typically result in more vehicles being put on the road, which can increase budgets.

Both service models will need to be reviewed in more detail by Strathcona County Transit for each context, understanding the cost and benefit.

Recommendations:

- Further explore the use of Dynamic Transit Services as a replacement of certain fixed-route services in the Urban Service Area. This should include a review of both dedicated and non-dedicated service models.
- Develop a Dynamic Transit Service model and business case for low demand areas and operating periods, allowing customers to use a mobile app to book a shared-ride demand-responsive service to connect to the fixed-route service.

12.1.1.2

Strategic Direction MM2: Explore Partnerships with Other Mobility Providers

People are becoming more multi-modal in how they travel. They may cycle to a local event, drive to a get groceries and take transit to work. Younger generations are not acquiring personal vehicles and driver's licences to the extent that previous generations did. While auto travel is likely to continue to dominate in Strathcona County, there are opportunities for the County to partner with other mobility providers to ensure residents are fully aware of the range of travel options that are available to them for various trip needs. Ride sharing or carpooling is now easier with technology matching those looking for rides with those having seats to fill. Car shares and bike shares are now common in urban settings. Taxis and the new Transportation Network Companies (TNCs) are adapting and offer citizens an alternative to owning a second car for many trips. School boards provide bus service for students to/from school that live outside of a predefined distance from the school. There are also opportunities to better integrate transportation services with school boards that a Mobility Manager can explore, including addressing the needs for students that participate in after-school activities.

Strathcona County Transit needs to continue to evolve and see themselves as not only an operator of transit services, but as a manager of sustainable mobility services.

Recommendations:

- Expand the role of a senior member of the Strathcona County Transit administration and management team to include the exploration of partnership approaches with other mobility service providers.
- Explore partnerships with other mobility providers, such as ride, car and bike share programs and school boards that provide school bus service, to identify opportunities to increase the range of mobility offerings, in both the Urban and Rural Service Areas.
- Promote sustainable mobility services through awareness, marketing and education campaigns to inform residents of alternatives to driving alone in private vehicles.

12.1.1.3

Strategic Direction MM3: Partnerships with Community Agencies

Some community agencies currently provide transportation as part of their service offering in the community. These forms of transportation tend to operate in a shared-ride format and support sustainable mobility. The Robin Hood Association is the primary provider of services to children and adults with disabilities in Sherwood Park, Fort Saskatchewan and surrounding areas. It continues to be a valued community partner in providing mobility for many of its clients to help them experience a quality lifestyle. The CHOICE Program (Comprehensive Home Option for Integrated Care of the Elderly) includes transportation as part of the overall service. Seniors centres often access vehicles to take residents to events and activities. An example from Orange County in California was adopted by the Disabled Adult Transit Service (DATS) in Edmonton. It involved donating a retiring specialized transit vehicle to a community agency to assist it in providing more of its own trips for its clients. It offered the agency more travel options and freed up space on DATS to meet the needs of individuals not linked to a program.

Recommendations:

- As a manager of 'sustainable mobility services', engage community agencies that deliver transportation as part of their programming to assess potential partnerships to continue and potentially expand mobility options across the community.

12.1.1.4

Strategic Direction MM4: Travel Training

Some orientation and training is often the only thing that prevents a person with a disability from accessing conventional public transit services. Travel training programs are designed to ensure that lack of awareness, training and familiarity with conventional transit is not a barrier to accessing transit services. Various transit agencies have adopted different approaches to delivering travel training. York Region Transit offers a training centre where trainees can learn about transit and practice how to ride the service in mocked up buses and stops. OC Transpo in Ottawa works with community agencies on a 'train the trainer' approach, leveraging the expertise of groups that provide life skills training. Others

employ one or more staff to deliver orientation and training, and some contract with firms to deliver one on one travel training, when required. Another way used to extend limited resources is to hire summer students to deliver a travel training program when the weather is nice.

Recommendations:

- Building on the 'take the bus' program being launched through the Customer Experience area, develop and implement a travel training program that ensures that the lack of awareness, training and familiarity with conventional transit is not a barrier to accessing transit services.

12.1.1.5

Strategic Direction MM5: Manage Parking Demand through Transportation Demand Management Strategies

Currently, the park-and-ride lots at both Bethel Transit Terminal and Ordze Transit Centre reach capacity on a regular basis during the post-secondary school year from September to April, when the parking lots can be full by 9:00am. There are currently 200 stalls of free parking at the Ordze Transit Centre and 1,100 free stalls and 100 paid "Advantage Parking" stalls at the Bethel Transit Terminal. Advantage Parking users pay \$35 per month for a reserved parking stall on weekdays from 5:00am to 6:00pm.

Building additional parking at either transit terminal is cost-prohibitive as it would likely require structured parking which typically costs about \$40,000 per stall. Transportation Demand Management (TDM) strategies can be used to incentivize more customers to take local transit to the terminals rather than driving. The local transit service is already well set-up to connect with Inter-municipal Routes at both transit terminals. The most logical TDM strategy is to change all the parking stalls to paid parking. The existing rate (\$35 per month) will likely be sufficient to encourage some users to take local transit to the terminals and reduce pressure on the parking lots (as local transit is free when connecting to an Inter-municipal Route). The parking rates can be raised if they are insufficient to promote behavioural change.

A strategy that involves paid parking at the transit terminals should consider the effects on rural residents of Strathcona County who do not have access to local transit. This could take the form of providing parking passes at no charge or at a reduced rate to rural residents, or reserving a portion of the lot for rural residents only to help ensure they can count on a parking spot being available at the transit terminals when they plan a trip. Similarly, the provision of reserved stalls to registered carpools with a minimum number of passengers per vehicle at no charge or a reduced rate should be considered as a means of incentivizing more efficient use of the existing resources.

Recommendations:

- Explore further the technology and cost required to implement paid parking at both Bethel Transit Terminal and Ordze Transit Centre. This should be weighed against the potential revenue generated from each parking area and the ability to provide a free space for residents that live in the Rural Service Area.

12.1.1.6

Strategic Direction MM6: Continue to Improve Eligibility based on a Family of Services Approach

The goal of Mobility Bus registration process is to accurately determine who is functionally able to ride conventional transit, and who is not. With a fully low-floor conventional bus fleet, persons with mild to moderate disabilities may be able to access the fixed-route service some or all of the time, especially if travel training is available to assist individuals. The CUTA Canadian Code of Practice on Determining Eligibility for Specialized Transit (2013) offers guidance on implementing eligibility and registration processes that assess the abilities of individuals seeking the accommodation offered through Mobility Bus. The existing Mobility Bus eligibility criteria continues to be appropriate as follows:

Persons who can demonstrate that because of a disability they are not able to use conventional bus services for some or all of their trips, are 18 years of age or older and are a resident of Strathcona County

Paper-based applications with medical verification do not provide sufficient information on the functional abilities of applicants and are being replaced with a more detailed process including an in-person component. With more accurate ways of assessing functional abilities, trip by trip eligibility is now possible especially with technologies that let individuals assess the accessibility of the conventional services including the path of travel at the beginning and end of a trip. Strathcona County Transit should continue to use three types of eligibility, that is, unconditional, temporary and conditional and refine conditions more fully as the service becomes more accessible and integrated.

In the medium to long-term, once a new specialized transit scheduling software is operational to allow staff to better manage trip by trip eligibility, Strathcona County Transit should also consider adopting a formal “Family of Services” approach to service delivery, integrated with travel training on Inter-municipal Routes and Local Routes.

When a customer is approved and registered as a Mobility Bus client, they are assigned a Mobility Bus status based on an abilities assessment which identifies the Strathcona County Transit services the customer is able to use. When booking a trip, Mobility Bus customer service staff aim to determine how services can be delivered most efficiently using the entire Family of Services. As a result, Mobility Bus customers may use a combination of Mobility Bus origin-to-destination services and accessible conventional fixed-route services to complete their trip (primarily for long-distance trips such as Inter-municipal Routes). This approach helps reduce duplication of transit services and promotes independence, inclusion, integration, and self-sufficiency to the customer.

For inter-municipal trips, this will involve coordination with Edmonton Transit Services (ETS), to ensure that the Mobility Bus registrant has a suitable connection when they arrive in Edmonton should they require another accessible vehicle to complete their trip (whether through their specialized transit service (DATS) or an accessible and direct ETS conventional service). There are currently a number of

direct ETS fixed-route connections to Misericordia Hospital from downtown Edmonton, and this would be a good first step to pilot this type of concept.

Recommendations:

- Update the application process to gather more detailed information on the functional limitations of applicants, including an in-person component, when appropriate. Review the CUTA *Canadian Code of Practice on Determining Eligibility for Specialized Transit* to adopt approaches that meet local needs.
- Re-certify existing registrants on a two year cycle to maintain accurate and up-to-date information.
- Implement photo identification as part of the updated registration process to support ease of identifying registrants, to support ‘attendants ride free’ on conventional transit and further advancing service integration.
- Once the new specialized transit scheduling software system is in place, explore the concept of a Family of Services approach.

12.1.1.7 Strategic Direction MM7: Equity of Attendants

Strathcona County Transit implemented fare parity across comparable conventional bus and Mobility Bus services in July 2018. Currently, persons riding on Mobility Bus who require an attendant are able to bring the attendant for free. This is not the case on conventional transit.

It is the prevailing practice across transit agencies in Canada and deemed to be an effective strategy to encourage specialized transit registrants to use the conventional transit service. A trip on specialized transit is typically ten times more costly to provide than on conventional transit. Therefore, any loss of revenue from fares is offset by reduced demand on specialized transit.

Recommendations:

- Implement an ‘attendant’s ride free’ on conventional bus service to encourage Mobility Bus registrants to ride the fixed-route service.

12.1.1.8 Strategic Direction MM8: Integration of Mobility Bus and Dynamic Transit Service

A key strategic direction will be to better integrate Mobility Bus trips with Dynamic Transit Service trips. If the County elects to use its own fleet to deliver Dynamic Transit Services, it is recommended that the Mobility Bus logo be removed from all its Mobility Bus vehicles, replaced with a Strathcona County Transit logo. This will allow the same vehicle to be used to provide both Mobility Bus and Dynamic Transit Services. The goal is to provide more flexibility in utilizing the right vehicle for the right type of trip, irrespective of whether a customer is registered for Mobility Bus. This strategy helps support the integration of customers on vehicles that were traditionally reserved for Mobility Bus customers and will allow for more efficient scheduling and increase the available capacity to all Strathcona County Transit customers.

Under the integrated service model, a vehicle used to provide Mobility Bus service can also be used to provide Dynamic Transit Service, simultaneously where possible. Similarly, a vehicle used to provide a Dynamic Transit Service will also be able to pick up Mobility Bus customers, simultaneously where possible. This means that the services would be “comingled”, and Mobility Bus and Dynamic Transit Service customers may share vehicles if this provides greater efficiency in the delivery of their trips. The decision to integrate trips will be based on the ability to utilize existing in-vehicle capacity and provide a better level of service to customers.

It should be noted that Mobility Bus will continue to operate as a core service for registered customers. While there are several areas where Dynamic Transit Services and Mobility Bus services could be integrated, Dynamic Transit Services do not operate in all areas of the County and during all time periods. Providing a core Mobility Bus service will still need to be of significant importance to the County.

Recommendations:

- Explore the concept of integrating Mobility Bus services with Dynamic Transit Services. A prerequisite of this approach is demand-response software in place to support the functions required by customers and staff.

12.1.1.9

Strategic Direction MM9: Work with Technology Providers to Develop Integrated Scheduling and Mobile App for Demand-Responsive Services

Specialized transit trip scheduling software, also known as ‘demand-response’, is now being used in new and innovative ways. Mobility Bus is beginning to roll out this software to assist staff in scheduling a growing number of trips on its service. Demand-response software is an invaluable tool on the day of service, to manage incidents such as a vehicle breakdown or customer illness. The staff, using their technology tools, can quickly find other vehicles in the area that can take upcoming trips or transfer existing riders to get them to their destinations. This software has the ability to track vehicles in real-time and let customers know that their ride is on the way just before it arrives. Online apps can allow riders to book trips in real-time similar to tools used by ride hailing service providers like Uber and Lyft and now being implemented by some transit agencies and communities that do not lend themselves to fixed-route transit.

Recommendations:

- Implement the demand-response software for Mobility Bus as soon as possible to provide technology tools to assist staff to efficiently and effectively manage a growing number of trips as well as offering customers more ways to book and track trips.
- Assess the potential of using this demand-response software for Dynamic Transit Services throughout the Urban Service Area. Requirements would include the ability to book trips online through smart devices, track rides in real-time, communicate pick-up locations to persons

booking trips, accept electronic fare payments aligned with the Regional Smart Fare project, to mention a few.

12.2 Theme B: Mobility in the Urban Service Area

Strathcona County Transit is an important component of mobility in the Urban Service Area. It is an essential service for many residents who rely on transit to provide access to employment, education, and services. This includes students (especially those attending Archbishop Jordan High School and post-secondary institutions), seniors, low income residents, one-car families, persons with disabilities who cannot drive, and other residents who are unable or choose not to drive.

The challenge that Strathcona County Transit faces is that the land use and roadway network it operates on is not always conducive to effective fixed-route transit operations. Fixed-route transit performs best when providing direct two-way service on arterial and collector roadways with good pedestrian connections to higher density, mixed-use development. This route design helps reduce travel times in both directions of travel while maximizing ridership potential.

Most of the existing housing in Strathcona County is single detached (70.2% in the Urban Service Area) and located on local streets. Pedestrian connections to fixed-routes can be difficult, particularly when routes travel along arterial corridors with long fences with poor connectivity to the adjacent residential neighbourhoods.

Recognizing this challenge, Strathcona County Transit deviates a number of its routes into local neighbourhoods to be within closer proximity to potential customers. The challenge with this approach is that routes become more circuitous, increasing travel time for all customers. This is a double-edged sword for transit: stay on the arterial road network and buses are too far removed from people; access the local neighbourhoods and bus trips are longer and more indirect, making transit an unattractive option.

As a result of these challenges with the built form and behavioural choices, many Local Routes in the Urban Service Area have poor productivity, particularly on evenings and weekends when travel demand is lower. During peak periods, some routes do well, while others experience weak ridership even at those times.

Local Routes are also designed around providing connections to Bethel Transit Terminal and Ordze Transit Centre. This is helpful for customers transferring to Inter-municipal Routes into Edmonton, but is not always conducive to local travel, as many trips require a transfer and often some backtracking. Despite the local transit connections, most Inter-municipal service customers prefer to drive to one of the transit terminals and the park-and-ride lots are regularly full at both Bethel Transit Terminal and Ordze Transit Centre throughout the school year.

For local transit to improve, a new model is required which:

- Adjusts land use in growing areas of Strathcona, reflecting a transit supportive design that is more conducive to operating two-way direct fixed-route transit on the arterial roadway network;
- Rethinks how transit operates in existing low-density areas to make better use of system resources and improve service quality for customers; and
- Rethinks how transit operates during off-peak periods to make better use of system resources and improve service quality for customers.

To address these challenges and make better use of existing resources, the following strategic directions are recommended.

12.2.1 Strategic Directions

12.2.1.1 Strategic Direction US1: Rethink Evening and Weekend Service

Currently, productivity on the local evening and weekend routes is quite low, often below six customer boardings per revenue vehicle hour. Customers are also poorly served by the hourly frequency during these off-peak hours. This results in a service that is neither cost-effective nor convenient. Evening and weekend service needs to be revamped, and it is recommended that this be done by piloting a Dynamic Transit Service during these times. A detailed explanation of Dynamic Transit Services can be found under Mobility Management Strategic Direction MM1: Explore the Introduction of Dynamic Transit Services.

This pilot project would consist of the following:

- Dynamic Transit Service would replace the existing evening and weekend fixed-route service and would operate during the same time periods: Monday to Friday from 7:15pm to 12:15am; Saturday from 6:15am to 12:15am; and Sunday from 7:15am to 8:15pm.
- Dynamic Transit Services would operate within the existing Urban Service Area.
- Connections between Dynamic Transit Services and Inter-municipal Routes should be seamless. A service policy should be developed to identify a maximum waiting time when transferring between a Dynamic Transit Service and an Inter-municipal Route.
- Dynamic Transit Services are a shared-ride service, and customers may need to share a ride with other customers. Routing will vary and depend on the number of customers needing to share a vehicle and where they need to travel.

The implementation of this service model in the weekday evenings and weekends provides the following benefits:

- Reduced travel time for a number of transit customers (as Dynamic Transit Services can be more direct than the longer fixed-routes in place during the evenings and weekends);
- One-seat service anywhere within the Urban Service Area (transfers between local fixed-routes are no longer applicable), and one transfer if connecting to/from an Inter-municipal Route;
- Real-time booking and tracking of vehicle, reducing the uncertainty of potential missed trips of the existing hourly service;
- Flexibility in scheduling Inter-municipal Routes (frequency of Inter-municipal Routes can be improved without adding significant resources to the local service, as Dynamic Transit Services do not operate on a fixed schedule);
- Use of smaller vehicles to provide service can reduce the perception of 'empty buses' operating during low demand periods); and
- Potential to reduce operating costs in both dedicated service model (hourly cost of service is typically less expensive due to use of smaller Mobility Bus vehicles or sedans and minivans) and the non-dedicated service model (as Strathcona County Transit would only pay for each trip completed).

Recommendations:

- Assess options to implement either a dedicated or non-dedicated Dynamic Transit Service model and select a preferred strategy during the weekday evening and weekend periods.
- Pilot a Dynamic Transit Service on weekday evenings and all-day weekends for a full year to evaluate its effectiveness.
- Assess effectiveness of Dynamic Transit Service at the completion of the pilot based on productivity (utilization), ridership and customer satisfaction.

12.2.1.2

Strategic Direction US2: Introduce Dynamic Transit Service Options to Bethel Transit Terminal and Other Key Local Destinations

If the initial pilot to replace fixed-route local service on weekday evenings and weekends with a Dynamic Transit Service is successful, a second phase should be piloted during weekday peak periods. This would involve eliminating all the 'A' and 'B' peak hour routes that currently operate in the area south of Baseline Road and replacing them with a Dynamic Transit Service focused on service to and from Bethel Transit Terminal. Route 433A north of Baseline Road would remain as a fixed-route service.

The five 'A' and 'B' peak hour routes that operate south of Baseline Road all have relatively low ridership, of which many do not meet minimum Service Utilization targets (see **Section 11.4.4**). It is estimated that the combined ridership of the five fixed-route buses could be accommodated with seven to nine dedicated Dynamic Transit Service vehicles (or more vehicles if a non-dedicated model is selected).

The Dynamic Transit Services would follow the same schedule as the existing five peak hour routes, connecting to the Bethel Transit Terminal at the same times as the existing routes. This would prevent any duplication with existing Local Routes and allow Strathcona County Transit to monitor to effectiveness of this service model compared to the fixed Local Route service. Customers that use the mobile app would be provided a list of arrival times to the terminal every 30 minutes (connected to an Inter-municipal Route departure time) and a list of departure times from the terminal every 30 minutes (connected to the arrival time of an Inter-municipal Route).

The removal of the peak only routes would result in a reduction to 30 minute headway during peak periods. However, this would be supplemented by Dynamic Transit Services, which would provide more flexible service to complement the fixed-route service (maintaining a 15 minute peak headway for residents connecting to Bethel Transit Terminal). Customers would have more options available to them and could take either fixed-route or a Dynamic Transit Service. The remaining fixed Local Routes would still connect with each other and the Inter-municipal Routes at both transit terminals every half hour. With this second pilot, Strathcona County Transit should also consider identifying other key destinations that the Dynamic Transit Service could connect to.

Adding the Ordze Transit Centre as an additional stop would also provide a more direct connection with the Bethel Transit Terminal (which currently takes approximately 30 minutes to travel between the two terminals). A Dynamic Transit Service that connects these two terminals would reduce travel time to approximately 12 to 15 minutes. This would primarily benefit customers that park their vehicle at the Ordze Transit Centre, but choose to take an Inter-municipal Route home that terminates at the Bethel Transit Terminal (as Inter-municipal Routes out of the Bethel Transit Terminal operates more frequently and for longer hours). This will provide more flexibility to customers using the Ordze Transit Centre.

Another key destination could include the Community Centre in Centre in the Park. This is a local destination in Sherwood Park which is experiencing intensification. Finding opportunities to connect to local destinations without a transfer would enhance the customer experience on transit.

It should be noted that adding more destinations to the Dynamic Transit Service model may result in a higher requirement for vehicles. The opportunity to share rides and increase the vehicle occupancy on a Dynamic Transit Service increases if there are limited destinations that everyone is going to (e.g. all customers going to/from the Bethel Transit Terminal every half hour). As the number of destinations that are added to this service increase (e.g. Ordze Transit Centre and the Community Centre), trip requests are more dispersed, reducing the ability to share rides without increasing the number of vehicles in service.

For this reason, the model should be tested only using two or three fixed destinations or connection points. This can be done through a mobile app provider, who can estimate vehicle requirements

required to meet customer demands. The goal is to provide a service that will require a similar to slightly higher operating cost at an improved level of service for customers.

Recommendations:

- Eliminate Local Routes with low productivity, and replace with a one-year Dynamic Transit Service pilot. Dynamic Transit Services would connect to the Bethel Transit Terminal at the same scheduled frequency as the existing routes that were replaced.
- Explore opportunities to expand the service to other key destinations, including the Ordze Transit Centre and the Community Centre. The goal will be to improve the options available to customers without significantly increase the number of vehicles required during the pilot to extend the service.
- Assess effectiveness of Dynamic Transit Service at the completion of the pilot based on productivity, ridership and customer satisfaction.

12.2.1.3

Strategic Direction US3: Review Local Service in Sherwood Park

At the successful completion of the Dynamic Transit Service peak period pilot (Strategic Direction US2), the potential to expand this service offering should be explored to other neighbourhoods, destinations and during the midday. At this point, the structure of the Local Routes and Dynamic Transit Services should be revisited to better service local destinations within Sherwood Park.

Currently, travel to most destinations in the Urban Service Area other than the transit terminals requires a transfer to a second route. This makes transit cumbersome and circuitous for local trips. Key destinations should be identified, including Centre in the Park, shopping centres, recreational facilities, schools, and Strathcona Community Hospital.

In conducting this more detailed assessment, the role of Dynamic Transit Services should also be considered in other key areas of Sherwood Park should the two pilot projects (Strategic Direction US1 and US2) be successful in attracting higher ridership (at a reasonable productivity).

Dynamic Transit Services are typically not as cost effective as fixed-route services when there is high ridership demand. Fixed-route vehicles generally have a larger capacity to accommodate more customers than Dynamic Transit Services, which can reduce operating costs when there are a high number of individuals that reside or are destined along the transit route.

As ridership grows on a Dynamic Transit Service, more vehicles are required to meet customer demands due to the smaller vehicle capacity and higher level of service provided (reduced transfers and travel times, and improved proximity to service and flexibility). This may result in a situation where the Dynamic Transit Service model is more costly to operate than the fixed-Local Route model.

This situation should not exclude the consideration of expanding the Dynamic Transit Service model in high demand areas or periods. If the results from the two pilots show a significant growth in ridership when the Dynamic Transit Service models are introduced, consideration should be made to expand this service, even if it results in higher operating and capital costs.

The cost of this service model and its associated ridership growth should be compared against the cost of remaining at the status quo. The Integrated Transportation Master Plan has identified a significant increase in transit mode share in order to offset roadway investment that would result from a higher number of private automobiles on the road. There are also a number of other benefits to reducing automobile travel such as greenhouse gas emission reduction, economic development and quality of life that need to be taken into consideration.

The existing Bethel Transit Terminal and Ordze Transit Centre are also at capacity during the post-secondary school year. Parking at the Community Centre is also at capacity on a number of occasions. Population growth will place additional strain on these facilities unless options are developed to reduce parking demand. The cost to build a parking structure is approximately \$40,000 per parking space, which should be weighed against the increase in capital and operating cost of improving transit (and therefore reduce parking demand) in the Urban Service Area.

Recommendations:

- Upon successful completion of the Dynamic Transit Service pilot, Strathcona County Transit should revisit the structure of transit services in the Urban Service Area to provide more direct connections to key local destinations. This could include a combination of Local Routes and Dynamic Transit Services providing direct trips to destinations such as Centre in the Park, shopping centres, secondary schools and Strathcona Community Hospital.
- Any future updates to the Integrated Transportation Master Plan should identify the cost of not proceeding with a transit mode share increase and compare against the cost of providing the necessary transit services in place to reach the mode share target.

12.2.1.4

Strategic Direction US4: Expand Service to Cambrian Crossing and Bremner

Cambrian Crossing is the area located north of Highway 16 between Range Road 231 (Clover Bar Road) and Highway 21. Large-scale neighbourhood development is expected to begin in Cambrian Crossing in 2021 and continue until 2037, with a projected built out population of more than 13,000. This works out to a population increase of almost 1,000 new residents per year. The pace of development may be slower at first, then accelerate after Sherwood Park reaches its full buildout, expected to be around 2024.

As Cambrian Crossing is located immediately across Highway 16 from Sherwood Park and forms part of the Urban Service Area, it will require local transit service as the area begins to develop. Bremner will begin to develop in 2023 and will also require an expansion of transit service. Determining when to

implement transit service in new communities is a balancing act: too soon and buses travel around empty on a patchwork of unconnected roads; too late and transit misses out on being a viable option while new residents are forming their travel habits.

Once the area begins to develop (e.g. population reaches 500 to 1,000 residents), Dynamic Transit Services should be introduced early to ensure new residents have a sustainable transportation option available to them. This will help improve the productivity of transit over a fixed-route design. This should be put in place until such time as ridership forecasts suggest minimum Utilization Standard target for a Local Route can be achieved (see **Section 11.4.4**). A logical connection to Sherwood Park would be to provide a service to either Emerald Drive and/or the Bethel Transit Terminal.

Once ridership on Dynamic Transit Service to Cambrian Crossing and Bremner reaches the triggers outlined in the Modification of Existing Services Standard (see **Section 11.4.5**), consideration should be made to replace it with a fixed-route service. This would likely happen once the population of Cambrian Crossing or Bremner have surpassed the 1,200 to 1,800 population mark. A route from either community could connect to Sherwood Park at Clover Bar Road, then along Emerald Drive and Sherwood Drive to Bethel Transit Terminal. This would connect residents of Cambrian Crossing and Bremner to Strathcona Community Hospital, Emerald Hills Shopping Centre, Archbishop Jordan Catholic High School, and Inter-municipal Routes to Edmonton from the Bethel Transit Terminal. Other Local Routes or Dynamic Transit Services should also be put in place to meet the Proximity to Service target noted in the Service Standards (see **Section 11.3.6**).

Recommendations:

- Introduce a Dynamic Transit Service to Cambrian Crossing and Bremner early in the development, with connections to Emerald Drive and the Bethel Transit Terminal.
- Consider replacing Dynamic Transit Service with a Local Route once ridership exceeds the minimum Service Utilization targets for a Local Route noted in the Service Standards (see **Section 11.4.4**).
- Continue to expand Local Route or Dynamic Transit Services in Cambrian Crossing and Bremner in accordance with the Service Standards noted in **Section 11.0**.

12.2.1.5

Strategic Direction US5: Expand Service for Mobility Bus Registrants

Since the last Transit Master Plan in 2012, Mobility Bus has made considerable progress toward offering a comparable level of transit service for persons with disabilities that are unable to access conventional fixed-route bus services. Service area coverage exceeds that of conventional bus in accessing most hospitals and health destinations in Edmonton as well as offering trips for social and medical purposes for eligible persons living in the rural portions of Strathcona County on weekdays. The introduction of fare parity for Mobility Bus customers within the Urban Service Area and Inter-municipally in July 2018, further advanced the goal of offering ‘equivalent’ service across the system. ‘Equivalent’ services refers

to offering persons with disabilities a comparable service to that available to persons using the fixed-route bus service.

With continued growth and aging of the population in the County, demand is expected to grow for this important service. With fare parity and an aging population, annual rides on Mobility Bus are projected to increase from approximately 21,000 trips today to between 45,000 and 55,000 trips by 2028. Much of this growth has been a result of the introduction of fare parity, however, a growing and aging population will also add to the Mobility Bus demand.

To maintain the existing level of service to persons with disabilities unable to use the conventional system, capital and operating budgets will need to grow as the population ages and grows.

Recommendations:

- Expand service on Mobility Bus to meet the growth in demand arising from a growing and aging population. This includes increasing the fleet and staffing required to meet demand within the Service Standards.
- Access taxis or other non-dedicated service providers for at least 10% of trips to support efficient use of the dedicated resources (staff and fleet). Using taxis for out-of-the-way, early morning and late night trips offers a means to deploy the dedicated Mobility Bus service when the majority of demand exists as well as minimizing trip denials. The cost of using taxis for trips at these low-demand times should be no more expensive than operating dedicated Mobility Bus vehicles and would be covered by Strathcona County, with registrants paying the standard Mobility Bus fare. Taxis delivering trips are also an important means to maintain quality customer service when incidents happen and a timely response is needed.
- Implement a 'family of services' approach to increase the travel options available to Mobility Bus registrants who can access conventional transit for part of some trips or for certain destinations. This approach to integrated service delivery is linked to an improved eligibility process.
- Review the life cycle of Mobility Bus fleet to maximize the length of service that this fleet can deliver to the community. Industry prevailing practice is 7 to 10 years.

12.2.1.6

Strategic Direction US6: Improve Accessibility of Services

Improving the accessibility of conventional transit is a key strategy to enable as many people with mild to moderate mobility limitations to experience the freedom and flexibility of transit services. The conventional bus fleet is now fully accessible and automated stop announcements in audio and visual formats are being implemented as part of the Smart Bus project rollout. More work is needed to create a more universally accessible service and community. The pedestrian environment, especially the path of travel to and from accessible stops to key destinations is critical to support as many people as possible to use the conventional service. With an aging and growing diverse population, more and more

jurisdictions are adhering to principles of universal design to maximize the accessibility for as many people as possible.

Recommendations:

- Develop an overarching policy that outlines the County's commitment to an accessible transit service.
- Develop short and long-term plans identifying improvements to policies, procedures, information, training, infrastructure, etc., to achieve a more fully accessible transit service. These plans would identify priority areas for improvement that could be submitted for funding consideration in the operating and capital budget cycles.
- Consult key stakeholders as part of this process to gather their input on priorities to improve accessibility.

12.3 Theme C: Mobility for Inter-municipal Travel

Strathcona County Transit offers three types of Inter-municipal services between Sherwood Park and Edmonton:

- Daily Inter-municipal Routes between Sherwood Park and Edmonton;
- Daily Mobility Bus service for registered clients between Sherwood Park and Edmonton; and
- Weekday Mobility Bus service for registered clients between the Rural Service Area and Edmonton.

The six Inter-municipal Routes connect Sherwood Park's two transit terminals to the City of Edmonton. The points of interest in Edmonton include downtown Edmonton, MacEwan University, University of Alberta's (UofA) main campus, University of Alberta's Campus Saint-Jean, the Northern Alberta Institute of Technology (NAIT), and the Bonnie Doon shopping centre. The service is performing at a high level, with approximately 5,000 average daily boardings on all six routes combined. Accessible double-decker buses are used to deliver services, which are often full in the peak direction.

A number of issues were both observed and raised through the community engagement process regarding service productivity on Mobility Bus, the need for improved service to key destinations and during evenings / weekends and potential implementation of rapid transit services. These issues and opportunities are identified below, with key strategic directions identified to address each.

12.3.1 Strategic Directions

12.3.1.1 Strategic Direction IM1: Identify Integration Opportunities with Edmonton Transit Service (ETS)

Edmonton Transit Services (ETS) provides two Light Rail Transit (LRT) lines through the community, with direct connections to downtown. LRT provides higher capacity service with full or partial service operating in its own right-of-way.

There is some duplication that occurs with Strathcona County Transit Inter-municipal Routes and existing and planned ETS LRT corridors. The potential to connect and short-turn some of the existing Strathcona County Transit Inter-municipal Routes was explored on both the existing Capital LRT Line (either Coliseum Station or Belvedere Station) as well as the future Valley LRT Line at Bonnie Doon Station (expected completion 2020).

Providing these connections would have the potential of reducing the length of the Strathcona County Transit Inter-municipal Routes, allowing revenue vehicle hours that were saved to be reinvested back into the system. However, this type of modification would also result in the need to transfer between two services on two separate systems, potentially increasing travel time and reducing the quality of service.

Table 20 illustrates the potential implications of connecting and terminating Strathcona County Transit Inter-municipal Routes at one of the ETS LRT lines.

Table 20 - Implications of LRT Connections

	Capital Line LRT	Valley Line LRT
Potential Daily Revenue Vehicle Hour Savings	0-5	5-7
Commuter Travel Time Added	4-15 min	3-18 min

Terminating a Strathcona County Transit Inter-municipal Route at one of the above identified LRT stations (instead of providing a direct downtown connection) would generally save Strathcona County Transit zero to seven daily service hours per route, which could be invested back into the system and be used to improve frequency of service or expand hours of operation.

However, for both the existing and future potential LRT line connections, the following disadvantages could be expected:

- Travel time increases for riders (primarily due to the need to transfer);
- Increased fare for riders (customers would have to pay both a Strathcona County Transit and an ETS fare);

- Increase in transfers (with certain customers potentially required to make three transfers to complete their trip); and
- Overloading the LRT route, which may result in ETS charging the County for the service.

Moreover, an additional transfer was felt to be a deterrent to ridership, which would likely not be offset by an increase in service frequency (reinvested back into the route from service hours saved by terminating the route at an LRT station). Additionally, for the Capital Line connection, customers may have a negative travel time perception because the Strathcona County Transit service would take them north only to connect to an LRT station, before heading back south on the Capital Line.

Together, these disadvantages could be expected to deter riders from using Inter-municipal Routes provided by Strathcona County Transit.

Recommendations:

- Continue to operate services directly to downtown Edmonton and other key destinations in Edmonton currently serviced by the Inter-municipal Routes.
- Connections to the Valley Line LRT and the Capital Line LRT continue to be made where feasible to promote connectivity between the two systems and accommodate customers that are not originating or destined downtown.
- Consideration be made to terminating routes at an ETS LRT station only when:
 - Fare integration is in place with ETS, avoiding customers from paying another fare;
 - Service hours saved can be reinvested back into the Inter-municipal Route to increase the frequency of service to every 15 minutes or greater (to reduce transfer time);
 - An agreement is made with ETS that does not involve a transfer cost paid to ETS to accommodate an increase in service levels that would result from adding Strathcona County Transit customers on to the LRT service.

12.3.1.2

Strategic Direction IM2: Improve Evening Connections to University of Alberta (UofA)

Two existing Inter-municipal Routes service the UofA main campus and the UofA Campus Hospital. While neither of these routes offer evening and weekend service in the Summer semester, Route 414 does service the campus in the evenings during the Fall and Winter semesters, with the last bus departing the UofA campus at 9:45pm, while the last class ends at 10:00pm.

There are a number of students that attend classes in the evenings and Summer period, as well as employees that work at the UofA Hospital. The closest Inter-municipal Route during these periods is in downtown Edmonton (Route 411, which provides hourly service from the Bethel Transit Terminal from 7:00pm to 11:45pm). While there is an ETS LRT service that connects the UofA campus to downtown Edmonton (where customers could connect to the Route 411 bus), this adds travel time to customers, can result in a long waiting time at the transfer location (as Route 411 only operates hourly) and would require customers that do not have a U-Pass to pay an additional fare.

The existing ridership on both Route 411 and 414 is within an acceptable Utilization Service Standard, and it is anticipated that extending the service hours by one or two runs during the Fall/Winter period would maintain a ridership level that is within a minimum threshold for service.

The potential to increase the frequency of service was also assessed to better align with UofA class times and improve flexibility of departure times by students and employees. While Route 414 is the most productive route in the system during the weekday evening periods, the combined ridership on both routes does not warrant adding the third bus to the service that would be required to move to a 30 minute headway.

Instead, it is recommended that Strathcona County Transit focus on providing better connections to UofA until the last class time during the Fall/Winter semesters. Expansion of this to the Summer semester can be explored as a second phase, provided ridership targets are being achieved in the Fall/Winter semester and are forecasted to be achieved in the Summer semester. Two options were explored to achieve this objective.

Option A: Offset the Two Evening Routes and Extend Route 414 Service to UofA by One or Two Hours

For this option, Routes 411 and 414 would be offset by 30 minutes so that there is one evening service leaving Edmonton every 30 minutes rather than every hour. This is possible with the introduction of evening Dynamic Transit Services, as local connections can be made to the Inter-municipal Routes every 30 minutes without a significant increase in Local transit service hours.

Offsetting the service would mean Route 414 would arrive at the UofA campus 15 minutes past the hour instead of 45 minutes past the hour. This better aligns with a 10:00pm class end time, with a bus departing the campus at approximately 10:15pm.

Students and employees could also choose to take the LRT to the downtown and transfer onto Route 411 if the offset Route 414 times do not align with their schedule. This would provide some customers who choose to use ETS as part of their trip with a 30 minutes service.

The service would require an increase in one to two daily hours of service in the Fall/Winter semesters and four to five daily hours in the Summer semester (depending on the end of service).

Option B: Combine Routes 414 and 411 and Expand Service

For this option, Route 414 would be eliminated in the evenings and Route 411 would be modified to follow the Groat Road-Waterdale Hill loop to service UofA before heading into downtown Edmonton and then back to the Bethel Transit Terminal. The addition of the UofA loop would bring the total return trip travel time of Route 411 to approximately 75 minutes and would require the use of a single-level 40ft accessible bus (due to the 3.2m height clearance of the High Level Bridge).

Customers from UofA would experience approximately 10-15 minutes of increased travel time (when compared to taking Route 414), but riders boarding in downtown Edmonton would not see any difference to their return trip travel time since they would be picked up right before the bus heads back to the Bethel Transit Terminal. The frequency of this modified route would be increased to every 35-40 minutes to improve alignment with the evening UofA schedule. This would also increase the level of service for customers destined to and departing from downtown Edmonton.

If Route 411 was modified in this way and the frequency was increased to every 35-40 minutes, an increase of three to five daily service hours would be expected during the Fall/Winter period and 7 to 12 service hours during the Summer period.

Recommendations:

- Further assess options to extend evening service to the UofA campus to better align with the last class end time of 10:00pm during the Fall/Winter period.
- Further assess options to extend midday and evening service to the UofA campus during the Summer period as a second phase of expansion (based on ridership growth during the Fall/Winter period meeting minimum Service Standards).
- Solutions should minimize the number of revenue vehicle hours added to the system to ensure service productivity targets continue to be met.

12.3.1.3

Strategic Direction IM3: Improve Weekend Service

Presently, Route 411 is the only Inter-municipal Route that operates on weekends. Route 411 provides hourly service on Saturdays and Sundays all year round. The service is well used, with a daily average of approximately 25 customer boardings per revenue vehicle hour on Saturdays and 22 customer boardings per revenue vehicle hour on Sundays.

As the ridership on Route 411 continues to grow along with the population of Strathcona, an increase in frequency may be warranted for the Route 411 weekend service.

Recommendations:

- Continue to monitor the population growth and weekend ridership on Route 411.
- Consider increasing frequency of the Route 411 weekend service as the maximum Service Utilization thresholds (see **Section 11.4.4**), as outlined in the Service Standards are reached for the different weekend time periods. Consideration should be made to improving service levels on Saturdays during the daytime period first to test the market. This should only take place if the weekend Dynamic Transit Service model has passed the pilot and made into a permanent service.

12.3.1.4

Strategic Direction IM4: Improve Connections to NAIT

Inter-municipal service to/from the Northern Alberta Institute of Technology (NAIT) is provided by extending Route 413 from MacEwan University by four weekday AM trips and three weekday PM return trips commencing from the Northern Alberta Institute of Technology (NAIT). Outside of these periods, students and employees at NAIT can connect to the Metro Line LRT and take a short trip between downtown (Route 413 terminus) and NAIT. With a U-Pass, NAIT students can make this transfer without paying an extra fare.

With the recent introduction of a U-Pass for NAIT students, NAIT ridership is growing and there is a desire by students to improve the level of service to NAIT. This could include increasing the number of trips to NAIT or providing a semi-express service, reducing the overall travel time between Sherwood Park and the post-secondary institution.

It should be noted that the cost of any service improvements to NAIT would not be offset by customer revenue as the majority of new rides would be NAIT students who carry a U-Pass. With a fairly frequent LRT service already in place, any service improvements need to minimize significant operating or capital cost increases until such time as a U-Pass rate is renegotiated or other revenue opportunities are identified to reflect the higher costs of providing the service.

Two options are presented below which Strathcona County Transit could consider to improve service levels without significantly increasing operating costs.

Option A: Extend four Additional Trips from Route 413 to NAIT in the AM and PM

This option would involve increasing the number of Route 413 extensions to NAIT by 2-3 trips in the AM peak period and service from NAIT by 1-2 trips in the PM peak period. Route 413 is a peak direction route which goes out of service at MacEwan University or NAIT in the AM peak and goes into service at these locations in the PM peak.

The travel time between MacEwan University and NAIT is approximately 10 minutes. This would add limited revenue vehicle hours (approximately 40 to 60 minutes daily) and would not impact the schedule of Route 413.

Option B: Provide Four Direct Semi-express Trips to NAIT on Yellowhead Highway

This option would create a new semi-express route to NAIT using Yellowhead Highway rather than Baseline Road (which the existing route currently takes). The semi-express route would save approximately 15 minutes in travel time to/from NAIT. Two AM peak services to NAIT and two PM peak services from NAIT are suggested, aligned with class schedules.

Since the semi-express route would travel via Yellowhead Highway, it could also stop at the Belvedere LRT station on the Capital Line, providing an opportunity to pick up City of Edmonton commuters going to Sherwood Park.

To offset some of the capital costs, Strathcona County Transit could choose to eliminate the extended service to NAIT on Route 413. Students travelling to/from NAIT outside of peak times would still be able to use a combination of the regular Route 413 and the Metro Line LRT. This would only reduce service hours (and therefore operating costs) by approximately 30 to 60 minutes per day.

This option is expected to add approximately four additional daily vehicle hours and would require the need for one or two additional daily peak buses.

Recommendations:

- Explore low cost options to improve the level of service to NAIT during the Fall/Winter period.
- The introduction of service options that significantly increase operating costs or require another peak vehicle(s) should only be in place if significant ridership growth to NAIT warrants a higher level of service and/or additional revenue opportunities are identified to offset operating costs.

12.3.1.5

Strategic Direction IM5: Expand Service to Grow Ridership

Inter-municipal Routes are the backbone of the Strathcona County Transit system. The service represents 82% of the ridership in the system, yet only uses approximately 37% of the revenue vehicle hours in the system. System ridership on Inter-municipal Routes has seen steady growth over the past 10 years while service within the Urban Service Area has remained fairly stable. With continued population growth and a desire to increase transit mode share, investment in Inter-municipal Routes will be a key component of the 10-year strategic plan.

Currently, Strathcona County Transit provides approximately 0.43 Inter-municipal Route revenue vehicle hours per capita (both Urban and Rural Service Areas). This level of service should be increased by 10 to 15% as population continues to grow. Increasing this level of investment per capita will provide the additional resources that will help the County reach the ridership growth targets noted in the Integrated Transportation Master Plan. Confirmation of the level of investment necessary required to reach the transit mode share targets should be confirmed in any update to the Integrated Transportation Master Plan.

The investment should be focused on two areas:

- Expanding service to new developments and population centres; and
- Increasing level of service at the existing terminals to encourage ridership growth.

Expansion to New Areas

Expansion of service will be focused on Cambrian Crossing; a planned area just north of Sherwood Park. As previously mentioned, Cambrian Crossing is expected to begin construction in 2021 and be built out in 2037, with a population of more than 13,000 people at buildout.

A Local Route should be introduced to Cambrian Crossing when the population reaches a certain threshold (approximately 1,200 to 1,800) based on achieving the Service Standard minimum utilization trigger of 10 weekday customer boardings/revenue vehicle hour. The introduction of an Inter-municipal Route should be in place when the population reaches approximately 2,500 to 3,000 (based on a minimum of 20 weekday customer boardings/revenue vehicle hours for an Inter-municipal Route).

It is recommended that transit service expansion be prioritized in the following order as the County's (and particularly the Urban Service Areas) population grows:

- **Phase 1 – Local Route connection between Cambrian Crossing to Emerald Drive.** The route would connect the planned transit transfer point at the north-end of Cambrian Crossing to either a transfer point on Emerald Drive (near a number of major retail services) or interline with an existing Local Route to provide direct one-seat Local Route service to Bethel Transit Terminal. Customers can connect directly to an Inter-municipal Route from this location.
- **Phase 2 – Inter-municipal Route to Cambrian Crossing through Bethel Transit Terminal.** As population continues to grow, a new Inter-municipal Route or an extension of an existing Inter-Municipal Route directly to Cambrian Crossing is recommended. This will reduce the travel time for Cambrian Crossing residents and minimize demand for parking at the Bethel Transit Terminal. Having the route go through Bethel Transit Terminal will increase the amount of service for residents in Sherwood Park (particularly if the frequency is offset from existing services) and improve the efficiency of operations (e.g. potentially provide Dynamic Transit Services to link between Bethel Transit Terminal and Cambrian Crossing during the off-peak if there is not enough demand to warrant a full extension). The service would also operate on Baseline Road, which would provide additional transit vehicles on this corridor and help build the case for future transit priority and/or Bus Rapid Transit.
- **Phase 3 – Express Cambrian Crossing Inter-municipal Route.** As ridership continues to grow, an express service to Cambrian Crossing which by-passes the Bethel Transit Terminal during AM and PM peak periods is recommended. The route could either use the Yellowhead Highway with a stop at the Belvedere LRT Station and/or NAIT before heading downtown, or use Baseline Road (if transit priority or a Bus Rapid Transit (BRT) corridor is in place). This would operate during the peak periods, with off-peak service continuing to stop at the Bethel Transit Terminal to increase service utilization.

Bremner is a future greenfield area located northeast of Sherwood Park. This development will be both larger and more long-term than Cambrian Crossing - construction is planned to commence in 2023, with

built out expected by 2061, and a full buildout population of approximately 80,000 people. It has been assumed that development will proceed slowly during the first few years. Bremner (upon buildout) will be large enough to include multiple transit terminals and park-and-ride lots. When this is built, a number of new Inter-municipal Routes should be provided with direct connections to Edmonton via Yellowhead Highway (instead of going through the Bethel Transit Terminal). Before the first terminal is complete, a similar phasing plan as described for Cambrian Crossing should be developed to provide transit service into the community early. The need for a park-and-ride facility at this location as well as an express service that does not connect to the Bethel Transit Terminal is anticipated to occur outside of the 10-year strategic plan timeframe.

Service Level Improvements

Weekday AM and PM peak period productivity on a number of Inter-municipal Routes is already above the trigger that would suggest a service level improvement could be accommodated. Many routes are also at or nearing capacity, resulting in Strathcona County Transit adding a number of overload buses. This suggests that there is room to increase peak service, particularly on Route 411.

The challenge with increasing frequency on the existing service is that it needs to be matched with an equal improvement in the Local Route structure in the Urban Service Area. Fixed-route service in the Urban Service Area are designed to match the primary headways of Inter-municipal Routes. If headways were increased on an Inter-municipal Route (e.g. from 15 minutes to 10 minutes in the peaks or 60 minutes to 30 minutes in the off-peak), there would also need to be a corresponding investment in the Urban Service Area, matching these headways on a number of Local Routes to maintain connections. This becomes a challenge since the productivity level on Local Routes are typically lower than Inter-municipal Routes.

Strathcona County Transit accounts for this by providing overload trips onto Inter-municipal Routes, which adds another vehicle to the scheduled service to reduce crowding. While this adds capacity to the system and is an effective strategy, it does not add to travel time options (frequency).

A shift to Dynamic Transit Services in the Urban Service Area as described in Theme B (Mobility in the Urban Service Area) will help to provide new opportunities to increase Inter-municipal Route headways as these routes are no longer dependent on matching a fixed-schedule of Local Routes in the Urban Service Area. This will allow Strathcona County Transit to more freely invest in frequency improvements that are not dependant on the Local Route service schedule.

Based on this assumption, peak period frequency improvements should be considered on Route 411 (once weekday Dynamic Transit Service is in place). Other service improvements should be based on the Utilization Service Standard targets (see **Section 11.4.4**) and the Customer Comfort / Vehicle Occupancy Service Standard triggers (see **Section 11.4.2**) being met.

Recommendations:

- Continue to invest in Inter-municipal Routes, gradually increasing the Inter-municipal Route revenue vehicle hours per capita as population grows. The amount of service growth should be confirmed in an update of the Integrated Transportation Master Plan, and tied to a transit mode share target.
- Explore options to connect to Cambrian Crossing and Bremner, starting with a Local Route and Inter-municipal Route extension from the Bethel Transit Terminal; then adding a peak period Express Inter-municipal Route directly to Edmonton. This should be based on minimum Utilization of Service Standard being met (see **Section 11.4.4**).
- Identify options to increase weekday peak period service on Route 411 as well as other existing Inter-municipal Routes from the Bethel Transit Terminal to operate every 10 minutes once a Dynamic Transit Service option is in place in the Urban Service Area. This will provide a more frequent Inter-municipal service and attract new ridership.

12.3.1.6**Strategic Direction IM6: Integration with Mobility Bus**

Mobility Bus offers eligible residents door-to-door service between any address in the County and most hospitals in the Edmonton Metropolitan Region. Mobility Bus vehicles that travel to Edmonton have limited productivity, often carrying one customer for a long-distance trip. This limits the ability for the resource to be used for other customer requests in the Urban Service Area or Rural Service Area. Since Inter-municipal Routes are fully accessible, finding strategies to improve integration between the two services would help improve productivity on the Mobility Bus and increase travel options for registered Mobility Bus customers.

A family of services approach involves working with Mobility Bus registrants to assess travel options to get where they need to go. Sometimes that involves a door-to-door trip and sometimes it involves a combination of Mobility Bus and the fixed-Inter-municipal Routes. A Mobility Bus to Inter-municipal Route service involves connecting individuals to either Bethel Transit Terminal or Ordze Transit Centre in order to complete a portion of their trip on the conventional bus. This type of service has the potential to increase the independence of riders to reach more destinations and focus Mobility Bus trips on those with the least options.

Recommendations:

- Assess current trips of Mobility Bus customers to determine if opportunities exist for connections onto the fixed Inter-municipal Routes. This would involve identifying transfer points that are appropriate for persons with reduced mobility, as well as working with individuals to inform them of alternate ways to travel to a destination.
- As specialized transit software is implemented, include as much as possible, the ability to deliver integrated trips in the technology platform.

12.3.1.7

Strategic Direction IM7: Identify Opportunities to Expand Service to Other Destinations in Edmonton

Inter-municipal Routes provide service to a number of destinations in Edmonton, including downtown Edmonton, MacEwan University, University of Alberta's (UofA) main campus, University of Alberta's Campus Saint-Jean, the Northern Alberta Institute of Technology (NAIT), and the Bonnie Doon shopping centre.

Inter-municipal Route expansion to other key destinations in Edmonton was reviewed and is not recommended at this time. Inter-municipal Routes already provide service to major academic institutions (UofA, NAIT, MacEwan University) and the major employment hub (downtown) in Edmonton that accounts for the majority of demand. Other key destinations of interest such as the Edmonton International Airport would not have consistent daily demand or are located further west of downtown Edmonton (e.g. West Edmonton Mall) or south of downtown Edmonton (e.g. Meadows Transit Centre) and would result in additional duplication of the ETS network, which provides frequent connections to a number of these locations. Instead of investing revenue vehicle hours and peak vehicle requirements to extend to other locations, focus should be on improving the level of service to existing destinations.

Mobility Bus service to Edmonton outside of the fixed-route service area is provided only for medical trips, to a number of hospitals and a few medical centres in the Metro Edmonton Area. The exceptions include Misericordia Community Hospital in West Edmonton, Alberta Hospital Edmonton in North Edmonton and the Fort Saskatchewan Hospital. A number of hospitals provide specialized medical services and procedures that are not available in every hospital. Recently, some requests have been made to expand service to all hospitals and potentially other destinations in Edmonton. Since many Mobility Bus registrants require door-to-door service, providing service to these hospitals should be considered.

Recommendations:

- Inter-municipal Routes should continue to be provided to the same destinations that are serviced today. No expansion to other destinations in Edmonton that require a significant expansion to the route structure are recommended at this time.
- Assess demand for trips to hospitals not currently served by Mobility Bus and alternative ways to deliver these trips, if sufficient demand exists. For example, the Misericordia is well served by several Edmonton Transit routes with a fully accessible path of travel from 87 Avenue to a nearby entrance. Negotiating a reciprocal agreement with DATS may be another way to offer these trips should demand warrant adding this service.

12.3.1.8

Strategic Direction IM8: Protecting for Transit Priority and Rapid Transit

Transit Priority or Rapid Transit are typically warranted on corridors with high peak hour transit bus volumes and ridership. The purpose is to improve reliability and travel time on corridors that experience congestion.

All Inter-municipal Routes currently travel on either Baseline Road (from Bethel Transit Terminal) or on Sherwood Park Freeway (from Ordze Transit Centre). The City of Edmonton's 2017 Transit Strategy identifies Sherwood Park Freeway as a planned transit priority corridor, while the 2015 Capital Region Plan identifies:

- Sherwood Park Freeway as a planned transit priority corridor;
- Yellowhead Highway as proposed transit priority corridor by 2044; and
- Baseline Road as a future regional LRT corridor by 2044.

A dedicated transit priority lane could be considered at 1,000 customers/peak hour (considering that a lane capacity of a major arterial or highway is between 1,000 to 1,200 vehicles/hour). However, certain Transit Priority measures could be considered at a slightly lower volume of approximately 750 customers/peak hour.

Baseline Road is currently the Sherwood Park-to-Edmonton corridor with the largest hourly ridership. Ridership is anticipated to grow on this corridor over the next 10 years based on:

- Population growth within Sherwood Park;
- Service improvements on existing peak period services (e.g. potential frequency improvement on Route 411); and
- The addition of service from Cambrian Crossing and potentially from Bremner (as these areas begin to develop).

Based on the results of the analysis, transit priority measures should be considered along Baseline Road between 2022 and 2024, however, a dedicated transit-only lane will likely not be warranted within the 10-year time period of this strategic plan.

Recommendations:

- Initiate a study on the Baseline Road corridor to gather data on areas of delay and assess various locations where transit priority measures could be introduced.
- Protect the corridor for a future dedicated transit-only lane.

12.4 Theme D: Mobility in the Rural Service Area

Planning and delivery of public transportation in rural areas is often challenging. Rural areas tend to be large in area but low in density, resulting in very widely dispersed population, employment and services. Because of these characteristics, trips made by rural residents (often to the nearest urban centres to access services) are also significantly longer than the average length of trip in urban areas to access the same services. Coupled with low ridership demand (thus resulting in limited revenue opportunities),

these characteristics make it difficult to provide a transit service model with reasonable frequency and availability that is reasonably priced.

Despite these challenges, there is still a need to provide mobility in rural areas. While most residents move to rural areas have access to a personal vehicle, many youth, seniors and residents with lower household incomes may not have access to a vehicle to access places of employment, education, medical appointments or services. Addressing the need is difficult and not one that can be simply solved by adding resources. Providing a fixed-route transit service to the Rural Service Area of the County would likely build ridership, but the amount invested would result in very high cost per customer trip delivered and may put a strain on municipal funding sources.

Currently, weekday Mobility Bus Services are provided in the Rural Service Area for medical and social trips. Trips are not provided for other trip purposes or for residents, employees or visitors that are not eligible for Mobility Bus. There has been some requests to improve mobility options for all residents in the Rural Service Area, recognizing that the service would need to be cost effective.

The following strategic directions are recommended to address the need for mobility in rural areas.

12.4.1 Strategic Directions

12.4.1.1 Strategic Direction RS1: Addressing the Needs of Rural Mobility Bus Registrants

Mobility Bus provides service in the Rural Service Area to residents who meet eligibility requirements on weekdays between 6:00am and 10:00pm for medical and social trips. There is no service on weekends or on holidays. Through the Mobility Bus program, rural residents of Strathcona County receive more transit service than rural residents anywhere else in the greater Edmonton region. Eligible rural residents can use Mobility Bus to travel within Sherwood Park and between Sherwood Park and specified destinations in Edmonton for any reason except work or school. Rural residents also pay higher fares for this service which is more costly to provide. As the County reviews its services to citizens, and as there is a greater focus on aging in place and supporting choices in where people live, options for increased transit services for persons living in rural areas of the County should be considered.

Recommendations:

- Assess the demand for Mobility Bus trips in the Rural Service Area on weekends and alternative ways of delivering these trips, if sufficient demand exists.

12.4.1.2

Strategic Direction RS2: Expanding Service to Ardrossan

The Hamlet of Ardrossan is expected to grow from approximately 500 residents in 2018 (based on the results of the 2018 Strathcona County census) to 6,000 by 2046.

With a much higher population focused in a hamlet area, Ardrossan is anticipated to have the population and density to support a fixed-route transit service connecting residents to Sherwood Park. The cost savings on fuel for the long commute into Edmonton as well as parking costs may make transit an attractive choice for residents in and around Ardrossan provided any trade-offs with longer travel time are reasonable. This could be provided using an accessible minibuss or full-sized bus (depending on demand), with service terminating at the Bethel Transit Terminal to facilitate connections to Inter-municipal Route services. Within Ardrossan, opportunities should be sought to connect the service to a small park-and-ride lot with space to accommodate 25 to 75 parking spaces. The service should also consider a local collector service to a number of residential neighbourhoods (as either a fixed-route or Dynamic Transit Service). The service would take approximately one hour to complete a round trip, and therefore would operate at a 60 minute headway initially, with potential to improve peak headways to 30 minutes as ridership grows.

Strathcona County Transit's Service Standards require minimum Service Utilization target of 10 weekday customer boardings per revenue vehicle hour of rural service to initiate a Rural Service (see **Section 11.4.6**). These triggers would not be met based on the existing population of Ardrossan, and introduction of a Rural Service to Ardrossan should only be considered when the future population and potential ridership in Ardrossan is large enough to meet the Service Utilization triggers. Service Standards provide a guideline for when Rural Services are warranted in the Rural Service Area.

Applying these thresholds, the following service plan is recommended for Ardrossan:

1. Consider implementation of a **local fixed-route peak service** for Ardrossan when the population of the hamlet reaches between 2,400 and 2,800 people (based on a minimum of 10 peak period customer boardings/revenue vehicle hour).
2. Consider implementation of a **local fixed-route midday service** for Ardrossan when the population of the hamlet is between 5,500 and 6,000 people.

Recommendations:

- Monitor pace of population growth in Ardrossan.
- Design and implement an hourly peak/off-peak service when ridership forecasts suggests that minimum productivity targets will be met.
- Monitor service once implemented and adjust *based on customer comments and performance*.

12.4.1.3

Strategic Direction RS3: Expanding Demand Responsive Services to All Rural Residents

The opportunity to expand public transit service to the entire Rural Service Area was also explored. Given the challenges of providing a fixed-route service in a large rural area, a dedicated Dynamic Transit Service model was assessed (using existing Mobility Bus vehicles, and/or with a potential partnership with the taxi industry or a Transportation Network Company).

Operating Models

The use of a dedicated service model in a large rural area is recommended over a non-dedicated model for the following reasons:

- **Availability of Drivers:** It can be difficult to attract non-dedicated drivers to rural areas, particularly when it is located further from an urban centre (Sherwood Park). Many Transportation Network Company (TNC) drivers are only paid for the portion of the trip that they are in revenue service. This can result in the driver refusing to take a trip request that involves a significant non-revenue travel to reach the customer, particularly when the trip is short. Companies such as Uber and Lyft have not had success extending their service to rural areas that are located far from an urban centre. If the service were to be contracted to a taxi company, the typical practice is to also charge for the non-revenue vehicle time for the vehicle to pick-up the customer. This adds to the cost of service. In a dedicated Dynamic Transit Service model, a fixed number of vehicles are placed in the system to accommodate the anticipated ridership, with drivers paid hourly for the service. If there are fluctuations in demand, a certain number of non-dedicated vehicles can be hired, but the base service is based on hourly-paid drivers, ensuring the availability of vehicles during the scheduled hours of service.
- **Ability to Share Rides:** In very low density areas with significant undeveloped lands, the ability to share rides in a non-dedicated model is difficult. The model for many TNCs that provide non-dedicated service is to reliably have a vehicle available within 5 to 10 minutes of a customer's trip request. This high level of service makes it difficult to coordinate shared rides in low density areas. As a result, the majority of trips are made with a single customer. As demand grows, the model adds supply (drivers), which increases the cost of the service. In a dedicated Dynamic Transit Service model, the supply is fixed and there are more controls available to increase vehicle occupancy over frequency (e.g. customer may be requested to book a trip at least one hour in advance). This helps reduce cost and increase the ability to share rides.

Potential Markets

There are two markets for service that were assessed for rural service:

- Non-discretionary trips (e.g. work and school trips) that are regularly scheduled and typically occur five days a week, during the AM and PM peak hours; and

- Discretionary trips (e.g. medical appointments, shopping, recreation and social activities) that typically don't have a defined regularly occurring schedule, providing individuals with more flexibility about when they want to travel.

Planning service for non-discretionary trips is focused on the AM and PM peak periods (6:00am to 9:00am and 3:00pm to 7:00pm) and requires a greater availability of vehicles to ensure reliability of the service (that a customer can consistently book a trip five days a week and rely on it to get to and from places of employment and education on-time).

Discretionary trips are more flexible and can typically be planned in the midday period (9:00am to 4:00pm). During this period, receiving your preferred departure or arrival time is not as important as travel times (outside of medical) are more flexible. This suggests that less vehicles are required to provide a service.

Service Scenarios

Two service scenarios were assessed for the provision of public transportation service in the Rural Service Area of the County:

Option A: All-day Dedicated Dynamic Transit Service. This option was designed to accommodate both daily commuter trips as well as off-peak discretionary trips. It was assumed that the service would operate from 6:00am to 9:00pm, five days a week, with additional vehicles capacity in the peak period to improve the reliability of the service.

Option B: Midday Only Dedicated Dynamic Transit Service. This option was designed to primarily meet the needs of discretionary trips that occur between 9:00am and 4:00pm.

For both options, a combination of in-house Mobility Bus vehicles and third-party sedans and minivans would be used for the fleet, and that up to three customer boardings per revenue vehicle hour could be accommodated. It was also assumed that school-age students did not need to be accounted in the ridership forecasts unless they were participating in after-school activities as they would be serviced with yellow school buses for trip to/from school in the Rural Service Area.

Based on this assessment, the approximate annual operating cost of Option A is between \$3 and \$3.5 million. If only midday service were provided as described in Option B, the annual operating cost would be between \$750,000 and \$1 million.

Recommendations:

- Further assess the cost versus benefit of providing a rural Dynamic Transit Service against other cost and benefit of other service recommendations. This should be completed after the

successful completion of the Dynamic Transit Service evening and weekend pilot in the Urban Service Area.

13.0 Community Comments on the Draft Strategic Plan

13.1 What We Heard: Developing Strategic Directions and Plans

The second phase of community engagement consisted of a series of events from October 23rd to November 19th, 2018, including:

- Internal team workshops and presentations;
- Presentation to Council Priorities Committee and advisory committees;
- Stakeholder workshop/focus group;
- Strathcona County Transit staff open house and presentations; and
- Six public open houses.

Overall, the project team spoke to more than 250 people about the Strategic Directions identified in **Section 12.0**. Generally the feedback on these Strategic Directions was very positive, particularly in regard to the introduction of Dynamic Transit Services.

This section summarizes the comments received about the four Strategic Direction themes during the second phase of community engagement and how the Strategic Directions identified in **Section 12.0** were modified as a result of the community engagement process.

13.1.1 Mobility Management

The following comments were received regarding the Mobility Management Strategic Direction. Modifications to the draft plan as a result of comments are also noted.

Comments	Response
The integration of Mobility Bus with Local Route and Inter-municipal Routes was perceived to be challenging, particularly from a customer's perspective.	The Implementation plan sets out a phased process to undertake this activity over a 2-5 year time frame. It was also emphasized that this solution will not apply to all Mobility Bus registrants, and will only be completed based on successful completion of a travel training program.
There was strong support for travel training. There was a comment that travel training should include the use bike rack and how to secure wheelchairs on buses. This could include training videos on the website.	Travel training recommendations were retained and expanded on in the implementation plan.

Comments	Response
There was strong support for Mobility Bus attendants riding for free on Inter-municipal Routes and Local Routes.	This was phased in as an early recommendation in the Implementation Plan.
There should be amenities and incentives for riding transit and these should be promoted to riders through marketing strategies.	Part of Strathcona County's Transit's role as a Mobility Manager will be to continue to develop marketing strategies to promote sustainable mobility options. This is noted in Strategic Direction MM2.
Support for replacing retiring diesel buses with electric or other alternative fuels to reduce the carbon footprint of public transit.	Additional goals and objectives were added to the policy framework in Section 10.0 supporting alternative fuels and carbon footprint reduction.
Opportunities to partner with school boards should be explored, and potentially with the private sector as well.	This forms part of Strathcona County Transit's Mobility Management role. The Strategic Direction was updated to reflect partnerships with school boards.

13.1.2 Mobility in the Urban Service Area

The following comments were received regarding the Mobility in the Urban Service Area Strategic Directions. Modifications to the draft plan as a result of comments are also noted.

Comments	Response
Dynamic Transit was positively received by most members of the public. The general direction is that it should be implemented as soon as possible with a phased implementation.	Dynamic Transit recommendations were retained with an implementation date in 2020 identified in the Implementation Plan. Concerns over ability to book trips over the phone, safety and reliability, accessibility and travelling with children were addressed in the Implementation Plan.
There were also concerns raised about Dynamic Transit. It needs to be accessible to people with mobility challenges and those without access to a cellphone; it needs to address safety and reliability concerns if contracted to a third-party operator; and it needs to accommodate parents with small children (e.g. car seats) and youth (age restriction).	
There was a general preference for the dedicated Dynamic Transit Service model, since there could be a	

Comments	Response
perception of public subsidy for a private taxi company if Dynamic Transit is contracted out.	
Service to local destinations needs to be improved, particularly during evenings and weekends.	The implementation of Dynamic Transit Services will provide better access to local destinations, starting on weekday evenings and weekends.
Smaller buses need to be considered for local service.	The Dynamic Transit Service will utilize smaller vehicles during low demand periods, better matching demand with vehicle size.
The bike rack program should be continued and expanded to all buses.	The use of bike racks on buses was included as one of the Goals and Objectives in Section 10.0 .

13.1.3 Mobility for Inter-municipal Travel

The following comments were received regarding the Mobility for Inter-municipal Travel Strategic Directions. Modifications to the draft plan as a result of comments are also noted.

Comments	Response
Consideration should be made to adding more Inter-municipal service from the Ordze Transit Centre once the Valley Line LRT is in service. The Dynamic Transit connection between Bethel Transit Terminal and Ordze Transit Centre is better, but it still needs more frequent service and evening and weekend service.	Additional service to Ordze Transit Centre was examined, however, is constrained by the limited number of park-and-ride spots at the terminal. The introduction of Dynamic Transit will provide a more direct connection between Bethel Transit Terminal and Ordze Transit Centre. The plan also calls for improvements in Inter-municipal service over the next 10-years. Ridership growth on existing routes will help determine where service improvements are prioritized.
Receptive to improved evening and weekend service being offered to the University of Alberta area and downtown. Those who commented felt the current service levels were inadequate or did not currently meet their needs.	This was identified as a priority initiative and scheduled in the short-term implementation plan (Section 14.0).
Improvements to early morning service should also be	Ridership on early morning service will continue to

Comments	Response
considered.	be monitored and expanded based on meeting service productivity triggers in the Service Standards document.
Improvements to Summer service on Route 414 for hospital workers should also be considered.	The initial recommendation was to improve evening and weekend service during the Fall/Winter period. Improvements to Summer Inter-municipal service were recommended in the medium-term based on ridership targets from improved Fall/Winter service being met.
There was mixed feedback on paid parking. While there is support to expand the program with improved local transit connections, many people don't think it should be a preferred option and other alternatives should be considered as well. There is also support for providing free parking for rural residents without transit service.	The Strategic Direction was modified to include a stronger emphasis on expanding Advantage Parking instead of moving to a full paid parking facility. A future parking study was also noted in the Implementation Plan to better assess the costs and benefits of paid parking.
There is a desire for Inter-municipal service to the Meadows Transit Centre and Century Park.	This was further explored, but was thought to be too far south of the downtown. The focus on the plan was instead to improve service frequency on existing Inter-municipal Routes and allow ETS to provide connections to additional destinations.
Safety concerns need to be addressed when allowing standees on Inter-municipal buses.	The Service Standards document identifies the maximum target for standees on all service types. The number of standees on Inter-municipal buses is limited to 110% of seated capacity.
Need to ensure the reliability of local and Inter-municipal connections, particularly during the afternoon rush hours.	The Service Standards document noted in Section 11.4.3 identifies a standard for service reliability and actions to be taken if the standard is not achieved.
Improving service to Government Centre from both Bethel Transit Terminal and Ordze Transit Centre needs to be considered.	There is a general plan to increase Inter-municipal service levels of the 10-year plan. The specific plan will continue to be developed following the approval of this Strategic Plan.

13.1.4 Mobility in the Rural Service Area

The following comments were received regarding the Mobility for Rural Service Area Strategic Directions. Modifications to the draft plan as a result of comments are also noted.

Comments	Response
Rural residents should be surveyed to determine the demand for transit in the Rural Service Area.	The Implementation Plan identifies the need to further assess the introduction of transit in the Rural Service Area. This will require a more detailed business case, which should include consultation with residents in the Rural Service Area.
Rural service needs to consider partnership opportunities with schools and other county facilities.	The Mobility Management Strategic Direction takes into account the need to develop partnerships to deliver mobility, particularly in low demand areas and periods.
If rural service is implemented, a Dynamic Transit model and integration with Mobility Bus service should be considered if there are economic and environmental benefits to doing so.	The use of an integrated Dynamic Transit and Mobility Bus service was stated as one of the preferred service delivery models if there was a business case to provide transit to all residents in the Rural Service Area.

13.2 Online Survey #2

A second online public survey was developed and made available to the public between October 23rd and November 19th, 2018. Customers and residents were able to complete the survey individually online or on tablets set up at the public open houses. The survey was reasonably successful with a total of 271 complete responses. This was a short survey to gauge public response after viewing the display boards or speaking with the project team about the Transit Master Plan at one of the open house events. A summary of the survey results is provided below. The comments reflected here are in alignment with the comments presented from the general public, outlined in **Section 13.1** above.

Agreement with Draft Recommendations

The initial question asked respondents whether the recommendations reasonably reflect their ideas of what the future of transit in Strathcona County should be. The survey results indicate that 90% of respondents felt the Strategic Direction recommendations represent their ideas of what the future of transit should be in Strathcona County.

To what extent do you agree that the recommendations reasonably reflect your ideas of what the future of transit in our community should be?

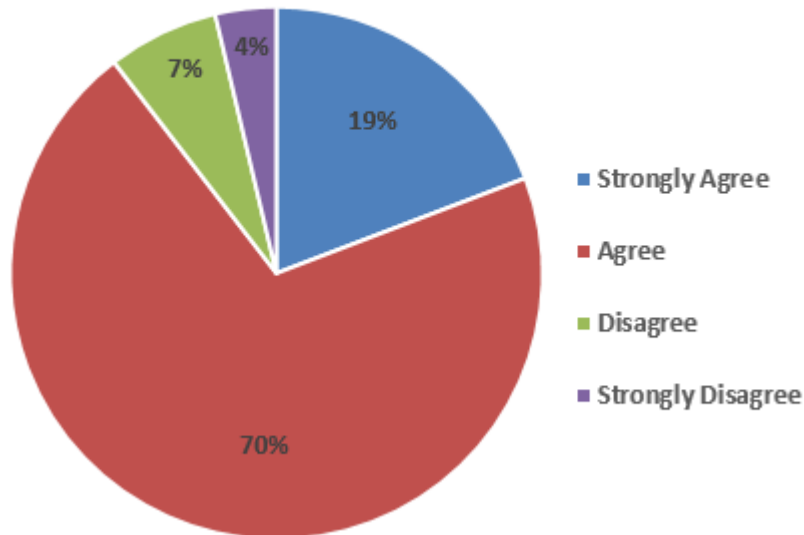


Figure 21 - Agreement with Draft Recommendations

Areas of Improvement

Respondents were asked to identify the service recommendations that they felt could be improved.

Figure 23 illustrates the overall result, with 36% of respondents indicating that there is no need to improve any of the recommendations. The top area for improvement was Mobility for Inter-municipal Travel, where 33% of respondents indicated that these recommendations could be improved. This was reflected in the comments outlined in **Section 13.1** above.

Priority Setting

Respondents were asked which recommendation Strathcona County Transit should focus on for implementation (recognizing that there will be a cost to implement any of the recommendations).

Overall, the majority of respondents (59%) indicated that the introduction of Dynamic Transit service should be the first priority. This was also reflected in the comments noted in **Section 13.1** above.

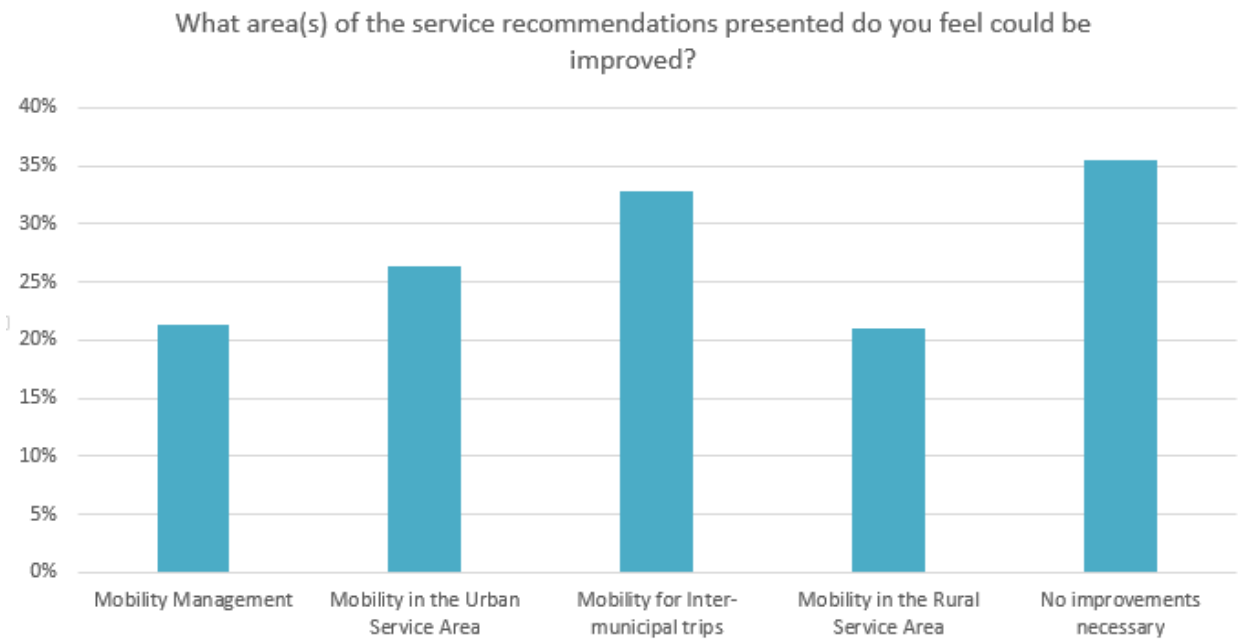


Figure 22 - Areas for Improvement in Recommendations

Recognizing that there will be a cost to implement any of the recommendations, which recommendation should we focus on first as a community?

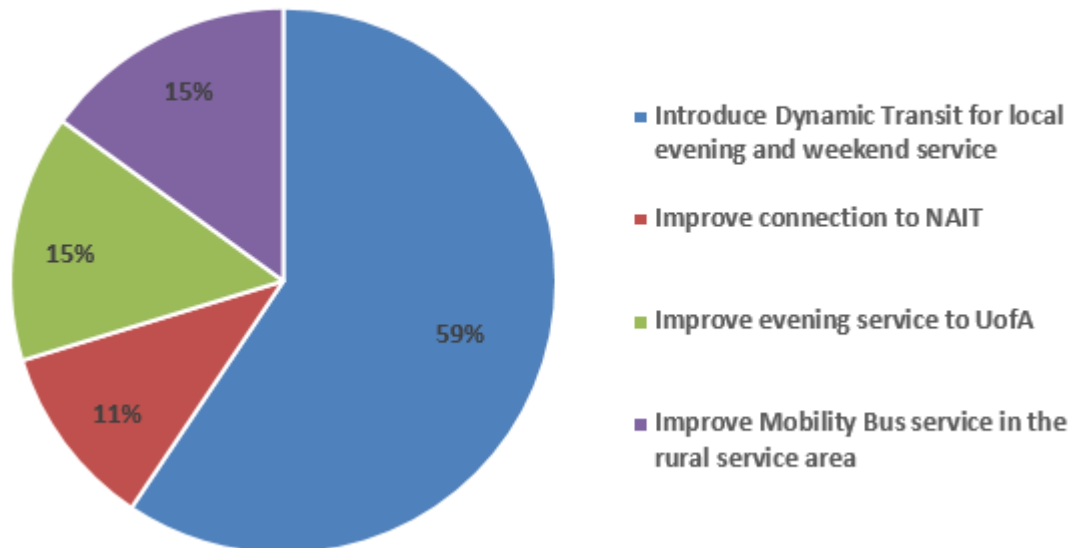


Figure 23 - Top Priority for New Service Recommendations

13.2.2 Other Feedback on the TMP

On-line survey respondents were asked to share any other feedback they had on the draft Transit Master Plan recommendations. A summary of the comments is provided below and are also summarized in the tables included in **Section 13.1** above (where relevant to the four Strategic Direction themes):

Comments	Response
Transit Master Plan Process	
Many statements of agreement with the plan and encouragement for its implementation. A few concerns that the recommendations are unclear, unnecessary, or too expensive.	Revisions to the draft Strategic Directions were made to provide more detail in areas that may be unclear. Most of the costs associated with the Master Plan are geared towards the introduction of new services to future growth areas (Cambrian Crossing, Bremner and Ardrossan).
General	
Desire to focus on the environmental implications of transit and a switch away from diesel buses. Concern that the TMP needs to focus on encouraging people to ride transit over driving. Desire to ensure that TMP directions fit with the creation of a regional transit authority.	There was a strong focus on environmental sustainability noted in the Goals and Objectives of the plan (Section 10.0), which is reflected in a number of the Strategic Directions. The Strategic Directions noted in this report are also relevant, even if the County chooses to join a regional transit authority.
Rural Service Area	
Most people commenting on rural transit service felt like it was unnecessary to spend money on an expensive service for relatively few residents. However, some respondents were in favour of the idea, especially service to Ardrossan with a park-and-ride.	The plan identified the need to create a business case to assess any expansion of transit service for all residents in the Rural Service Area.
Urban Service Area	
Frustration with the inconvenience, extra time, and transfers required to use the local service. Concern that full size buses appear to be empty or have very few passengers on them.	The Dynamic Transit Service model will limit transfers in the Urban Service Area on evenings and weekends and will utilize smaller vehicles during low demand periods.

Comments	Response
Dynamic Transit Service	
<p>Lots of interest in the Dynamic Transit proposal, including from people who do not currently use local transit service.</p> <p>Desire for more information to fully understand the concept.</p> <p>Concern about access for those without smartphones and safety and liability issues if using non-dedicated vehicles.</p>	<p>The Implementation Plan sets out a task to further develop the business case and operating plan for Dynamic Transit Service, to address a number of issues noted. A marketing plan is also noted in the implementation plan to better communicate how to use Dynamic Transit.</p>
Parking	
<p>Opposition to expanding paid parking at the transit terminals. However, there was also support from current users of the Advantage Parking to expand the number of paid stalls because they need to have a guaranteed parking spot to allow them to use the Inter-municipal service.</p>	<p>The implementation plan notes a need to further assess the benefits and costs of implementing a paid parking program or expanding the Advantage Parking program.</p>
Mobility Bus	
<p>Desire for making all transit service more accessible, including stop announcements and accessible provision of real-time information. Concern that Dynamic Transit booking won't be accessible for people who use screen readers.</p>	<p>The Strategic Direction emphasizes the desire to better integrate Dynamic Transit with Mobility Bus services. An accessible vehicle should be made available if required by a passenger.</p>
Inter-municipal Service	
<p>Significant desire for expanded Inter-municipal service on evenings and weekends, especially to the University of Alberta.</p> <p>Requests for slightly modifying certain route timings to better align with school and work schedules.</p> <p>There is interest in direct service to LRT stations in Edmonton.</p> <p>Concerns about currently not having service late enough to come back to Sherwood Park.</p>	<p>Expansion of evening and weekend Inter-municipal service was identified as a short-term priority, once Dynamic Transit Services are in place in the Urban Service Area. This would also better align with the last evening weekday class schedule at the University of Alberta. This would extend the late night service by one trip.</p> <p>Service to the new Bonnie Doon LRT station (once open), was also identified as a short-term priority in the Implementation Plan.</p>

Comments	Response
Fares and Funding	
<p>Comment that the TMP recommendations do not increase the current funding levels unless it is funded by users.</p> <p>Desire that transit fares not be increased to pay for service improvements.</p> <p>Suggestions that transit be free at off-peak times with low ridership.</p>	<p>There are a number of benefits of providing better transit to all residents of Strathcona County. Increasing transit ridership can reduce growth in vehicle congestion and the capital and operating expense of widening roads and building structured parking facilities. Increasing transit's mode share was also a key recommendation in the County's ITMP, and this master plan identifies strategies to move in this direction.</p> <p>The plan does not address the existing fare structure. This is something that the County should evaluate as part of their annual business planning process to balance ridership growth targets with financial performance targets.</p>

Implementation and Phasing Plan

The following phasing and implementation plan groups the necessary steps to achieve the Strategic Directions. The phasing of each Strategic Direction is illustrated in **Figure 24**, while **Appendix A** provides a more detailed summary of next steps, including estimated operating and capital costs (also summarized in **Section 15.0 – Financial Plan**).

It should be noted that the timing of many of these are subject to a number of factors, including the pace of population and employment growth in Cambrian Crossing and Bremner, ridership growth and the success of pilot projects. The timing of each Strategic Direction should be reviewed annually and be subject to the annual business planning and budgeting process conducted by Strathcona County Transit.

The implementation plan is split into four main horizon periods over the next ten years.

Immediate-term (2019) Implementation Plan

The immediate-term plan addresses recommendations that should be implemented in the first year of the Transit Master Plan. As such, there are no significant costs associated with these strategic directions. The majority of these tasks involve further planning and research required before service modifications occur in the short to medium-term horizon. Much of the immediate-term also involves steps under the 'Mobility Management' strategic direction, which focus on organizational changes to how Strathcona County Transit views its role in providing sustainable mobility and further refining the Dynamic Transit Service strategy. Key steps for Strathcona County to take in the Immediate-term include:

Strategic Direction	Key Tasks
MM1 - Explore the Introduction of Dynamic Transit Services	<ul style="list-style-type: none"> • Develop a business case to implement a Dynamic Transit pilot, starting with service on weekday evenings and all-day weekends • Meet with Strathcona County legal and procurement departments early to address any issues around liability and privacy impact statements • Explore integration opportunities with planned Regional Smart Fare project. • Develop policies and procedures around service • Meet with potential on-demand mobile app and service providers to understand their ability to deliver on the Dynamic Transit design parameters set out in the business case • Develop an RFP for a one-year pilot of dynamic transit service on evenings and weekends (replacing existing fixed route services) • Issue RFP in Fall 2019 for the introduction of a Dynamic Transit service pilot in the Urban Service Area on weekday evenings and all-day weekends

Strategic Direction	Key Tasks
MM2 - Explore Partnerships with Other Mobility Providers	<ul style="list-style-type: none"> • Designate a senior Strathcona County Transit staff member to be responsible for exploring partnerships with other mobility providers and potential to integrate with existing Strathcona County Transit services • Initiate a Mobility Management business plan, with a focus on sustainable mobility options to Strathcona County residents • Develop a marketing plan to promote the use of sustainable mobility services
MM3 - Partnerships with Community Agencies	<ul style="list-style-type: none"> • Include potential partnerships with community agencies as part of the Mobility Management plan • Engage community agencies that deliver transportation as part of their programming to assess potential partnerships • Develop plans including potential funding programs through County decision-making processes
MM4 - Travel Training	<ul style="list-style-type: none"> • Develop a business plan for a new travel training program • Undertake a 'best practices in travel training' peer agency assessment • Modify existing travel training program based on results of this assessment • Building on the 'take the bus' program being launched through the Customer Experience area • Access existing customer service representatives, as able, to deliver these sessions with a Strathcona County Transit bus and operator • Assess the use of peer training programs to leverage resources in the community (for implementation in the short-term or medium-term period)
MM7 - Equity of Attendants	<ul style="list-style-type: none"> • Ensure that Mobility Bus registrants have an identification card that can be used to verify their eligibility to bring an attendant for free on conventional buses • Update policy and procedure documentation • Develop and implement a communication plan to inform bus operators, Mobility Bus registrants and others as required
MM8 - Integration of Mobility Bus and Dynamic Transit Service	<ul style="list-style-type: none"> • Through the business case development (Strategic Direction MM1), assess the costs and benefits of integrating Mobility Bus and Dynamic Transit Services
US5 - Expand Service for Mobility Bus Registrants	<ul style="list-style-type: none"> • Confirm the growth rate following fare parity implementation in July 2018. Each year update historic figures and adjust budget projections • Implement demand management strategies to ensure Mobility Bus is available for those with the least ability to access other travel options • Implement initiatives to improve operational effectiveness

Strategic Direction	Key Tasks
IM1 - Identify Integration Opportunities with Edmonton Transit Service (ETS)	<ul style="list-style-type: none"> Work with ETS to identify opportunities to connect Inter-municipal Routes from Ordze Transit Centre to the future Bonnie Doon Station while the station is being planned

Short-term (2020) Implementation Plan

The short-term plan addresses recommendations that should and can be implemented in the second year of the Transit Master Plan. Some of these are continuations of recommendations from the immediate-term plan. The primary tasks in the short-term plan are to implement Dynamic Transit Service as well as a number of low-cost expansion opportunities to the Inter-municipal service. Key steps for Strathcona County to take in the short-term include:

Strategic Direction	Key Tasks
MM5 - Manage Parking Demand through Transportation Demand Strategies	<ul style="list-style-type: none"> Initiate a parking study to explore the likely effects of expanding the paid parking program at the transit terminals Monitor Dynamic Transit service pilot to estimate potential impact on parking demand
MM6 - Continue to improve Eligibility based on a Family of Services Approach	<ul style="list-style-type: none"> Review the existing Mobility Bus application for ways to update the required information to more accurately assess the abilities of the applicant Assess the most effective approach to conduct an in-person assessment that best meets the needs of Strathcona County Transit Implement new application approach and advise the affected registrants
MM8 - Integration of Mobility Bus and Dynamic Transit Service	<ul style="list-style-type: none"> During the initial Dynamic Transit pilot, explore opportunities to use the Dynamic Transit mobility app to book Mobility Bus trips on evenings and weekends Identify the best scheduling software for Mobility Bus and Dynamic Transit
US1 - Rethink Evening and Weekend Service	<ul style="list-style-type: none"> Pilot a Dynamic Transit Service on weekday evenings and all-day weekends for a full year to evaluate its effectiveness
US5 - Expand Service for Mobility Bus Registrants	<ul style="list-style-type: none"> Implement a more accurate eligibility determination process (Strategic Direction MM6) Integrate service delivery, where possible, with Dynamic transit services (Strategic Direction MM8)

Strategic Direction	Key Tasks
IM1 - Identify Integration Opportunities with Edmonton Transit Service (ETS)	<ul style="list-style-type: none"> ● Modify Inter-municipal Routes from Ordze Transit Centre and schedule once the Valley Line LRT is operational to connect to Bonnie Doon station ● Communicate connection opportunities to Bonnie Doon station to Strathcona County Transit customers ● If Strathcona County joins the Commission, be part of a working group to better assess the opportunity to short-turn certain Inter-municipal Routes at the Bonnie Doon LRT station
IM2 - Improve Evening Connections to University of Alberta (UofA)	<ul style="list-style-type: none"> ● Work with University of Alberta student association to confirm evening class times and number of students that attend each class ● Consider extending Route 414 by one trip to accommodate last class time ● Initiate a more detailed service planning process to improve evening service once the evening Dynamic Transit Service Pilot is in place
IM3 - Improve Weekend Service	<ul style="list-style-type: none"> ● Monitor Saturday and Sunday ridership on Route 411 and conduct a more detailed assessment of demand to University of Alberta on weekends ● Initiate a more detailed service planning review to identify cost-effective solutions to improve level of service on weekends ● As service utilization thresholds are reached, increase Saturday daytime frequencies first (e.g. 10:00am to 6:00pm) ● Frequency improvements to other periods of the day or on Sunday should be considered in the medium-term if service improvement is successful
IM4 - Improve Connections to NAIT	<ul style="list-style-type: none"> ● Work with NAIT student association to confirm class times and trip demand from students living in Strathcona County ● Assess various service options to improve service to NAIT ● Review service options in 2020
IM7 - Identify Opportunities to Expand Service to Other Destinations in Edmonton	<ul style="list-style-type: none"> ● Assess demand for trips to hospitals not currently served by Mobility Bus and alternative ways to deliver these trips, if sufficient demand exists ● Initiate discussions with DATS to coordinate trips to these hospitals through the Family of Services approach (at an accessible transfer point with the Inter-municipal Route in downtown Edmonton)
RS1 - Addressing the Needs of Rural Mobility Bus Registrants	<ul style="list-style-type: none"> ● Confirm ridership forecasts and costs of providing weekend Mobility Bus service in the Rural Service Area ● Assess community-based volunteer services that might be accessed to meet weekend Mobility Bus needs in the Rural Service Area ● Estimate the cost of increasing service hour coverage to weekends on Mobility Bus, if demand warrants ● Provide mobility options in the Rural Service Area on weekends for up to six hours daily, targeted to Mobility Bus registrants

Medium-term (2021-2023) Implementation Plan

The medium-term plan addresses recommendations that should and can be implemented in the third to fifth years of the Transit Master Plan. Some of these are continuations of recommendations from the short-term plan and some will continue into the long-term plan. The primary strategies that will take place in the medium-term include expanding on the Family of Services concept, addressing the issue of paid parking at the Bethel Transit Terminal and Ordze Transit Centre, and continuing to expand the Dynamic Transit service plan. Key steps for Strathcona County to take in the medium-term include:

Strategic Direction	Key Tasks
MM4 - Travel Training	<ul style="list-style-type: none"> Establish permanent travel training program and better tie in with conditional eligibility (as part of the Family of Services approach)
MM5 - Manage Parking Demand through Transportation Demand Management Strategies	<ul style="list-style-type: none"> Implement paid parking solution at Bethel Transit Terminal and/or Ordze Transit Centre (depending on the outcome of the parking study) Monitor parking and local transit utilization before and after implementation of paid-parking solution to assess results
MM6 - Continue to improve Eligibility based on a Family of Services Approach	<ul style="list-style-type: none"> Transition to full Family of Services approach Modify application to include 'conditional eligibility' based on registrants going through a travel training program soon after their approval Update travel training program and identify need to invest further staff resources into travel training staff Change policies and procedures, as well as communication materials
MM8 - Integration of Mobility Bus and Dynamic Transit Service	<ul style="list-style-type: none"> Integrate Dynamic Transit Service with Mobility Bus service to the extent feasible Link to the 'Family of Services' approach
MM9 - Work with Technology Providers to Develop Integrated Scheduling and Mobile App for Demand-Responsive Services	<ul style="list-style-type: none"> Assess options to move to one scheduling/on-demand tool to allow customers to book, track and pay for their trip and optimize ridesharing opportunities Pick a single software / mobile app solution for both service types to better optimize trip delivery

Strategic Direction	Key Tasks
US2 - Introduce Dynamic Transit Service options to Bethel Transit Terminal and Other Key Destinations	<ul style="list-style-type: none"> ● Use data from evening and weekend pilot project to assess effectiveness of service model ● Survey customers using the evening and weekend Dynamic Transit Service to better understand the customer experience ● Use this data to confirm Local Routes that should be replaced by a Dynamic Transit Service (and the key destinations they should connect to) ● Pilot weekday day-time Dynamic Transit service on Local Routes for a one-year period ● Develop a communication and marketing plan before initiating the service
US3 - Review Local Service in Sherwood Park	<ul style="list-style-type: none"> ● Review data from weekday day-time pilot service and evening and weekend service to better understand travel patterns ● Survey customers using the weekday day-time dynamic transit pilot service to gauge satisfaction with the service model ● Initiate an operational review of existing day-time services in the Urban Service Area and recommend an appropriate structure based on data and public feedback ● Implement service based on Council approval ● Develop communications and marketing strategy to coincide with implementation
US4 - Expand Service to Cambrian Crossing and Bremner	<ul style="list-style-type: none"> ● Develop a service plan for the Cambrian Crossing community, to be introduced once the population meets the minimum thresholds noted in the Service Standards (Section 11.4.6) ● Communicate and advertise new service plan to residents in the Cambrian Crossing Community ● Implement an all-day Dynamic Transit Service within Cambrian Crossing and between Cambrian Crossing and Emerald Drive area once population is between 500 and 1,000 ● Implement a Local Route service within Cambrian Crossing and between Cambrian Crossing and Emerald Drive once population is between 1,200 and 1,800
US5 - Expand Service for Mobility Bus Registrants	<ul style="list-style-type: none"> ● Continue to monitor growth and add Mobility Bus and contracted taxi resources as required ● Improve the travel training program based on Family of Services approach ● Implement a Family of Services approach ● Improve integration opportunities with Inter-municipal Routes and DATS ● Continue to enhance scheduling software (with potential integration with Dynamic Transit Services)

Strategic Direction	Key Tasks
US6 - Improve Accessibility of Services	<ul style="list-style-type: none"> • Undertake a process to consult key stakeholders to gather their input on a County policy and priorities to improve accessibility • Develop an overarching policy that outlines the County's commitment to an accessible transit service within an enabling community environment • Develop short and long-term plans identifying improvements to policies, procedures, information, training, infrastructure, etc., to achieve a more fully accessible transit service
IM3 - Improve Weekend Service	<ul style="list-style-type: none"> • Conduct more detailed forecasts of Sunday ridership based on natural growth and productivity achieved on Saturday service with the increase in frequency • Increase daytime service frequency on Sundays for eight hours a day
IM4 - Improve Connections to NAIT	<ul style="list-style-type: none"> • Implement selected service option in September 2021
IM5 - Expand Service to Grow Ridership	<ul style="list-style-type: none"> • Conduct service planning for expansion of Inter-municipal service to Cambrian Crossing and Bremner • Provide hourly Inter-municipal Service to Cambrian Crossing through Bethel Transit Terminal as a first step • As ridership grows, expand frequency of service based on meeting productivity targets in the Service Standards • Expand the service hours of existing Inter-municipal Routes as ridership and population growth warrants
IM6 - Integration with Mobility Bus	<ul style="list-style-type: none"> • Assess current trips of Mobility Bus customers to determine if opportunities exist for connections onto the fixed Inter-municipal Routes • As the scheduling software is implemented, include as much as possible, the ability to deliver integrated trips in the technology platform • Work with DATS to identify opportunities to coordinate trips to hospitals in Edmonton for Mobility Bus registrants • Ensure travel training program includes use of Inter-municipal Routes
IM8 - Protecting for Transit Priority and Rapid Transit	<ul style="list-style-type: none"> • Initiate a study on the Baseline Road corridor to gather data on areas of delay and assess various locations where transit priority measures could be introduced

Long-term (2024-2028) Implementation Plan

The long-term plan addresses recommendations that primarily address expansion of future residential growth within the Urban Service Area, continued expansion of Mobility Bus service and improvements to Inter-municipal service to improve travel time and reliability and continued expansion to Cambrian Crossing and Bremner. Key steps for Strathcona County to take in the long-term include:

Strategic Direction	Key Tasks
US4 - Expand Service to Cambrian Crossing and Bremner	<ul style="list-style-type: none"> Continue to expand local transit service to Cambrian Crossing (Local fixed-route and/or Dynamic Transit) as population and employment continue to grow. This may involve modifying existing routes in Sherwood Park to better integrate with service in the Cambrian Crossing area Implement service to Bremner using a similar staging pattern as Cambrian Crossing
US5 - Expand Service for Mobility Bus Registrants	<ul style="list-style-type: none"> Continue to monitor growth and add Mobility Bus and contracted taxi resources as required
IM5 - Expand Service to Grow Ridership	<ul style="list-style-type: none"> Extend service to Bremner starting in 2024 (or based on population growth) following a similar phasing process as Cambrian Crossing Increase weekday peak period headway on existing routes from Bethel Transit Terminal to Edmonton as ridership growth occurs (based on Service Standards being achieved)
IM8 - Protecting for Transit Priority and Rapid Transit	<ul style="list-style-type: none"> Identify and protect for a future rapid transit corridor on Baseline Road in updates to existing planning documents Implement transit priority measures in the Baseline Road corridor as recommended by the study
RS2 - Expand Service to Ardrossan	<ul style="list-style-type: none"> Conduct more detailed service planning, including proposed service hours, frequency and stop locations Consult with residents in the Ardrossan community to better understand travel patterns Explore location to build a small park-and-ride lot in Ardrossan Implement a local fixed-route peak service between Ardrossan and Bethel Transit Terminal once population is between 2,400 and 2,800 Implement a local fixed-route midday service between Ardrossan and Bethel Transit Terminal once population is between 5,500 and 6,000
RS3 - Expand Demand-Responsive Services to All Rural Residents	<ul style="list-style-type: none"> Undertake further cost-benefit analysis of implementing Dynamic Transit service in the Rural Service Area Present to Council. If deemed feasible, implement in the long-term

Strategic Direction	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Mobility Management										
MM1 - Explore the Introduction of Dynamic Transit Services										
MM2 - Explore Partnerships with Other Mobility Providers										
MM3 - Partnerships with Community Agencies										
MM4 - Travel Training										
MM5 - Manage Parking Demand through Transportation Demand Strategies										
MM6 - Continue to improve Eligibility based on a Family of Services Approach										
MM7 - Equity of Attendants										
MM8 - Integration of Mobility Bus and Dynamic Transit Service										
MM9 - Develop Integrated Scheduling and Mobile App for Demand-Responsive Services										
Mobility in the Urban Service Area										
US1 - Rethink Evening and Weekend Service										
US2 - Introduce Dynamic Transit Service options to BTT and Other Key Destinations										
US3 - Review Local Service in Sherwood Park										
US4 - Expand Service to Cambrian Crossing and Bremner										
US5 - Expand Mobility Bus Service										
US6 - Improve Accessibility of Services										
Mobility for Inter-municipal Travel										
IM1 - Identify Integration Opportunities with Edmonton Transit Service (ETS)										
IM2 - Improve Evening Connections to UofA										
IM3 - Improve Weekend Service										
IM4 - Improve Connections to NAIT										
IM5 - Expand Service to Grow Ridership										
IM6 - Integration with Mobility Bus										
IM7 - Identify Opportunities to Expand Service to Other Destinations in Edmonton										
IM8 - Protecting for Transit Priority and Rapid Transit										
Mobility in the Rural Service Area										
RS1 - Addressing the Needs of Rural Mobility Bus Registrants										
RS2 - Expand Service to Ardrossan										
RS3 - Expand Demand-Responsive Services to All Rural Residents										

Figure 24 - Strategic Directions Implementation Overview

15.0

Financial Plan

The financial plan is a summary of all the costs identified to implement the Strategic Directions in the implementation plan. These are in addition to Strathcona County Transit's existing annual operating costs.

No significant additional costs are anticipated for 2019 outside of one-time fees required to further operationalize the strategy. In the short-term, some minimal cost increases are required to improve Mobility Bus service (as a result of fare parity) and make some improvements to evening and weekend Inter-municipal service. In the medium to long-term, cost increases are budgeted for to accommodate service improvements, with the majority of costs going towards expansion of service to Cambrian Crossing, Bremner and Ardrossan. **Table 21** presents anticipated additional operating costs that should be considered in new operating budgets over the next 10 years. This does not include potential customer revenue that would be generated from improved and expanded service.

Table 22 provides anticipated vehicle expansion and other capital costs to accommodate service improvements. This identifies only expansion vehicles and does not include any additional spare vehicles required to maintain a healthy spare ratio. With the introduction of Dynamic Transit Services, there may be some cost savings as retiring 40-foot buses used to operate Local Routes may be replaced with smaller less expensive vehicles used to operate the Dynamic Transit Service. Some estimates for this are made in the implementation plan, but this will need further review as the strategy is operationalized.

A range is identified for all costs given the strategic nature of this plan. Each cost should be further reviewed as part of the annual business planning and budgeting process required each year before budgets are approved.

It is also anticipated that there will be a need for one-time consulting fees to help operationalize and market the strategy, depending on the availability of existing staff. The fees in the immediate-term are to further refine the strategic plan, with a focus on operationalizing the Dynamic Transit Service strategy (\$155,000 to \$225,000).

In the short-term, this is anticipated to reduce to \$50,000 to \$70,000, focused on developing a plan for the parking strategy. In the medium-term, there is a need to further develop a service plan for the Urban Service Area to better integrate Dynamic Transit Service with Local Routes, implement a Family of Services approach and conduct a transit priority corridor study on Baseline Road (\$290,000 to \$410,000 over a three year period). In the long-term, costs are required to further assess transit service in the Rural Service Area (\$50,000 to \$70,000). It should be noted that the costs identified above are focused on the implementation of the above noted Strategic Directions. There may be other costs identified,

including a five-year update of this Strategic Master Plan, which was not included in this estimate and should be identified in the annual business planning and budgeting process.

Table 21 - Annual Operating Costs

Strategic Direction	2019	2020	2021-2023 (annual)	2024-2028 (annual)
MM3 - Partnerships with Community Agencies (community grant program)	-	\$25,000	\$25,000	\$25,000
MM4 - Travel Training	-	-	\$10,000 - \$15,000	\$10,000 - \$15,000
MM6 - Continue to improve Eligibility based on a Family of Services Approach (Occupational Therapist)	-	\$15,000 - \$30,000	\$15,000 - \$30,000	\$15,000 - \$30,000
US4 - Expand Service to Cambrian Crossing and Bremner	-	-	\$344,000 - \$460,000	\$918,000 - \$1,377,000
US5 - Expand Service for Mobility Bus Registrants	-	-	\$112,000 - \$215,000	\$261,000 - \$500,000
IM2 - Improve Evening Connections to University of Alberta (UofA)	-	\$15,000 - \$23,000	\$15,000 - \$32,000	\$15,000 - \$32,000
IM3 - Improve Weekend Service	-	\$35,000	\$35,000 - \$89,000	\$35,000 - \$89,000
IM4 - Improve Connections to NAIT	-	-	\$10,000 - \$60,000	\$10,000 - \$60,000
IM5 - Expand Service to Grow Ridership	-	-	\$383,000 - \$577,000	\$1,004,000 - \$1,876,000
RS1 - Addressing the Needs of Rural Mobility Bus Registrants	-	\$27,000 - \$48,000	\$27,000 - \$48,000	\$27,000 - \$48,000
RS2 - Expand Service to Ardrossan	-	-	-	\$128,000 - \$277,000
Total	\$0	\$117,000 - \$161,000	\$976,000 - \$1,551,000	\$2,448,000 - \$4,329,000

Table 22 - Capital Plan (vehicle expansion and accessibility improvements)

Strategic Direction	2019	2020	2021-2023	2024-2028
US4 - Expand Service to Cambrian Crossing and Bremner (40' buses)	-	-	\$0 - \$670,000	\$0 – \$1,340,000
US5 - Expand Service for Mobility Bus Registrants	-	-	\$0 - \$405,000	\$135,000
IM4 - Improve Connections to NAIT (double-decker vehicle)	-	-	\$0 - \$1,200,000	-
IM5 - Expand Service to Grow Ridership (double decker vehicles)	-	-	\$1,200,000 - \$2,400,000	\$2,400,000 – \$4,800,000
US6 - Improve Accessibility of Services (budgeted for accessibility improvements)	-	-	\$150,000	\$250,000
RS2 - Expand Service to Ardrossan (40' bus)	-	-	-	\$670,000
Total	\$0	\$0	\$1,350,000 - \$4,825,000	\$3,455,000 - \$7,195,000

Appendix A

Detailed Implementation Plan

Appendix A: Detailed Implementation Plan

The following appendix provides a more detailed list of implementation steps identified in **Section 14.0** of the report. For each of the Strategic Directions in the phasing and implementation plan, next steps are provided, including estimated operating and capital costs. Where next steps for each Strategic Direction transcend multiple horizon years, steps in previous and/or future horizon years are also noted in grey text to help visualize the continuation between horizon years.

Immediate-term (2019) Implementation Plan

The immediate-term plan addresses recommendations that should be implemented in the first year of the Transit Master Plan. As such, there are no significant costs associated with these strategic directions. The majority of these tasks involve further planning and research required before service modifications occur in the short- to medium-term horizon. Much of the immediate-term also involves steps under the 'Mobility Management' strategic direction, which focus on organizational changes to how Strathcona County Transit views its role in providing sustainable mobility.

MOBILITY MANAGEMENT (SD MM)

Strategic Direction	MM1: Explore the of Introduction of Dynamic Transit Services
Background	This strategic direction focuses on further exploring the potential to implement Dynamic Transit Services during low-demand periods and areas of the County. This will involve building a business case that will provide further clarity on the service model, design parameters and potential costs and revenue. The completion of this step is required prior to the implementation of an evening and weekend Dynamic Transit pilot service identified in Strategic Direction US1, US2 and RS3.
Next Steps	<ul style="list-style-type: none"> Develop a business case to implement a Dynamic Transit pilot, starting with service on weekday evenings and all-day weekends (Strategic Direction US1). The business case should confirm the service model (e.g. use of dedicated or non-dedicated service), provide a further estimate on cost, ridership and revenue and set out the design parameters that will be used in the development of a Request for Proposals (RFP) for the use of an on-demand mobile app. The business case should also provide further clarity on potential implementation of Dynamic Transit Services during the weekday daytime period (Strategic Direction US2) and in the Rural Service Area of the County

	<p>(Strategic Direction RS3). Target completion by June 2019 to allow the new model to be included in the 2020 budget process.</p> <ul style="list-style-type: none"> ● Meet with Strathcona County legal and procurement departments early to address any issues around liability and privacy impact statements that may arise and that should be included in a future RFP. ● Explore integration opportunities with planned Regional Smart Fare project. ● Develop policies and procedures around service delivery (including transporting of children and infants and requirements for child seats in vehicles). ● Meet with potential on-demand mobile app providers to understand their ability to deliver on the Dynamic Transit design parameters set out in the business case. ● Assess whether the delivery of the service should be completed using existing vehicles and operators or contracted out to a third-party operator. ● Develop an RFP for a one-year pilot of Dynamic Transit Service on evenings and weekends (replacing existing Local Route services). ● Issue RFP in Fall 2019 for the introduction of a Dynamic Transit Service pilot in the Urban Service Area on weekday evenings and all-day weekends. Consideration should also be made to issue a Request for Information (RFI) in the late Summer if more information from potential respondents is deemed beneficial to developing the RFP.
Annual Operating Cost	Staff time
Capital Cost	\$40,000 to \$60,000 for consulting expertise (depending on staff availability to conduct work)
Timeframe	2019
Strategic Direction	MM2: Explore Partnerships with other Mobility Providers
Background	<p>This Strategic Direction involves a shift in how Strathcona County Transit operates and views its mission. The focus shifts from providing transit service to managing sustainable mobility options (which include transit). To further implement this Strategic Direction, a member of existing staff will need to be positioned to take on this new direction, beginning with a Mobility Management plan to better understand the opportunities available to the County through partnerships to improve mobility options for residents.</p>

Next Steps	<ul style="list-style-type: none"> • Designate a senior Strathcona County Transit staff member to be responsible for exploring partnerships with other mobility providers and potential to integrate with existing Strathcona County Transit services (target early Spring 2019). • Initiate a Mobility Management business plan, with a focus of exploring opportunities to provide sustainable mobility options to Strathcona County residents. This may be done in-house or through outside expertise depending on staff availability. The Mobility Management plan should include an inventory of existing mobility providers, a best practices review of other tools that could be implemented in the County (e.g. carpooling software), promotion and education campaigns, and an assessment of how these partnerships can be integrated with Strathcona County Transit services. Start in Fall 2019, with completion in 2020. • Develop a marketing plan to promote sustainable mobility options. May involve contracting to a marketing/advertising firm.
Annual Operating Cost	Staff time
Capital Cost	<p>\$50,000 to \$70,000 for consulting expertise (depending on staff availability to conduct work)</p> <p>\$50,000 to \$70,000 to engage an advertising/marketing firm to develop a marketing strategy (depending on internal staff availability)</p>
Timeframe	2019
Strategic Direction	MM3: Partnerships with Community Agencies
Background	Community agencies such as Robin Hood, Capital Health, etc. currently provide transportation as part of their service offering in certain circumstances. These forms of transportation tend to operate in a shared-ride format and support sustainable mobility. The implementation of this strategic direction can be completed as part of the Mobility Management plan as identified in Strategic Direction MM2.

Next Steps	<ul style="list-style-type: none"> ● Include potential partnerships with community agencies as part of the Mobility Management plan. ● Through this plan, engage community agencies that deliver transportation as part of their programming to assess potential partnerships to continue and potentially expand mobility options across the community. ● Assess which partnerships align with the County's role as a Mobility Manager and offer good value for citizens. ● Develop plans, including potential funding programs through County decision-making processes.
Annual Operating Cost	<p>2019 - \$0</p> <p>2020 and beyond - \$25,000 (estimated community grant program to sustain mobility options that reduce the need to expand Mobility Bus services)</p>
Capital Cost	Included as part of Strategic Direction MM2
Timeframe	2019
Strategic Direction	MM4: Travel Training
Background	Orientation and training is often the only thing that prevents a person with a disability from accessing conventional public transit services. Travel training programs are designed to ensure that lack of awareness, training and familiarity with conventional transit is not a barrier to accessing transit services.

Next Steps	<ul style="list-style-type: none"> ● Develop a business plan for a new travel training program. ● Undertake a 'best practices in travel training' peer agency assessment to stay abreast of innovations that might benefit Strathcona County Transit. ● Modify existing travel training program based on results of this assessment. Start in Fall 2019 with completion in 2020. This may involve consulting expertise. ● Building on the 'take the bus' program being launched through the Customer Experience area, promote orientation opportunities to Mobility Bus registrants and other groups who would most benefit from this training. ● Access existing customer service representatives, as able, to deliver these sessions with a Strathcona County Transit bus and operator to allow individuals to practice in a safe, supportive environment. ● Assess the use of peer training programs such as high school students, persons with developmental disabilities, summer students, etc. to leverage resources in the community (for implementation in the short-term or medium-term period).
Annual Operating Cost	Staff time
Capital Cost	\$15,000 to \$25,000 for consulting expertise (depending on staff availability to conduct work)
Timeframe	2019 - 2023
Strategic Direction	MM7: Equity of Attendants
Background	To continue to encourage more persons with disabilities to use the more fully accessible conventional service, Strathcona County Transit is introducing 'an attendants ride free' policy, so that Mobility Bus registrants can bring someone to assist them, if need be, when riding the conventional bus. This aligns practices across Mobility Bus and conventional bus services.

Next Steps	<ul style="list-style-type: none"> • Ensure that Mobility Bus registrants have an identification card that can be used to verify their eligibility to bring an attendant for free on conventional buses. • Update policy and procedure documentation to include applicable information on 'attendants accompanying a fare paying Mobility Bus registrant ride free on conventional'. • Develop and implement a communication plan to inform bus operators, Mobility Bus registrants and others as required that Strathcona County Transit has an 'attendants ride free' policy.
Annual Operating Cost	Within existing budget for communication materials. Potential for cost savings or deferral if Mobility Bus trip growth can be contained.
Capital Cost	Not applicable
Timeframe	2019
Strategic Direction	MM8: Integration of Mobility Bus and Dynamic Transit Service
Background	This Strategic Direction is tied to the business case for Dynamic Transit Services being developed (Strategic Direction MM1). Exploring the option of integrating Dynamic Transit Services with Mobility Bus to the extent it is deemed beneficial should be undertaken (service comingling). This will better utilize existing resources.
Next Steps	<ul style="list-style-type: none"> • Through the business case development (Strategic Direction MM1), assess the costs and benefits of integrating Mobility Bus and Dynamic Transit Services, starting in the short-term.
Annual Operating Cost	Staff time
Capital Cost	Included as part of Strategic Direction MM1
Timeframe	2019-2023

MOBILITY IN THE URBAN SERVICE AREA (SD US)	
Strategic Direction	US5: Expand Service for Mobility Bus Registrants
Background	Fare parity introduced in July 2018 saw a forecasted bump in ridership. The growing and aging population is projected to increase annual rides on Mobility Bus from approximately 21,000 trips in 2017 to between 37,000 and 44,000 trips by the end of 2019. To maintain the existing level of service to persons with disabilities unable to use the conventional system, capital and operating budgets will need to grow concurrently. In the immediate-term, the focus should be on improving the effectiveness of the service and make the conventional Local Routes more accessible to manage demand. Expansion of Mobility Bus revenue service hours may also be required.
Next Steps	<ul style="list-style-type: none"> • Confirm the growth rate following fare parity implementation in July 2018. Each year update historic figures and adjust budget projections. • Implement demand management strategies to ensure Mobility Bus is available for those with the least ability to access other travel options including: <ul style="list-style-type: none"> • deliver travel training (Strategic Direction MM4); • enable 'attendants ride free' on conventional (Strategic Direction MM7). • Implement initiatives to improve operational effectiveness such as: <ul style="list-style-type: none"> • deploying new scheduling software; • use non-dedicated services (e.g. taxis) to deliver at least 10% of trips in locations and time periods, as appropriate; • Expand Mobility Bus revenue service hours to accommodate growing demand.
Annual Operating Cost	Annual cost for new eligibility assessments (covered in Strategic Direction MM6). The majority of expansion costs accounted for in the 2018 budget
Capital Cost	Assumed ridership growth can be accommodated by existing fleet (due to existing high spare ratio)
Timeframe	2019-2028

MOBILITY FOR INTER-MUNICIPAL TRAVEL (SD IM)	
Strategic Direction	IM1: Identify Integration Opportunities with Edmonton Transit Service (ETS)
Background	The strategic direction confirms that the current Inter-municipal Route structure of providing direct links to key destinations in Edmonton is more effective than short-turning routes at LRT stations. As the LRT network expands, connections to LRT stations should be made, however, these should not be a terminus station. In 2019, ETS continues to plan and build the Valley Line LRT service. It will be important for Strathcona County Transit to continue to work with ETS to improve integration opportunities at the future Bonnie Doon Station.
Next Steps	<ul style="list-style-type: none"> • Work with ETS to identify opportunities to connect Inter-municipal Routes from Ordze Transit Centre to the future Bonnie Doon Station while the station is being planned. This should involve the identification of a bus bay for Strathcona County Transit vehicles as well as potential modifications to Strathcona County Transit service which would minimize increases in travel time.
Annual Operating Cost	Staff time
Capital Cost	Not applicable
Timeframe	2019-2020

Short-term (2020) Implementation Plan

The short-term plan addresses recommendations that should and can be implemented in the second year of the Transit Master Plan. Some of these are continuations of recommendations from the immediate-term plan. The primary tasks in the short-term plan are to implement Dynamic Transit Service as well as a number of low-cost expansion opportunities to the Inter-municipal service.

MOBILITY MANAGEMENT (SD MM)

Strategic Direction	MM5: Manage Parking Demand through Transportation Demand Management Strategies
Background	The park-and-ride lots at both Bethel Transit Terminal and Ordze Transit Centre reach capacity on a regular basis during the Fall and Winter periods. The uncertainty of being able to find a parking spot reduces the dependability of the park-and-ride program for those who have no other option for traveling to the terminals. The existing paid Advantage Parking reserved stalls are very popular and expanding this program or another approach would be much more cost-effective than building additional parking stalls. Adding a cost to parking would also increase the attractiveness of local transit in the Urban Service Area.
Next Steps	<ul style="list-style-type: none"> • Initiate a parking study to explore the likely effects of expanding the paid parking program at the transit terminals, and what division of paid/free parking is optimal. • The study should identify the technology and cost for expanding the preferred parking solution and should ensure that rural residents have equitable access to parking at the transit terminals. • Monitor Dynamic Transit service pilot to estimate potential impact on parking demand.
Annual Operating Cost	Staff time
Capital Cost	\$50,000 to \$70,000 for consulting expertise (depending on staff availability to conduct the work and level of consultation required)
Timeframe	2020 - 2023

Strategic Direction	MM6: Continue to improve Eligibility based on a Family of Services Approach
Background	The current means used by Strathcona County Transit to determine eligibility is a paper-based application with medical verification. This follows years of experience in Canada and the US, but is deemed to be less effective. As the conventional transit service becomes more fully accessible, an in-person component is needed to more accurately assess the functional abilities of applicants to determine which transit service or combination of services best meet the needs of the individuals. This is also known as the Family of Services approach. The first step in this Strategic Direction is to rethink the application process. This should follow a process that uses functional eligibility to determine when a registrant can use an accessible conventional service or can only use the Mobility Bus service.
Next Steps	<ul style="list-style-type: none"> ● Review the existing Mobility Bus application for ways to update the required information to more accurately assess the abilities of the applicant. ● Assess the most effective approach to conduct an in-person assessment that best meets the needs of Strathcona County Transit. Options to undertake an in-person component of the eligibility process include contracting with an external occupational therapy service, providing a municipal location to meet with staff to review the services, etc. ● Implement new application approach and advise the affected registrants.
Annual Operating Cost	Dependent on approach chosen. A contracted Occupational Therapist service provider is estimated to cost \$100 to \$150 per 30 minute interview. Assuming there are 150 to 200 new applicants annually, the estimated cost would be between \$15,000 and \$30,000.
Capital Cost	Assume staff have ability to develop new application form.
Timeframe	2020-2023
Strategic Direction	MM8: Integration of Mobility Bus and Dynamic Transit Service
Background	This strategic direction is a continuation of the business case that was developed in the immediate-term (Strategic Direction MM1). In the short-term with the implementation of scheduling software for Mobility Bus services, opportunities to integrate Mobility Bus and Dynamic Transit trips using the

	same vehicle should be explored. This would involve having discussions with both the Mobility Bus scheduling software provider and the Dynamic Transit on-demand mobile app provider. The goal would be to provide an integrated service in the medium-term.
Next Steps	<ul style="list-style-type: none"> • During the evening and weekend Dynamic Transit pilot, explore opportunities to use the Dynamic Transit on-demand mobility app to book Mobility Bus trips on evenings and weekends. • Assess the ability to use either the Mobility Bus scheduling software of the Dynamic Transit on-demand mobile app to book integrated Dynamic Transit and Mobility Bus trips.
Annual Operating Cost	May result in potential savings, depending on the cost of the Dynamic Transit Service
Capital Cost	There may be one-time costs to explore the integration of technology
Timeframe	2019-2023
MOBILITY IN THE URBAN SERVICE AREA (SD US)	
Strategic Direction	US1: Rethink Evening and Weekend Service
Background	This is a continuation of the Strategic Direction MM1, first implemented in 2019. If the business case for Dynamic Transit pilot is approved by Council and included in the 2020 budget, it is recommended that this be piloted for a full year, starting in the Spring or Summer (when ridership is typically lower).
Next Steps	<ul style="list-style-type: none"> • Pilot a Dynamic Transit Service on weekday evenings and all-day weekends for a full year to evaluate its effectiveness.
Annual Operating Cost	Cost estimate to be determined through the RFP process in 2019. Estimated that annual operating cost to be equal to or less than existing service provided on evenings and weekends
Capital Cost	Use either existing Mobility Bus vehicles and/or vehicles supplied by third-party operator
Timeframe	2020

Strategic Direction	US5: Expand Service for Mobility Bus Registrants
Background	Fare parity has been in place for approximately one year by early 2020, however, ridership growth as a result of this initiative is expected to continue to grow. Ridership on Mobility Bus is forecasted to increase between 37,000 and 44,000 in 2019 to between 41,000 and 50,000 trips by 2020. In 2020, the focus will be on improving the eligibility process to take advantage of the accessible conventional service where applicable as well as improve integration with the Dynamic Transit service. Continued expansion of Mobility Bus revenue service hours and contracted taxi trips will also be required to accommodate growing demand.
Next Steps	<ul style="list-style-type: none"> • Implement a more accurate eligibility determination process (Strategic Direction MM6). • Integrate service delivery, where possible, with Dynamic transit services (Strategic Direction MM8).
Annual Operating Cost	Majority of increases in service accounted for in the 2018 budget
Capital Cost	No fleet expansion anticipated in 2020 due to ridership growth
Timeframe	2019-2028
MOBILITY FOR INTER-MUNICIPAL TRAVEL	
Strategic Direction	IM1: Identify Integration Opportunities with Edmonton Transit Service (ETS)
Background	<p>This is a continuation of the Strategic Direction first implemented in 2019. In 2020, Strathcona County Transit will continue to participate in discussions regarding its potential involvement in a Regional Transit Services Commission. These discussions may further assess the potential for service and fare integration between existing Inter-municipal Routes and ETS service (particularly LRT).</p> <p>The Valley Line LRT service will also be operational and Inter-municipal Routes from Ordze Transit Centre may be modified to better integrate with the Bonnie Doon Station.</p>
Next Steps	<ul style="list-style-type: none"> • Modify Inter-municipal Routes from Ordze Transit Centre and schedule once the Valley Line LRT is operational to connect to Bonnie

	<p>Doon station.</p> <ul style="list-style-type: none"> • Communicate connection opportunities to Bonnie Doon station to Strathcona County Transit customers. • If Strathcona County joins the Commission, be part of a working group to better assess the opportunity to short-turn certain Inter-municipal Routes at the Bonnie Doon LRT station (full fare integration should be in place for this to occur so that customers are not paying a higher fare to transfer between both services).
Annual Operating Cost	No change unless round-trip travel time increases with connection to LRT
Capital Cost	Not applicable
Timeframe	2019-2020
Strategic Direction	IM2: Improve Evening Connections to University of Alberta (UofA)
Background	<p>This Strategic Direction has been identified as a high priority for implementation of increased service as well as a necessary improvement to provide students with evening classes a quicker ride home. In the short-term, there may be opportunity to extend the hours of service to UofA to accommodate the last class, however, any modifications to headway would not take place until a Dynamic Transit Service is in place during the weekday evenings (Strategic Direction US1).</p>
Next Steps	<ul style="list-style-type: none"> • Work with University of Alberta student association to confirm evening class times and number of students that attend each class. • Consider extending Route 414 by one trip during the Fall/Winter semester to accommodate last class time (if productivity service standard is anticipated to be met). • Initiate a more detailed service planning process to improve evening service once the evening Dynamic Transit Service pilot is in place (Strategic Direction US1). Target a 30 minute headway by either combining Route 414 with Route 411 or off-setting the departure time from the Bethel Transit Terminal of the two services by 30 minutes. Implement during Fall/Winter period first and assess route productivity before exploring extending service in the Summer period in the medium-term.

Annual Operating Cost	Between \$15,000 and \$23,000 (up to \$32,000 if Summer service is also provided in the medium-term)
Capital Cost	None, buses are available in evenings
Timeframe	2020
Strategic Direction	IM3: Improve Weekend Service
Background	Route 411 between Bethel Transit Terminal and Edmonton City Centre is the only Inter-municipal Route that operates on weekends. It has hourly frequency with good productivity. With the introduction of Dynamic Transit service on weekends (Strategic Direction US1), there is opportunity to improve connections to Edmonton without an increase in local transit service hours.
Next Steps	<ul style="list-style-type: none"> ● Monitor Saturday and Sunday ridership on Route 411. ● Conduct a more detailed assessment of demand to University of Alberta on weekends. ● Initiate a more detailed service planning review to identify cost-effective solutions to improve level of service on weekends. This should be a similar solution to the service plan developed for weekday evenings to maintain consistency of the service between these days of the week. ● As service utilization thresholds are reached, increase Saturday daytime frequencies first (e.g. 10:00am to 6:00pm) by either doubling the frequency of Route 411 or introducing Route 414 (with trip departure times offset by 30 minutes from the Bethel terminal). ● Frequency improvements to other periods of the day, or on Sunday should be considered in the medium-term if service improvement is successful.
Annual Operating Cost	\$35,000 for eight additional Saturday daytime trips
Capital Cost	None, buses are available on weekends
Timeframe	2020-2023

Strategic Direction	IM4: Improve Connections to NAIT
Background	There are currently four AM trips to NAIT and three PM trips from NAIT provided by Strathcona County Transit via an extension of the Route 413 service to Government Centre and MacEwan University. With the recent introduction of a U-Pass for NAIT students, NAIT ridership is growing and there is a desire by students to improve the level of service to NAIT from Strathcona County. This strategic direction is about assessing the various options to improve service to NAIT.
Next Steps	<ul style="list-style-type: none"> • Work with NAIT student association to confirm class times and trip demand from students living in Strathcona County. • Assess various service options to improve service to NAIT. Two options include extending the number of 413 trips that operate to NAIT as well as providing a new semi-express service to NAIT via Yellowhead Highway. • Review service options in 2020.
Annual Operating Cost	Staff time only in short-term
Capital Cost	No capital requirements in short-term
Timeframe	2020-2023
Strategic Direction	IM7: Identify Opportunities to Expand Service to Other Destinations in Edmonton
Background	Expanding Inter-municipal service to other destinations in Edmonton is not recommended at this time. For Mobility Bus service, there was a stronger desire to extend service to hospitals currently not serviced by Mobility Bus. This demand would need to be explored further, including options to provide the connection through the Family of Services approach (connection with DATS).
Next Steps	<ul style="list-style-type: none"> • Assess demand for trips to hospitals not currently served by Mobility Bus and alternative ways to deliver these trips, if sufficient demand exists. • Initiate discussions with DATS to coordinate trips to these hospitals through the Family of Services approach (at an accessible transfer point with the Inter-municipal Route in downtown Edmonton).

Annual Operating Cost	None - staff time for coordination only
Capital Cost	Not applicable
Timeframe	2020
MOBILITY IN THE RURAL SERVICE AREA	
Strategic Direction	RS1: Addressing the Needs of Rural Mobility Bus Registrants
Background	<p>This strategic direction is based on assessing the potential to implement weekend Mobility Bus service in the Rural Service Area of the County. Weekend ridership on Mobility Bus in the Urban Service Area currently represents approximately 17% of average weekday ridership on Saturdays and 29% of average weekday ridership on Sundays. Ridership on Sundays is typically higher due to attendance at religious institutions, and is therefore more focused in the morning and early afternoon.</p> <p>Currently, Mobility Bus provides an average 12 daily trips in the Rural Service Area. Applying these same ratios to the weekend yields an average of two to four daily trips on a Saturday and three to five daily trips on a Sunday.</p>
Next Steps	<ul style="list-style-type: none"> • Confirm ridership forecasts and costs of providing weekend Mobility Bus service in the Rural Service Area. • In the new role of “Mobility Manager”, assess community-based volunteer services that might be accessed to meet weekend Mobility Bus needs in the Rural Service Area. This could include tools that might be accessed by individuals and groups to support carpooling, for example, among neighbours across the County. • Estimate the cost of increasing service hour coverage to weekends on Mobility Bus, if demand warrants. • Provide mobility options in the Rural Service Area on weekends for up to six hours daily, targeted to Mobility Bus registrants. This could be Mobility Bus service, partnership with a volunteer organization, or implementation of a carpooling tool.
Annual Operating Cost	Mobility Bus service on weekends would range between \$27,000 and \$48,000 annually. This is based on a \$65.00 cost per hour
Capital Cost	None. Use existing resources

Timeframe	2020
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Medium-term (2021-2023) Implementation Plan

The medium-term plan addresses recommendations that should and can be implemented in the third to fifth years of the Transit Master Plan. Some of these are continuations of recommendations from the short-term plan and some will continue into the long-term plan. The primary strategies that will take place in the medium-term include expanding on the Family of Services concept, addressing the issue of paid parking at the Bethel Transit Terminal and Ordze Transit Centre, and continuing to expand the Dynamic Transit service plan.

MOBILITY MANAGEMENT

Strategic Direction	MM4: Travel Training
Background	Once the review of best practices has been completed and a Family of Service approach has been assessed, consideration should be made to expanding the travel training program. This would be tied to the conditional eligibility (Strategic Direction MM6).
Next Steps	<ul style="list-style-type: none"> Establish permanent travel training program and better tie in with conditional eligibility (as part of the Family of Services approach).
Annual Operating Cost	\$10,000 - \$15,000 annually for expanded travel training program
Capital Cost	None
Timeframe	2019-2023
Strategic Direction	MM5: Manage Parking Demand through Transportation Demand Management Strategies
Background	The implementation of this strategic direction in the medium-term is a continuation of the parking study completed in the short-term horizon (2020). If the results of the study recommend that a paid parking solution should be implemented, this should be implemented in the medium-term horizon.
Next Steps	<ul style="list-style-type: none"> Implement paid parking solution at Bethel Transit Terminal and/or Ordze Transit Centre (depending on the outcome of the study).

	<ul style="list-style-type: none"> • Monitor parking and local transit utilization before and after implementation of paid-parking solution to assess results.
Annual Operating Cost	To be determined through the parking study
Capital Cost	To be determined through the parking study
Timeframe	2020-2023
Strategic Direction	MM6: Continue to improve Eligibility based on a Family of Services Approach
Background	<p>The implementation of this strategic direction began in the short-term with an update to the application process. Once this is in place, and the travel training program is underway and the scheduling software has been implemented and stabilized, the next step would be to develop and implement 'conditional eligibility'. When a customer is approved and registered, they are assigned a Mobility Bus status based on an abilities assessment which identifies the transit services the customer is able to use. When booking a trip, Mobility Bus customer service staff aim to determine how services can be delivered most efficiently using the entire Family of Services. As a result, Mobility Bus customers may use a combination of Mobility Bus origin-to-destination services and accessible conventional fixed-route services to complete their trip (primarily for long-distance trips such as Inter-municipal Routes). The travel training program may also need to be modified and incorporated into the new eligibility criteria. It is important to note that the changes in eligibility criteria are not intended to exclude any eligible registrants. Rather, revamped eligibility criteria will ensure that Mobility Bus service is available for registrants when and where they need it most.</p>
Next Steps	<ul style="list-style-type: none"> • Transition to full Family of Services approach. • Modify application to include 'conditional eligibility' based on registrants going through a travel training program soon after their approval. • Update travel training program and identify need to invest further staff resources into travel training staff. • Change policies and procedures, as well as communication materials. • This may require the use of consulting resources to develop the program to supplement staff time.

Annual Operating Cost	Incorporated as part of Travel Training budget (Strategic Direction MM4)
Capital Cost	\$30,000 - \$40,000 in consulting fees (depending on availability of internal staff)
Timeframe	2020-2023
Strategic Direction	MM8: Integration of Mobility Bus and Dynamic Transit Service
Background	In the medium-term, a solution should have been found to integrate Dynamic Transit Service trips with Mobility Bus trips in the Urban Service Area. Steps taken in this period are about implementing this solution using a Family of Services approach.
Next Steps	<ul style="list-style-type: none"> • Integrate Dynamic Transit Service with Mobility Bus service to the extent feasible. • Link to the 'Family of Services' approach.
Annual Operating Cost	May result in potential savings based on more effective use of Mobility Bus and Dynamic Transit vehicles
Capital Cost	None
Timeframe	2019-2023
Strategic Direction	MM9: Work with Technology Providers to Develop Integrated Scheduling and Mobile App for Demand-Responsive Services
Background	As the County deploys its demand response software for Mobility Bus customers and assesses the effectiveness of the Dynamic Transit service, it will need to more fully examine the capabilities to undertake integrated scheduling and trip delivery (particularly during the weekday day-time period).
Next Steps	<ul style="list-style-type: none"> • Evaluate the ability of both the Mobility Bus scheduling software provider and Dynamic Transit mobile app provider to comingle Dynamic Transit and Mobility Bus trips during all periods. • Assess options to move to one scheduling/on-demand tool to allow customers to book, track and pay for their trip and optimize ridesharing opportunities. • Pick a single software / mobile app solution for both service types to

	better optimize trip delivery.
Annual Operating Cost	May result in a reduction in annual software licensing fees (using one software / mobile app for both Dynamic and Mobility Bus service instead of two separate systems)
Capital Cost	N/A
Timeframe	2021-2023
MOBILITY IN THE URBAN SERVICE AREA (SD US)	
Strategic Direction	US2: Introduce Dynamic Transit Service options to Bethel Transit Terminal and Other Key Destinations
Background	If the evening and weekend Dynamic Transit pilot project is determined to be a success, the service delivery model should continue as a permanent part of the service. At this point, Strathcona County Transit should identify lessons learned and implement the service in selected areas of the Urban Service Area during the day-time weekday period. The service can replace a number of low productivity Local Routes with Dynamic Transit Services that provide connections to the Bethel Transit Terminal and other key destinations.
Next Steps	<ul style="list-style-type: none"> ● Use data from evening and weekend pilot project to assess cost per ride at different times of day, amount of ridesharing, average travel times, and key origins and destinations. ● Survey customers using the evening and weekend Dynamic Transit service to better understand the customer experience. ● Use this data to confirm Local Routes that should be replaced by a Dynamic Transit service (and the key destinations they should connect to). ● Assess the operation of the pilot, including how the Dynamic Transit Service market has evolved to determine whether changes need to be made and whether this should continue as a permanent service. ● Pilot weekday day-time Dynamic Transit service on Local Routes for a one-year period. ● Develop a communication and marketing plan before initiating the service.
Annual Operating Cost	No additional cost; reallocation of existing resources only

Capital Cost	<p>During the pilot, it is recommended that existing Mobility Bus or third-party operator supplied vehicles are used (depending on the operating model chosen). If Mobility Bus vehicles are used, consideration should be made to extending the life of a Mobility Bus vehicle scheduled for retirement for the pilot. If the pilot is successful and the service becomes permanent, conventional 40-foot buses scheduled for retirement may be replaced by smaller accessible vehicles for the Dynamic Transit service, which would result in a capital cost savings.</p> <p>\$20,000 - \$30,000 in consulting fees to assess pilot data, survey customers or develop communications plan (depending on availability of internal staff).</p>
Timeframe	2021-2022 (depending on success of the evening and weekend pilot service).
Strategic Direction	US3: Review Local Service in Sherwood Park
Background	If the introduction of the Dynamic Transit service pilot during the day-time period is successful, the existing Local Routes should be reviewed to find the optimal combination of Local Routes and Dynamic Transit Services to connect to both the inter-municipal terminals and local destinations. In the medium-term, data from the Dynamic Transit pilot will be used to assess all remaining routes, with a target to restructure the system (if applicable) after the completion of the weekday day-time Dynamic Transit pilot.
Next Steps	<ul style="list-style-type: none"> ● Review data from weekday day-time pilot service and evening and weekend service to better understand travel patterns. ● Survey customers using the weekday day-time Dynamic Transit pilot service to gauge satisfaction with the service model. ● Initiate an operational review of existing day-time services in the Urban Service Area and recommend an appropriate structure based on data and public feedback. This may require the use of consulting expertise depending on staff availability. The review should identify more local destinations that Dynamic Transit Services could connect to, as well as explore options north of Baseline Road for implementation of this service model. ● Implement service based on Council approval. ● Develop communications and marketing strategy to coincide with implementation.
Annual Operating Cost	Only if expansion of overall service hours is desired

Capital Cost	<p>\$50,000 to \$80,000 to conduct service design (if outside consulting services are required and depending on level of consultation required)</p> <p>If Mobility Bus vehicles are used for Dynamic Transit Services, conventional 40-foot buses scheduled for retirement may be replaced by smaller vehicles, which would result in a capital cost savings</p>
Timeframe	2022-2023 (depending on success of the weekday day-time pilot service)
Strategic Direction	US4: Expand Service to Cambrian Crossing and Bremner
Background	<p>Cambrian Crossing is anticipated to begin development in 2021 and continue until a projected build-out population of over 13,000 is reached around 2037. By 2023, it is anticipated to reach a population of 2,100. This is adjacent to existing Sherwood Park and local transit service should be extended into Cambrian Crossing early enough in the development to ensure that transit is a viable option while new residents are forming their travel habits.</p>
Next Steps	<ul style="list-style-type: none"> • Develop a service plan for the Cambrian Crossing and Bremner Community, to be introduced once the population meets the minimum thresholds noted in the Service Standards document. • Communicate and advertise new service plan to residents in the Cambrian Crossing Community. • Implement an all-day Dynamic Transit service within Cambrian Crossing and between Cambrian Crossing and Emerald Drive area once population is between 500 and 1,000. • Implement a local fixed-route service within Cambrian Crossing and between Cambrian Crossing and Emerald Drive once population is between 1,200 and 1,800.
Annual Operating Cost	\$344,000 to \$460,000 - Begin with Dynamic Transit service between 6:00am and 7:00pm weekdays. Introduce weekday fixed route (if demand warrants)
Capital Cost	\$0 for Dynamic Transit Service – Up to \$670,000 assumed for one additional bus (if Local Route is introduced)
Timeframe	2021-2028
Strategic Direction	US5: Expand Service for Mobility Bus Registrants
Background	This is a continuation of the Strategic Direction which began in the immediate-

	<p>term. In the medium-term, the significant ridership growth that occurred as a result of fare parity should have stabilized. Most of the ridership growth during this period should be the result of continuing population growth and an aging population. To maintain the existing level of service to persons with disabilities unable to use the conventional system, capital and operating budgets will need to grow concurrently. A focus on the “Family of Services” approach (Strategic Direction MM6) will help further manage demand.</p>
Next Steps	<ul style="list-style-type: none"> • Continue to monitor growth and add Mobility Bus and contracted taxi resources as required. • Improve the travel training program based on Family of Services approach (Strategic Direction MM4). • Implement a Family of Services approach (Strategic Direction MM6). • Improve integration opportunities with Inter-municipal Routes and DATS (Strategic Direction IM6). • Continue to enhance scheduling software (with potential integration with dynamic transit services) (Strategic Direction MM9).
Annual Operating Cost	\$112,000 to \$215,000 increase on average between 2019 and 2023
Capital Cost	\$0 to \$405,000 for zero to three additional vehicles required to accommodate growth in this period (depending on whether low or high ridership growth scenario is achieved)
Timeframe	2019-2028
Strategic Direction	US6: Improve Accessibility of Services
Background	<p>The County needs a plan to guide its work to a more fully universally accessible place to live that supports aging in place and reduces the need for special services. Improving the accessibility of conventional transit is a key strategy to enable as many people with mild to moderate and even severe mobility limitations to experience the freedom and flexibility of transit services. The pedestrian environment, especially the path of travel to and from accessible stops to key destinations is critical to support as many people as possible to use the conventional service. With an aging and growing diverse population, more and more jurisdictions are adhering to principles of universal design to maximize the accessibility for as many people as possible.</p>
Next Steps	<ul style="list-style-type: none"> • Undertake a process to consult key stakeholders to gather their input on a County policy and priorities to improve accessibility.

	<ul style="list-style-type: none"> • Develop an overarching policy that outlines the County's commitment to an accessible transit service within an enabling community environment. • Develop short and long-term plans identifying improvements to policies, procedures, information, training, infrastructure, etc., to achieve a more fully accessible transit service. These plans would identify priority areas for improvement that could be submitted for funding consideration in the operating and capital budget cycles.
Annual Operating Cost	Staff time
Capital Cost	<p>Potential for one-time costs to develop an accessibility plan (estimated at \$40,000 to \$60,000) to undertake this work depending on availability of existing staff.</p> <p>Consider including an element of infrastructure capital budget to improve access across the urban area. Dependent on policy and speed with which improvements are implemented. A set amount, such as \$50,000, could be allocated and departments encouraged to submit projects to improve accessibility for funding consideration.</p>
Timeframe	2021-2023
MOBILITY FOR INTER-MUNICIPAL TRAVEL	
Strategic Direction	IM3: Improve Weekend Service
Background	<p>This strategic direction is a continuation from the short-term horizon. If the improvement to Saturday service is successful, with Dynamic Transit service in the Urban Service Area still in operation, consideration should be made to improving the frequency of Sunday service during the core operating period. This could involve either an increase in frequency to Route 411 (to every 30 minutes) or the introduction of Route 414, offset by half hour from Route 411 to create a 30 minutes service to Edmonton.</p>
Next Steps	<ul style="list-style-type: none"> • Conduct more detailed forecasts of Sunday ridership based on natural growth and productivity achieved on Saturday service with the increase in frequency. • Increase daytime service frequency on Sundays for eight hours a day if warranted (either increase frequency on Route 411 or introduce

	Route 414, offset by 30 minutes from Route 411).
Annual Operating Cost	Additional \$54,000 for eight additional Sunday daytime trips (all-year) and extension of Saturday service by an additional four hours daily
Capital Cost	None, buses are available on weekends
Timeframe	2020-2023
Strategic Direction	IM4: Improve Connections to NAIT
Background	This strategic direction is about implementing the preferred option for NAIT that was assessed in the short-term period (target September 2021).
Next Steps	<ul style="list-style-type: none"> ● Implement selected service option in September 2021 for the Fall/Winter Semester.
Annual Operating Cost	Range between \$10,000 (extension of Route 413) to \$60,000 (four daily semi-express trips to NAIT via Yellowhead Highway) during the Fall/Winter semesters
Capital Cost	No capital requirements if Route 413 is extended. If a new semi-express service is implemented, one additional peak period bus would be required at a capital cost of \$1,200,000. It was assumed that the second bus required to operate the second trip would come from the existing fleet
Timeframe	2020-2023
Strategic Direction	IM5: Expand Service to Grow Ridership
Background	Strathcona County Transit's Inter-municipal Routes have the highest ridership and are the most productive part of the system. Service hours should be gradually increased to help the County reach its ridership growth and transit mode share targets. The Cambrian Crossing area of Strathcona County is planned to be developed between 2021 and 2037 and should be served with both local and Inter-municipal service.
Next Steps	<ul style="list-style-type: none"> ● Conduct service planning for expansion of Inter-municipal service to Cambrian Crossing and Bremner. ● Provide hourly Inter-municipal service to Cambrian Crossing through the Bethel Transit Terminal as a first step. ● As ridership grows, expand frequency of service based on meeting

	<p>productivity targets in the Service Standards.</p> <ul style="list-style-type: none"> Expand the service hours of existing Inter-municipal Routes as ridership and population growth warrants.
Annual Operating Cost	Approximately \$383,000 in annual operating cost. Assumes 60 minute headway during the weekday peaks and midday period. The peak service would continue to downtown Edmonton to add capacity to the existing service. As ridership grows, potential to added service during the weekday evenings and on weekends (60 minute headway). This would increase annual operating cost to \$577,000.
Capital Cost	\$1,200,000 for \$2,400,000 for one to two new Inter-municipal buses for service between Cambrian Crossing and downtown Edmonton (may be able to use one of the existing overload buses for this new route).
Timeframe	2021-2028
Strategic Direction	IM6: Integration with Mobility Bus
Background	Mobility Bus offers eligible residents door-to-door service between any address in the County and most hospitals in the Edmonton Metropolitan Region. Mobility Bus vehicles that travel to Edmonton have limited productivity, often carrying one customer for a long-distance trip. Balancing the 'needs of the many' with the 'needs of the few' continues to challenge specialized transit providers. Since Inter-municipal Routes are fully accessible, finding strategies to improve integration between the two services would help improve productivity and increase travel options for registered Mobility Bus customers.
Next Steps	<ul style="list-style-type: none"> Assess current trips of Mobility Bus customers to determine if opportunities exist for connections onto the fixed Inter-municipal Routes. This would involve identifying transfer points in Edmonton that are appropriate for persons with reduced mobility, as well as working with individuals to inform them of alternate ways to travel to a destination. As the scheduling software is implemented, include as much as possible, the ability to deliver integrated trips in the technology platform. Work with DATS to identify opportunities to coordinate trips to hospitals in Edmonton for Mobility Bus registrants (including those that are not currently serviced by Mobility Bus).

	<ul style="list-style-type: none"> Ensure travel training program includes use of Inter-municipal Routes.
Annual Operating Cost	Builds on the 'Family of Services' concept to support more multi-modal travel among specialized transit customers. May result in operating savings in Strategic Direction US5 if less Mobility Bus vehicles are used for Inter-municipal trips
Capital Cost	None
Timeframe	2022-2023
Strategic Direction	IM8: Protecting for Transit Priority and Rapid Transit
Background	Baseline Road is currently the Sherwood Park-to-Edmonton corridor with the largest hourly ridership. Ridership is expected to continue to increase on this corridor. A study to identify and design transit priority measures should be undertaken between 2022 and 2023, depending on ridership growth. A dedicated transit-only lane along Baseline Road will not be warranted within the timeframe of this TMP, but the corridor should be protected for future implementation of this infrastructure.
Next Steps	<ul style="list-style-type: none"> Initiate a study on the Baseline Road corridor to gather data on areas of delay and assess various locations where transit priority measures could be introduced.
Annual Operating Cost	None - staff time for coordination only
Capital Cost	\$150,000 to \$200,000 for a corridor transit priority study
Timeframe	2022-2028

Long-term (2024-2028) Implementation Plan

The long-term plan addresses recommendations that primarily address future growth within the Urban Service Area, continued expansion of Mobility Bus service, improvements to Inter-municipal service to improve travel time and reliability and continued expansion to Cambrian Crossing and Bremner.

MOBILITY IN THE URBAN SERVICE AREA (SD US)

Strategic Direction	US4: Expand Service to Cambrian Crossing and Bremner
Background	In the long-term, it is assumed that Cambrian Crossing will continue to develop, which will require an expansion of bus service. Bremner will also begin to develop starting in 2023, and implementation of service is expected by 2024. The population of Cambrian Crossing is anticipated to be 5,500 while Bremner was forecasted to reach 4,600 by 2028. This will likely include a combination of Local Route and Dynamic Transit Services.
Next Steps	<ul style="list-style-type: none"> Continue to expand local transit service to Cambrian Crossing (Local fixed-route and/or Dynamic Transit) as population and employment continue to grow. This may involve modifying existing routes in the Urban Service Area to better integrate with service in the Cambrian Crossing area. Implement service to Bremner using a similar staging pattern as Cambrian Crossing.
Annual Operating Cost	\$918,000 to \$1,377,000 (assumed seven day a week service, with two to three Local Routes/Dynamic Transit Services in Crossing and Bremner). Assumed 30 minute headway on average for Local Routes
Capital Cost	\$0 to \$1,340,000 for zero to two additional 40-foot buses for peak hour service (various in bus requirements is dependent on the number of Dynamic Transit vehicles that are used for this service area)
Timeframe	2021-2028
Strategic Direction	US5: Expand Service for Mobility Bus Registrants
Background	This is a continuation of the Strategic Direction which began in the immediate-term. During this timeframe, most improvements will be about continued expansion to accommodate a growing and aging population within the Urban Service Area.
Next Steps	<ul style="list-style-type: none"> Continue to monitor growth and add Mobility Bus and contracted taxi resources as required.
Annual Operating Cost	\$261,000 to \$500,000 increase in operating costs on average between 2019 and 2028
Capital Cost	\$135,000 for one additional vehicle required to accommodate growth in this period (2024-2028)

Timeframe	2019-2028
MOBILITY FOR INTER-MUNICIPAL TRAVEL (SD IM)	
Strategic Direction	IM5: Expand Service to Grow Ridership
Background	As Inter-municipal Route ridership continues to grow from Cambrian Crossing, a direct route during the weekday peaks should be considered. An extension of this route to Bremner should also be added as the population continues to grow.
Next Steps	<ul style="list-style-type: none"> • Extend service to Bremner starting in 2024 (or based on population growth) following a similar phasing process as Cambrian Crossing. • Increase weekday peak period headway on existing routes from Bethel Transit Terminal to Edmonton as ridership growth occurs (based on Service Standards being achieved).
Annual Operating Cost	<p>\$1,004,000 annual operating costs, assuming an increase in peak period service headway to every 30 minutes between Bremner/Cambrian Crossing to Bethel Transit Terminal and an increase in weekday peak period headway on Route 411 from 15 minutes to 10 minutes.</p> <p>This could increase to \$1,876,000 if ridership growth warrants a 15 minute weekday peak period service from Bremner/Cambrian Crossing to Bethel Transit Terminal and an increase in weekday peak period headway on Route 414 from 15 minutes to 10 minutes (Fall/Winter semester assumed).</p>
Capital Cost	\$2,400,000 to \$4,800,000 for two to four new Inter-municipal buses. Assumes that the two overload buses on Route 411 and the two overload buses on Route 414 can be used for this service to reduce capital requirements.
Timeframe	2021-2028
Strategic Direction	IM8: Protecting for Transit Priority and Rapid Transit
Background	If the study conducted in the medium-term warrants the future introduction of transit priority features and/or rapid transit on Baseline Road, steps should be taken in the long-term to protect the corridor and start introducing transit priority features.
Next Steps	<ul style="list-style-type: none"> • Identify and protect for a future rapid transit corridor on Baseline Road in updates to existing planning documents (e.g. the Municipal

	<p>Development Plan).</p> <ul style="list-style-type: none"> ● Implement transit priority measures in the Baseline Road corridor as recommended by the study.
Annual Operating Cost	None - staff time for coordination only
Capital Cost	Infrastructure costs as determined by study
Timeframe	2022-2028
MOBILITY IN THE RURAL SERVICE AREA (MM RS)	
Strategic Direction	RS2: Expand Service to Ardrossan
Background	<p>The hamlet of Ardrossan is projected to grow from approximately 500 residents in 2018 to 6,000 by 2046. It is anticipated to have the population and density required to support fixed-route service. The service will be dependent on meeting Service Utilization targets, and would start with an hourly peak period service to Bethel Transit Terminal. The Ardrossan Recreation Centre is a good location to provide a park-and-ride lot for residents of the hamlet and surrounding rural areas.</p>
Next Steps	<ul style="list-style-type: none"> ● Conduct more detailed service planning, including proposed service hours, frequency and stop locations. ● Consult with residents in the Ardrossan community to better understand travel patterns. ● Explore location to build a small park-and-ride lot in Ardrossan. Utilization of existing parking facilities should be explored. ● Implement a local fixed-route peak service between Ardrossan and Bethel Transit Terminal once population is between 2,400 and 2,800. ● Implement a local fixed-route midday service between Ardrossan and Bethel Transit Terminal once population is between 5,500 and 6,000.
Annual Operating Cost	\$128,000 for six daily trips; \$277,000 once service is expanded to the midday period.
Capital Cost	\$0 to \$670,000 for one additional 40-foot bus (Note: there may be a spare 40-foot bus available with the introduction of peak period Dynamic Transit Services in the Urban Service Area, which utilizes smaller vehicles).
Timeframe	2024-2028

Strategic Direction	RS3: Expand Demand-Responsive Services to All Rural Residents
Background	<p>There are significant challenges to providing fixed-route transit service in large rural areas. Currently, only rural residents who qualify for Mobility Bus Service have transit service available to them. The use of Dynamic Transit Service may make it feasible to provide transit service to all rural residents. Once dynamic transit is provided in the Urban Service Area and there is good data on how it is used, consideration should be made to explore implementation in the long-term. This should be further studied, with operating costs and ridership forecasts refined. The estimated cost of providing a rural service is between \$1,000,000 for a midday service to \$3,500,000 for an all-day service. Both assume use of dedicated vehicles. The resources (and cost) required for providing all-day service are expected to be significantly higher than what would be required for midday service only.</p>
Next Steps	<ul style="list-style-type: none"> • Undertake further cost-benefit analysis of implementing Dynamic Transit service in the Rural Service Area. • Present to Council. If deemed feasible, implement in the long-term.
Annual Operating Cost	Staff time
Capital Cost	\$50,000 to \$70,000 for outside expertise to complete a more detailed review (depending on availability of staff to complete the work internally)
Timeframe	2024-2028