

Supplement 4

Paratransit and Demand Responsive Recommendations



REGINA TRANSIT

Transit Master Plan

Paratransit and On Demand Recommendations

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1.0 Introduction

1.1 Purpose

The purpose of this document is to outline the recommendations for Regina Transit Paratransit as part of the **25-Year Regina Transit Master Plan**.

1.2 Report Structure

This report is divided into the following sections:

1. **Introduction** – overview of report purpose and structure of the document.
2. **Recommendations** – description and rationale for all Paratransit transit service recommendations to be implemented as part of the Regina Transit Master Plan within the following categories:
 - a. Eligibility and Registration
 - b. Service Delivery Model
 - c. Service Hours and Technology
 - d. Communications
 - e. Policy and Procedures
3. **Financial Plan** – a description of the financial impact of implementing the proposed changes.

1.3 Background

Regina Paratransit provides specialized transit service to individuals who have barriers to accessing the conventional fixed-route service for some or all trips. Potential registrants apply for the service and if approved, receive unconditional, conditional, or temporary eligibility depending on their assessment. Paratransit trips are demand-responsive, requiring individuals to book trips in advance. Bookings can be made up to seven days in advance and can be requested up until the trip is required. Same-day bookings are accommodated when possible. Regina Transit owns the Paratransit vehicles and is responsible for booking and customer service while operations and maintenance are contracted to a third-party contractor called First Transit.

As of 2019, Paratransit had 2,470 total registrants, 59 per cent of which were ambulatory. The service provided a total of 194,749 passenger trips within the year, excluding attendants who ride without charge.

A peer review was conducted with the following specialized transit service providers: Saskatoon, Windsor, Victoria, Guelph, and Winnipeg. The peer review report is documented in **Supplement 3** of the **Regina Transit Master Plan**. In comparison to the peer systems, Regina's Paratransit provides similar hours of service on weekdays, number and type of vehicles, and breakdown of registrant types. Regina's

performance is above the peer average in service hours per capita and per registrant, rides per revenue vehicle hour, revenue/cost ratio, and net operating cost per hour. Regina also had one of the lowest rates of registrants per capita of the group. Areas in which Regina performed below the peer average include number and types of booking options, end of service time, Sunday and Holiday service hours, and cash fare price. While other cities have systems that are designed for each of their unique needs, the analysis illustrates several areas that could be improved and addressed within the Regina Transit Master Plan.

A foundational pillar of the recommendations for Paratransit and accessible conventional service in the **Regina Transit Master Plan** is feedback from the community, including current registrants and stakeholders who work with passengers who use the service. Based on Round 1 of Engagement (more information available in **Supplement 1**) the following themes were identified as the highest priority for Paratransit passengers:

Table 1: Key Themes from Public Engagement

Key Themes	Description	Response
Assistance Improvements	<ul style="list-style-type: none"> Current booking system is challenging and not-user friendly 	<ul style="list-style-type: none"> Addressed in Section 2.4.2
Transit Infrastructure	<ul style="list-style-type: none"> Lack of sidewalks connecting to stops Congestion on 11th Ave Desire for benches at stops 	<ul style="list-style-type: none"> Addressed in Regina Transit Master Plan Sections 4.1.6, 4.3.2, and 4.3.3
Equity	<ul style="list-style-type: none"> More emphasis on variety of accessibility needs (i.e. visual impairment) 	<ul style="list-style-type: none"> Addressed in Section 2.2.1 and 2.6.2
Frequency/ Routing	<ul style="list-style-type: none"> Long waits for trip bookings Lack of flexibility Desired earlier start times on holidays and weekends and later end times on Sunday 	<ul style="list-style-type: none"> Addressed in Section 2.4.1 and 2.4.2
Snow/Ice	<ul style="list-style-type: none"> Snow piles near stops reduce maneuverability 	<ul style="list-style-type: none"> Addressed in Regina Transit Master Plan Section 4.4.1

2.0

Paratransit Recommendations

The recommendations related to Regina Paratransit fall into six categories:

1. Branding
2. Eligibility and Registration
3. Service Delivery Model
4. Service Hours and Technology
5. Communications
6. Policies and Procedures

Each recommendation includes a description, relevant context, and justification through analysis of Regina Transit's existing operations or best practices from peer transit agencies.

2.1

Branding

2.1.1

Recommendation 1: Rename "Paratransit"

Regina Transit is shifting towards a brand wherein all services are housed under the overall Regina Transit umbrella. The Paratransit sub-brand singles out the specialized transit service and may carry negative connotations of the prefix "para".

It is recommended that the Paratransit sub-brand be retired and replaced with a different identifier for the service. This identifier should not be a standalone brand, and should emphasize the type of service provided as opposed to the type of passenger who uses it. The change should also reflect the amalgamation of Paratransit and On Demand services (**Recommendation 5**) and the variety of trips available for registered Paratransit passengers. For example, a registered Paratransit passenger could book a trip using the same scheduling software as On Demand service, receive a pick-up at their door, and share a vehicle with an On Demand passenger who was picked up at a designated On Demand stop. Alternatively, a Paratransit trip could see a passenger picked up by a demand-responsive vehicle at their door and transferred to a conventional fixed route service which drops them off at the door of their destination. In this way, a wide variety of trips can exist within the demand-responsive umbrella without singling out passengers who require accessible service.

Regina Transit should undertake the process of selecting a new identifier within the first year of the approval of the Transit Master Plan.

2.2 Eligibility and Registration

2.2.1 Recommendation 2: Change Eligibility Process to Include Third-Party Assessments and Individualized Reassessment Schedules

The current process for Regina Paratransit involves a passenger submitting an application form that has been filled out by the passenger as well as a health care professional. It outlines the passenger's barrier(s) to mobility and the health care professional's assessment of whether the applicant can access conventional transit. Where an individual's eligibility is not clear, an in-person assessment is performed by a committee of three individuals, including a volunteer Occupational Therapist, paratransit passenger and the Manager of Paratransit and Revenue Services.

Many transit agencies use external third parties to evaluate paratransit applications and make an eligibility determination. Depending on the needs of the system, this process can be contracted to a qualified company or an individual. Best practice indicates that assessment decisions should be made by health care professionals who can effectively evaluate an individual's capacity to use transit based on their abilities. Contracting this service to an external assessor provides an additional level of objectivity to the evaluation process and avoids the appearance of a conflict of interest.

Recommendation 2a: Hire Third-Party Review Agency

It is recommended that Regina Paratransit contract out its assessment process to a third-party review agency with compensation based on the number of applications reviewed. The reviewer must be a health care provider, such as an Occupational Therapist, Nurse or Physical Therapist, and include in-person assessments as warranted.

Regina Paratransit would continue to be responsible for reviewing applications for completeness and approve applicants without further assessment in cases where the applicant would be unconditionally eligible for Paratransit service based on key characteristics (e.g. applicants who reside in a long-term care facility or require assistance when travelling that would prevent them from using an accessible conventional vehicle for any part of their trip). These criteria should be clearly identified by Regina Transit and provided to staff conducting the initial review.

All other applications would be forwarded to the third-party review agency, where the assessor would determine whether an in-person assessment is required. In-person assessments are typically completed to determine whether an applicant would receive unconditional or conditional eligibility if they are able to use an accessible conventional bus for some of their trips. To reduce inconvenience for applicants, in-person assessments should only take place where there is insufficient information to make a decision based on the application form alone.

The assessment should also determine whether the applicant can travel alone, must travel with an attendant or be met by an attendant at their destination, or is able to use taxi services. This

recommendation would add an initial cost to the City of Regina, but would also reduce operating costs. The third-party review process is expected to reduce the number of applications with 'unconditional eligibility' status approved, and increase the number of applications with 'conditional eligibility' status. Conditional eligibility would be granted to individuals that can use conventional transit for some or part of their trips, and is anticipated to see a reduction in trips on Paratransit services. This will free up resources to accommodate more trips and provide more mobility options for customers, including an increased use of the accessible fixed-route service for certain passengers based on ability. Assumptions on costs and savings are noted in **Section** Error! Reference source not found..

Recommendation 2b: Update Paratransit Service Application Form

To facilitate the updated assessment process, minor changes to the existing application form are recommended. Specifically, Part B of the form would be filled out by all applicants rather than just a select few.

Recommendation 2c: Provide Online Paratransit Service Application Form

Regina Transit currently provides several options for applicants to submit their completed application forms. These include:

- in-person;
- mail;
- fax; and
- email.

Providing multiple submission options improves the customer experience of the application process by allowing applicants to choose the method that is most convenient for them, including options that do not require a physical submission. To further facilitate user-friendly application choices, a form that can be directly filled out and submitted online should be developed and available on the Regina Transit website. This form should be available in addition to the existing submission options listed above.

Recommendation 2d: Change Reassessment Process

Reassessments currently occur every five years for all passengers regardless of the type of eligibility. The purpose is to assess whether a registrant's abilities have changed or the accessibility of the conventional transit service or physical environment has changed, resulting in a potential change in type of eligibility, ability to use taxi service, or need for an attendant. Using a single reassessment period for all passengers is not recommended as it can result in registrants who are not receiving the right level of service based on their needs.

It is recommended that:

1. The frequency of reassessment be evaluated by the external third-party assessor at the time of the initial assessment. This time should not exceed five years. This would allow for a more

personalized and efficient reassessment process, wherein passengers whose barriers to mobility are less likely to change would be reassessed less often. Alternatively, those whose barriers to mobility are less limiting and may change (or can be met with improvements to accessibility) can be reassessed more frequently. The assessor will make this decision at the time of the initial review of the application based on each passenger's specific conditions and needs, as well as an understanding of the accessibility improvements to transit and the physical environment. The reassessment process should entail a complete reapplication for some individuals and a simple update process for others.

2. Consistent criteria is developed to make decisions regarding the reassessment period for each registered Paratransit passenger. While the details of this criteria should be developed by the assessor in conjunction with Regina Transit, the following factors should be considered:
 - whether the assessor determines that the applicant's condition will change over time; and
 - whether the assessor determines that the applicant could use conventional transit where routes and stops are made more accessible.
3. A formal policy should be established that would trigger the need for an unplanned reassessment. For example, if a family member, operator or customer service agent notices a registrant's deteriorating condition that may change their eligibility. The policy should provide clear guidance for all parties involved, including the preferred processes for family members or staff to communicate the observations and who would determine the need for a reassessment.
4. Where an update and not a full reapplication is required, the reassessment should be conducted by Regina Transit over the phone, where the information on the application form is reviewed by the registrant and staff member for changes. If there is any further information required or changes in required service level are identified, the passenger is referred to the third-party assessor, which may include an in-person component if required. If no significant changes are identified, the reassessment call provides an opportunity to update personal information and check in with passengers.

2.2.2 Recommendation 3: Expand Travel Training Program

Travel Training can provide the necessary education and support for Paratransit passengers to safely and comfortably use Main and Local transit services. Using these services offers passengers more options and flexibility than can be provided by the Paratransit system alone. As well, Travel Training can support non-specialized passengers who otherwise would be less likely to access transit independently, thus increasing transit ridership overall. This includes supporting seniors, newcomers and students who may benefit from training on how to use transit.

Currently there is a successful Travel Training program in place that supports Paratransit passengers to independently use conventional transit. The expansion of this program would allow those individuals

who are able to use Main or Local services for a portion of their trip. This would provide passengers with more trip options, particularly on short notice. This would also reduce the time required per trip, resulting in more Paratransit service being made available to passengers who need it most.

Recommendation 3a: Expand Travel Training to Other Passengers

It is recommended that the Travel Training program be expanded to provide the service to both persons who are eligible for Paratransit trips and those who are not. Additional funds should be budgeted to support this expansion.

Recommendation 3b: Tie Travel Training to Application Process

It is recommended that Travel Training be offered to all customers who may benefit from it as part of the registration and reassessment process regardless of eligibility assessment. The assessor working with the third-party review agency should also have the ability to make Travel Training a requirement of eligibility, should the reviewer determine that the applicant could be able to use an accessible conventional service for all trips, certain trips, part of a trip or during certain times with the support of Travel Training. For example, a passenger who is unable to access a bus stop but who could take Paratransit service to the bus stop and then transfer to a conventional bus for the remainder of their trip would fit this criterion. This is referred to as an integrated trip.

While the purpose of Travel Training is to present passengers that are able with options, it is also recommended that the results of the Travel Training program be tied to eligibility (e.g. a passenger that successfully completes Travel Training for an integrated trip may not be given a full Paratransit trip if they are able to make an integrated trip).

The third-party assessor would determine whether a person has successfully benefited from Travel Training, or whether a person can only use conventional transit (even after Travel Training) during certain circumstances. The person's file on the applicable scheduling platform would need to be coded to afford the call takers as much information as is needed to allow them to use their discretion when booking trips for a passenger. This would allow customer booking agents to identify trips that include the use of an accessible conventional transit service for all or part of their trip when booking with the passenger.

It is recommended that the entity responsible for third-party assessments must be fully separate from the Travel Training provider to ensure the avoidance of a conflict of interest. The current partnership with Creative Options Regina (COR) has been highly successful and should be maintained and expanded to support a larger number of participants. To reach a more diverse population, such as new Canadians and seniors, additional partnerships should be developed with other community organizations, such as the Regina Open Door Society. A similar model to the contract with COR can be used, wherein Regina Transit provides a flat annual fee to the selected organization(s), which will be responsible for providing all training services.

It is recommended that the duties associated with managing the Travel Training program should fall under the responsibility of the Manager, Paratransit and Revenue Services and an additional middle manager staff person, as described in **Recommendation 24 (Section 2.7.1)**. Further information about staffing recommendations can be found in **Supplement 6 (Organizational Review)** of the **Regina Transit Master Plan**.

2.2.3 Recommendation 4: Enhance the Appeal Process

Currently, applicants may appeal their eligibility decision to the Accessibility Advisory Committee (AAC). The Committee reviews the decision and has the power to confirm or amend it. It is recommended that this process be maintained as it functions effectively and provides an arms-length process to address appeals. As per **Recommendation 23 (Section 2.6.5)**, the reinstatement of a minimum of two registered Paratransit customers on the AAC is recommended to ensure decisions regarding appeals are heard by a representative body.

Appeals should be heard on matters that relate to:

- **Eligibility** – denial of service, based on review of applicant’s information;
- **Assessment** – denial of service, or restricting of service (i.e., conditional) based on in person assessment/interview; and
- **Travel Training** – dispute relating to the trainer’s findings.

It is essential for the committee to recognize the importance of the new third-party assessment process, and the value added by having health care practitioners conducting assessments. An error in fact or process, or additional new information for example, would be grounds for reconsideration.

2.3 Service Delivery Model

2.3.1 Recommendation 5: Combine On Demand and Paratransit Services as One Demand-Responsive Operation

It is recommended that Regina Transit work towards developing a shared demand-responsive operation that would cover both Paratransit and On Demand service. This would allow for the sharing of resources (drivers and vehicles) to operate both services, increasing efficiency. The integration of these services is increasingly common among transit systems.

This would require the implementation of new software that could accommodate both services as described in **Recommendation 11 (Section 2.4.2)**. Operationally, this system would facilitate a single “demand-responsive” pool of drivers and vehicles operating both Paratransit and On Demand transit. Trip booking would also occur using the same mobile application and customer call centre, allowing customers to identify whether they are a registered Paratransit customer.

For all demand-responsive passengers, the software should be set up to allow customers to select their required drop-off time when booking a trip instead of the current practice of focusing on their preferred pick-up time. This provides the customer with greater certainty of getting to work/school or appointments on-time, as well as meeting connections between demand-responsive and fixed-route services. Drop offs that are not time sensitive (i.e. shopping) can continue to use the pick-up time as the focus for bookings, either through an option provided in the On Demand software or through Call Centre staff.

2.3.1 Recommendation 6: Maintain Contracted Operating Model

No concerns were identified regarding the operating model of Paratransit. Operations of the service and maintenance of vehicles is contracted to a private contractor, while the City of Regina continues to be responsible for setting direction, policies and procedures, reviewing applications forms, booking and scheduling trips and addressing customer inquiries. This is a typical arrangement with other paratransit systems and there was nothing of concern that would indicate the need to change from a contracted arrangement to an in-house operation. The following areas were reviewed when coming to this conclusion:

Industry Practice

Contracting out services to private sector operators is a typical practice in the transit industry. Of the five peer systems reviewed, three are contracted to either a private operator (Winnipeg and Victoria) or a non-profit organization (Windsor).

Operating Costs

One of the benefits of contracted operations can be lower operating costs. This is typically achieved through the process of competition for the contract. This includes both variable costs (i.e. driver costs, vehicle maintenance, etc.) and fixed plant costs (i.e. maintenance and operations of the garage). With more flexibility in how the service is operated, private contractors can typically reduce the amount of unproductive time and thus operate more efficiently. Generally, many private transit operators have use of existing storage and maintenance facilities for other operators (e.g. school bus), which can reduce overall costs.

Table 2 provides a cost comparison of five paratransit peer systems. This illustrates that Regina's per-hour cost is the second lowest among its peers.

Table 2: Peer System Operating Model and Hourly Cost

	Regina	Saskatoon	Windsor	Victoria	Guelph	Winnipeg
Service Type	Contracted	Internal	Non-Profit	Contracted	Internal	Contracted
Hourly Cost	\$68.97	\$73.70	\$62.27	\$83.88	\$92.52	N/A

Existing Paratransit operating costs in Regina are also lower than conventional services. **Table 3** below presents the hourly operating costs of Paratransit services and conventional transit services in Regina, excluding administration costs (which represent City staff for both) and fuel (due to the larger vehicle size on conventional transit). As noted below, operating costs for the contracted Paratransit service are 52% less expensive than conventional services. Bringing this service in-house would likely increase operating costs.

Table 3: Comparison of Operating Costs for Paratransit and Conventional Services

	Operations (cost)	Service Hours	Cost per Hour
Paratransit	\$3,887,346	74,439	\$52.22
Conventional	\$23,903,057	302,058	\$79.13

*Note: does not include fuel or administrative costs

**Source: 2019 CUTA Transit Fact Book (specialized and conventional)

Flexibility

There is typically more flexibility in a contracted model to make changes to services to respond to demand. This is particularly important for paratransit services, where there are no fixed routes or schedules and demand can fluctuate daily. This would allow Regina staff to be more responsive to the changing needs of customers and respond accordingly.

Administration

Bringing the service in house would require a higher degree of oversight, which would further increase administrative costs to the City. This includes an increased role for management, human resources, payroll and IT. The municipality would also be responsible for retaining drivers, maintenance staff and a facility to store and maintain vehicles.

Based on the analysis conducted, the existing contracted operating model is appropriate for Regina Paratransit and should be maintained. It is important to note that this is based largely on a continued cost-effective contractual arrangement with a service provider on a go forward basis.

2.3.2

Recommendation 7: Shorten Maximum Booking Window

In the short-term, Paratransit should maintain the existing seven-day maximum booking window. As the system moves toward one larger demand-responsive operation, it is recommended that the booking window be reduced to three days. The closer a passenger books their trip to the date of travel, the higher the likelihood that they will complete their trip, reducing No Shows and Late Cancellations. Reducing No Shows and Late Cancellations provides cost savings for the agency and increases the availability of rides for other passengers. The shorter booking window should only occur when trip and vehicle supply effectively meet demand, ensuring that customers are able to book trips when they are

needed and that sufficient resources are available to provide these trips. This will be facilitated by improvements in software as discussed in **Recommendation 11 (Section 2.4.2)**, which will increase assurance of trip availability for passengers on a shorter notice.

2.3.3

Recommendation 8: Take Steps towards Implementing an Integrated Service Delivery Model

Integrated trip delivery models involve the transfer of registered Paratransit passengers from a Paratransit vehicle to fixed route transit within the abilities of the passenger. Integrated trips are optimal for longer distance trips that use a high-frequency, direct route with accessible stops. This allows passengers to take advantage of accessible features of conventional service along with potential time savings of travelling along a direct route rather than a longer potential trip time due to diversions to pick up and drop off other passengers in a shared Paratransit transit vehicle. Utilizing Paratransit vehicles for only a portion of a trip will result in higher levels of availability of the service for other passengers, including for those who are unable to take integrated trips.

It is recommended that Regina Transit adopt an integrated service delivery model, and that steps should be taken to allow these trips to occur for individuals that are able to take an accessible conventional transit service for part of their trip. While all passengers should have the ability to request an integrated trip for any trip they would like to take, it is recommended that customer call centre staff suggest integrated trips to registrants that have successfully undertaken the Travel Training program (**Recommendation 3**).

To implement the integrated Trip Model, the following steps are recommended:

Recommendation 8a: Update Travel Training Program to Include Integrated Trips

The Travel Training program should be updated to include hands-on training for an integrated trip. At the time of booking, the Paratransit Clerk could schedule a Travel Trainer to meet a customer at a transfer point and show them how to board the vehicle, pay for their fare and secure themselves in a seat (if required). The Travel Trainer would stay with the customer for the duration of the trip if deemed necessary and be available for the return trip if necessary. At this point, the Travel Trainer would determine whether the customer could make additional integrated trips on their own, requires additional training, or should not be recommended for integrated trips. This information would be updated on the passenger's file and visible to the customer service agent. As described in **Recommendation 3b**, this Travel Training should be provided through the existing partnership with Creative Options Regina, or a new agency found through a competitive bid process, of Regina Transit's choosing. This agency should not be the same as the agency tasked with completing the applicant assessments.

Recommendation 8b: Identify Optimal Integrated Routes and Stops

Trips that are recommended for integration should provide the same travel time to the customer as those that are provided by Paratransit, or be able to meet a same-day travel request where a complete

Paratransit trip is not available. This would suggest focusing on long-distance trips where the conventional portion of the route is frequent, direct and has semi-express or transit priority features.

Stops also need to be accessible to allow vehicles to layover and passengers to transfer between vehicles without barriers. **Table 4** provides recommendations for integrated trips.

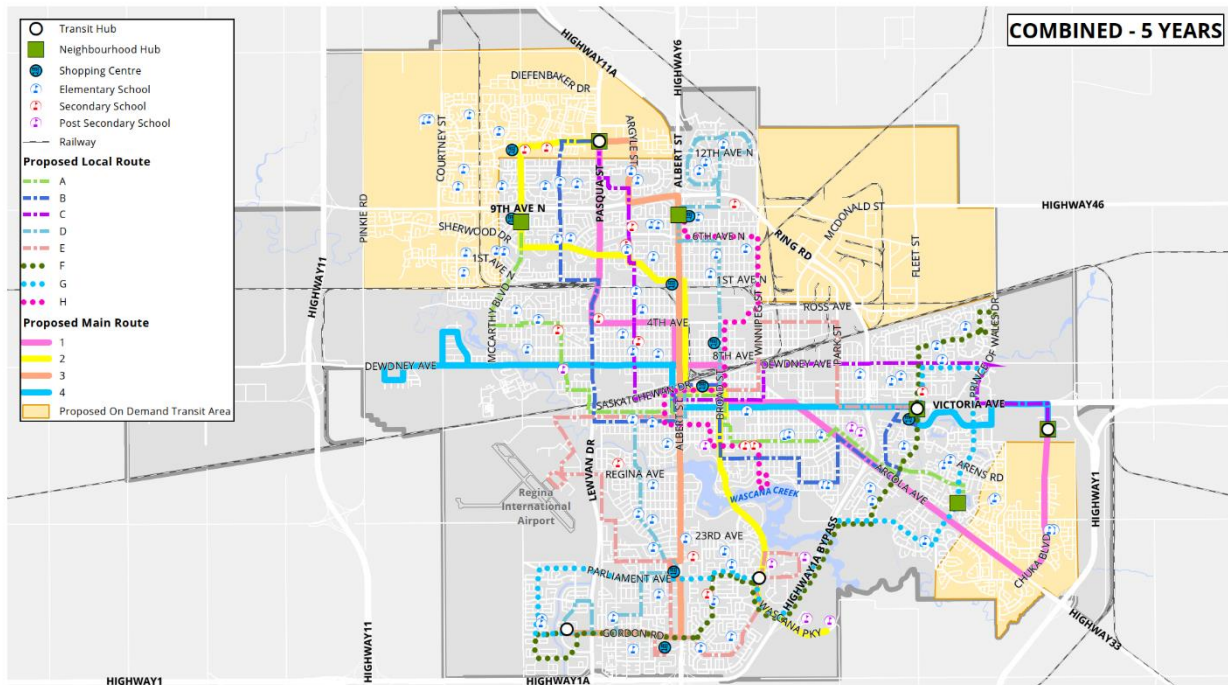
Table 4: Characteristic of Integrated Trip Routes and Transfer Points

Priority	Integrated Route	Integrated Transfer Point
Required	<ul style="list-style-type: none"> • 30-minute peak headways or less • Located on a long-distance arterial (minimum 8 kilometres in length) • Vehicles that operate on corridors are fully accessible with two or more spaces for mobility aids • The majority of stops on the route are accessible 	<ul style="list-style-type: none"> • Stop is accessible based on Regina's accessibility guideline • Paved hard surface path for passengers transferring between the Paratransit and conventional transit bus • Sufficient space for Paratransit vehicle to layover without impeding the conventional transit vehicle • Integrated stop should be in place for both directions of the trip (within close proximity to each other) • Presence of adequate lighting, bench, shelter • Hubs and stops that are prioritized for snow clearing as per Recommendation 3.11 of the Regina Transit Master Plan
Preferred	<ul style="list-style-type: none"> • 15-minute peak headways or less • "Semi-Express" designation • All stops on the route are accessible 	<ul style="list-style-type: none"> • Located at a transit terminal with multiple connections to accessible transit routes • Customer amenities such as a washroom, heated shelters, indoor waiting area

Based on the proposed five-year transit network, Transit and Neighbourhood Hubs would be best suited as transfer points for integrated trips. These stops and the immediate surrounding area must be fully accessible, allowing passengers to successfully transfer or depart the Hub to access their final destination. Transfer points require space available for a Paratransit vehicle to layover while waiting for a conventional vehicle to arrive. These hubs could accommodate both On Demand and Paratransit transfer trips, sharing layover space.

Specific routes should be identified as appropriate for integrated trips. Each of the Main Routes identified should be reviewed against the criteria noted in **Table 4** to assess their applicability for an integrated trip.

Figure 1: Recommended Main Transit Network



Recommendation 8c: Identify Optimal Trips to be Integrated

Integrated trips are to be offered for all passengers who are conditionally eligible, regardless of whether the travel time is shorter or longer than a Paratransit trip. In cases where the total trip time for an integrated trip would be longer than the full Paratransit trip, an integrated trip may still provide greater flexibility.

To provide the highest level of service, the conventional network must be fully built and operate at frequencies that are conducive to convenient transfers (i.e. 15 minutes or less). Until this network is in place, integrated trips should be optional for passengers. Passengers should be informed of the option to take integrated trips and encouraged to utilize Travel Training if necessary. Regina Transit may wish to consider implementing mandatory integrated trips within a passenger's ability when the Main Route network is in place, or when Main Routes have been converted to Bus Rapid Transit (BRT).

Recommendation 8d: Incident Management

To support all users utilizing the conventional system where possible, it is important to continue to provide wheelchair accessible on-street supervisory vehicles. If a passenger in a wheelchair requires support while taking an integrated trip – in the case of a bus mechanical breakdown for example - a

supervisor could respond to the situation and provide a ride to the passenger's final destination. As ridership continues to grow, additional accessible supervisor vehicles should be added to the network. Within the 2046 time horizon, it is anticipated that one to two additional supervisors (as supervisor vehicles) should be added to accommodate ridership growth.

Policies and processes for incident management should also be developed, including how to respond when fixed route vehicles are at capacity and pass by passengers at a stop, when Paratransit transit vehicles are late for a connection, when severe weather conditions exist, and when a Paratransit customer needs assistance due to a mobility aid issue.

2.3.4 Recommendation 9: Increase the Number of Non-Dedicated Contract Trips

When there are no spaces available on a dedicated bus, some trips are scheduled on contracted non-dedicated taxis. In 2019, this equated to approximately 1.43% of trips delivered using non-dedicated taxis.

Trips delivered by non-dedicated taxis are based on the metre rate (distance-based fee) and can fluctuate. The number of trips that are provided are proportional to the budget allocation.

In 2020, during the COVID-19 pandemic, the average cost per trip on non-dedicated taxis was \$23.94. There is no hard rule to determine when non-dedicated taxi trips are more effective. Instead, the use of non-dedicated trips should be based on the following guidelines:

1. Use for overflow trips that cannot be accommodated on the standard dedicated vehicles and to avoid trip denials.
2. Use during low-demand periods such as early mornings and evenings when dedicated buses experience a high rate of downtime.
3. Use for short-distance trips where the cost per trip is lower than on dedicated vehicles.

A common practice among transit agencies is to set the maximum number of taxi trips as a percentage of trips rather than a single number. This allows for a standard that aligns with the overall number of service hours offered, which are intended to increase following the implementation of the Regina Transit Master Plan.

Table 5 illustrates the number of dedicated and non-dedicated contract trips provided in Regina and its peer systems in 2019. For the systems that provide non-dedicated service, Regina provides a lower percentage of non-dedicated contract trips than several of its peers.

Table 5: Peer System Passenger Trip Comparison (2019 data)

	Regina	Saskatoon	Windsor	Victoria	Guelph	Winnipeg
Total dedicated trips	191,957	135,488	52,394	267,750	51,452	373,593

Total non-dedicated contract trips	2,792	4,096	-	68,401	29	17,730
Total passenger trips	194,749	139,584	52,394	336,151	51,481	391,323
Non-dedicated contract trips (% of all trips)	1.43%	2.93%	-	20.35%	0.06%	4.53%

The level of non-dedicated service each municipality provides depends on several factors, including availability and service quality provided by the taxi provider and the cost per trip negotiated with the taxi provider. Discussions with Regina Transit suggest that improvements are needed regarding the quality of service and level of driver training provided by the existing taxi provider.

In order to reduce trip denials (including same day trips) and increase efficiencies, it is recommended that Regina Paratransit target 2-4% of trips using non-dedicated vehicles and monitor performance against customer service and efficiency indicators.

Prior to increasing this target, it is recommended that a more rigorous training requirements for non-dedicated contract service is established, including additional accessibility and customer service training and re-training requirements with a performance monitoring program in place. This can be completed by the new middle manager position identified in Recommendation 24 of this report.

The policy for the maximum number of taxi trips should be flexible to allow for the highest number of cost savings and reduction in trip denials, allowing scheduling staff to book trips in a manner that maximizes vehicle occupancy on dedicated vehicles.

It is also recommended that Regina Transit identify a different method for setting a maximum number of trips made on non-dedicated taxis. This should be based on a proportion of total dedicated trips to reflect fluctuations and future growth in ridership year over year. The target should be monitored and re-evaluated at regular intervals to ensure the selected target remains suitable over time. This will be particularly important after the integration of Paratransit and On Demand services as the usage of fleet may change in the aftermath of this reorganization.

2.4 Service Hours and Technology

2.4.1 Recommendation 10: Expand Paratransit Service Hours to have Parity with Conventional Service

Increasing service hours to match what is offered on Main and Local services and removing the policy of hourly trip pick-up times will provide more flexibility for registered Paratransit passengers.

Currently, Paratransit services are available within a shorter time span than conventional transit services. It is recommended that Paratransit service hours be expanded to mirror that of conventional

service. This will ensure that Paratransit passengers can access transit at the same time as conventional transit passengers.

This change is aligned with human rights standards, accessibility legislation and best practices across transit agencies, as equitable access for all transit passengers is a foundational principle of Paratransit transit service. To support this extension of service hours, the operating hours for trip booking must also be expanded. Passengers of all Paratransit services should be able to book trips at all hours that the service is in operation. The increased operating hours of booking should be implemented in alignment with the integration of On Demand service with Paratransit.

2.4.2

Recommendation 11: Select Scheduling Software based on Identified Needs, Remove Manual Zonal Scheduling System

Regina Paratransit currently utilizes Trapeze software for scheduling specialized transit trips. There are some operational challenges related to the software.

One issue is the longstanding practice of scheduling trips on a Zonal system, wherein trips originating at the outer edges of the service area are scheduled on the hour and trips originating in the centre of the city are scheduled on the half hour. This process was an effective method to optimize trips when scheduling was done manually, but setting these parameters within the existing scheduling software program (Trapeze) or finding trips that do not align with the Zonal system negatively impacts the ability for the software to optimize trips and increase travel options for passengers.

Round 1 of engagement with Paratransit passengers revealed that the existing booking system is difficult for some passengers to use and could be more user friendly. Upgrading the Trapeze software would allow for higher quality self-serve bookings through app and web-based tools, improving access to the service and reducing call volume and wait times for the Call Centre.

It is recommended that Regina Transit identify, procure and implement a software solution that would allow for demand-responsive as well as integrated trips.

It is recommended that the software have the following features:

- integration of On Demand and Paratransit service;
- independent customer booking through an application/web-based tool;
- vehicle scheduling and dispatching based on live data and vehicle availability; and
- the ability for customer service staff to monitor and adjust trip bookings where necessary.

To utilize this software most efficiently, the practice of scheduling trips on a Zonal system should be replaced with providing passengers with trip options at more flexible intervals.

2.4.3

Recommendation 12: Assess Level of Call Centre Staffing

To provide a high level of service, it is essential that sufficient Call Centre staff are available to answer passenger calls in a timely manner. Concerns were raised about the availability of staff during peak times and on statutory holidays which may be exacerbated by a higher volume of inquiries related to On Demand service.

It is anticipated that most trip bookings for On Demand will be completed through the dedicated mobile application and should not significantly increase call volumes. However, it is recommended that the number of calls and capacity of staff be monitored on an ongoing basis to quickly identify if additional resources are required to maintain a high standard of service. Customer experience is impacted by the average time a customer is on hold. Between 2016 and 2019 the average hold time ranged from 2 to 2.5 minutes, with a reduction to approximately 1 minute in 2020 with reduced demand due to COVID-19. This data is averaged monthly. According to the U.S. Federal Transit Administration's *Telephone Hold Time in Paratransit* (2010) topic guide, average wait times should be calculated hourly or half-hourly to ensure less common cases of significant hold times are not smoothed out by averaging high quantities of data. The best practice identified in this report is:

- “95 percent of the hourly periods should have an average hold time of no more than one minute, and 99 percent of the hourly periods should have an average hold time of no more than two minutes” (p. 7).

The average length of a call will impact the ability to achieve this target within the budgetary constraints of the municipality. For some passengers who may be isolated, these calls form an important social need which can reflect in the call length. Other registrants with a cognitive disability or a speech impairment may require more time on a call. This will contribute to the time on hold, depending on the number of calls received.

The extension of Paratransit hours to achieve parity with conventional transit (**Recommendation 10**) will also see extended service in the early mornings and late evenings seven days a week. This will also require starting Call Centre staff earlier and ending later each day. It is recommended that Regina Transit increase casual Call Centre staff in conjunction with extending Paratransit service hours and redistribute staff hours accordingly to best cover off the extended hours and periods where there are high call volumes and long waiting times.

It is also recommended that Regina Paratransit assess existing call durations, identify the number of calls that may be accommodated through online booking, and use this information to assess the performance of the Call Centre and identify a hold-time target for Regina that is between 1 to 2 minutes. If this target cannot be achieved once the new scheduling software program is in place (**Recommendation 11**) additional Call Centre staff should be hired.

2.4.4

Recommendation 13: Maintain Trip Denial Rate at or Below Industry Best Practice Rate

Regina Paratransit's 2019 trip denial rate is 1.67%¹. The peer systems reviewed reported the following trip denial rates:

- Winnipeg: 1.0%;
- Edmonton: 0.06%;
- Calgary: 0.8%; and
- Saskatoon: 6.4%.

As per Regina Paratransit's Standard Operating Procedures, an accommodation rate of 99% and trip denial rate of 1% is the stated goal. This is an acceptable trip denial rate and it is recommended that the stated goal of 1% trip denials should be maintained.

The existing trip denial rate does not include trips that are offered within the 90-minute policy window but are denied by the passenger, or trip requests that are denied after 12:00 p.m. the day prior to the trip (same day denial). This definition is consistent with the Canadian Urban Transit Association (CUTA)'s definition of trip denials, which is "the inability for an agency to provide a trip within the agency's pick-up window when a request is made within the agency's booking window."

For clarity, it is recommended that Regina Paratransit change the designation of "Denied Same Day" trips to more accurately reflect the Canadian Urban Transit Association (CUTA) definition of trip denials. This category of trips could be categorized as "Denied Outside Booking Window" to reflect denials that occur the day prior to the requested trip but nonetheless are not within the booking window and as such should not be counted as trip denials as per CUTA's definition.

It is also recommended that the 90-minute policy window used to define trips denied by passengers within an acceptable booking window (Denied by Passenger) be revised to 60-minutes or less prior to a requested drop-off time (e.g. medical appointment/work start time) or after a requested pick-up time (e.g. work end time).

The 60-minute policy window is more consistent with maximum wait times on conventional transit services (e.g. where a conventional transit headway is 60 minutes or requires a transfer, the passenger may need to schedule their trip to arrive up to 60 minutes early to be on-time for an appointment). Having a similar policy for Paratransit customers increases parity between the two services. If the maximum headways were to improve on conventional transit, this policy window should also be revisited.

¹ Note: 2020 and 2021 trip denials were lower than 2019 due to the reduced demand for service from the COVID-19 pandemic

Same-Day Trips

Regina Paratransit currently accepts booking requests up until the requested departure time, subject to trip availability. While same-day trips that are not accommodated are not defined as trip denials as described above, there is value in providing same-day service to ensure registered passengers have access to mobility in a spontaneous way that is equitable to conventional transit service. This may also become part of any standard set by the Saskatchewan Human Rights Code, in a similar way that *The Accessibility for Ontarians With Disabilities Act, 2005* (AODA) defines same-day trips for paratransit systems in Ontario.

In 2019, 16,887 same-day trip requests were made, of which 12,393 were accommodated and 4,494 were denied. This represents 26.6% of same-day trips requests denied, or a same-day trip denial rate of 2.2% of all trips requested. Reducing the trip denial rate for same-day trips is a target for a number of paratransit service providers, but is not routinely measured. With the introduction of the On Demand scheduling software (**Recommendation 5**) and other improvements, it is recommended that Regina Paratransit remove the distinction between trip denials and same-day trip denials and move towards a system-wide target of 1% trip denials. This should occur within 10-years of implementing the recommendations noted in this plan and will increase the ability for persons with disabilities to make spontaneous trips.

2.4.5

Recommendation 14: Reduce No-Shows and Late Cancellation Policy

Late cancellations and no-shows can lead to a number of negative impacts on the service. When a trip is cancelled after it has already been scheduled or the passenger is not present:

1. Any cost savings associated with grouping multiple trips together are lost.
2. Schedules for the rest of the day can be impacted.
3. Travel time for passengers on a vehicle is unnecessarily increased.
4. Passengers that may have been denied a trip or not been given their preferred trip time may have been accommodated if the trip was cancelled on time.
5. Operators may become concerned about the well-being of the passenger, which may require follow-up (e.g. the safety of a passenger known to have dementia).

As highlighted in **Table 6**, Regina has a moderate number of late cancellations in comparison with its peers and the highest no-show rate. It is recommended that steps be taken to reduce these occurrences for the reasons identified above.

Table 6: Peer Review of No-Shows and Late Cancellations

	Regina	Saskatoon	Windsor	Victoria	Guelph ¹	Winnipeg
Cancelled Late	3.4%	6.3%	6.3%	1.9%	1.9%	-
No-Shows	2.3%	0.9%	1.0%	0.7%	1.5%	2.0%
Cancelled at Door	-	0.5%	-	1.0%	0.3%	-

The process currently in place to address frequent cancellations, late cancellations and no-shows is for Call Centre staff to inform a supervisor who follows up with the customer directly. There are two challenges with this process:

1. The Policy and Procedure Guide identifies repeated no-shows as grounds for suspension of service but it is unclear what the threshold is for this step to be taken.
2. Following up on no-shows and late cancellations takes valuable staff time, particularly for the collection of penalties (missed fares).

To address the challenges with the current process, no-shows and late cancellations need to have a stronger policy established. The policy needs to establish how many no-shows and late cancellations are deemed unacceptable, and during what period (i.e. 30 days). Exemptions for no-shows with cause need to be factored in (could be illness, cognitive, etc.).

The level of effort to address no-shows and late cancellations also needs to align with the frequency of occurrence. This should balance the need to educate and remind passengers of the policy for infrequent occurrences, and change behaviour for more passengers with frequent no-shows and late cancellations. The administrative support to enforce this policy should be provided by an additional staff member as described in **Recommendation 24 (Section 2.7.1)**. Where possible, automation should be used to identify and enforce penalties against those who regularly no-show and/or cancel late.

Once the parameters are established, the elements of that policy should include:

1. **Education:** To encourage timely cancellation of unneeded trips, additional messaging related to the no-show and late cancellation passenger expectations can be included in the newsletter provided to customers (**Section 2.5.1**).
2. **Warnings:** Inform passenger of occurrence and remind them of the policy. This should occur on the first and second occurrence per month and could be provided through no-show slips or door hangers. The no-show slip or door hanger should include the specifics of the pick-up such as date and time. This could also mean sending an automated email or text message (via the integrated booking app) and/or having the customer service agent inform the passenger the next time they book the trip that the previous trip was a late cancellation or no-show and remind them of the policy. For more frequent occurrences, the dispatcher, call centre staff, or supervisor can phone, email or inform the passenger in person.
3. **Penalty:** This can be set as the regular fare plus an administration fee. A policy would need to be developed outlining the consequences of nonpayment. This should begin on the third no-show or late cancellation occurrence over a one-month period to minimize the staff effort to collect fares.
4. **Suspension:** A reasonable short suspension of service if the above measures have not been successful in correcting the behaviour (suspension of service should be seen as a last resort, and comes with its own set of issues, such as the need of the passenger and their upcoming trip purpose for medical or lifesaving therapies).

It is important that punitive measures are used as a secondary measure and only when:

- the educational efforts have failed to gain the needed cooperation/behaviour change from the passenger; and
- there is a sufficient pattern and practice of no-shows and/or late cancellations that is deemed unacceptable by Regina Transit.

An appeals process for those who feel they have been unjustly suspended from the service for excessive no-shows and late cancellations will also need to be developed and then implemented by Regina Transit.

The introduction of a more automated, demand-responsive system should provide passengers with trip times that better align with their travel needs which may result in a lower no-show or late cancellation rate. As well, for those passengers who choose to use the associated app or web-based tools for booking, the cancellation process will be simplified which may encourage earlier cancellation of trips that are no longer needed.

2.4.6 Recommendation 15: Reduce Maximum Travel Times

Paratransit trips are scheduled to optimize ridesharing where possible to provide operational and financial efficiency. Increasing the number of passengers and potential stops that the vehicle must make can increase the overall in-vehicle travel time for passengers, which impacts the customer experience. This can be a challenge, particularly for Paratransit passengers with serious health conditions. A balance must be struck between optimizing the number of passengers per hour and providing reasonable trip durations.

The current policy in place allows for trip durations of up to 75 minutes. The Canadian Urban Transit Association published a Specialized Transit Services Industry Practices report which identifies a best practice of a 60-minute maximum trip duration for medium-sized operations, which would include Regina Transit.

Most destinations within Regina can be accessed within a 30-minute driving time. Most conventional transit trips that require one or fewer transfers are also less than 60 minutes long.

To align with industry best practices and provide a high level of customer service for passengers, it is recommended that Regina Paratransit implement a 60-minute maximum trip duration, targeting at least 99% of trips delivered within this maximum. This provides some flexibility to the call centre staff to book slightly longer trips where it makes sense (e.g. a slightly longer trip would mean a trip could be accommodated), while still ensuring the policy of travel times under 60 minutes is maintained.

While information was not available on average trip distances and durations on Paratransit services, discussions with staff indicated that the majority of trips are already under 60 minutes, and this change in policy would not see a significant increase in resources to deliver.

2.4.7 Recommendation 16: Explore Mixed Vehicle Fleet

The current demand-responsive fleet is made up of 35 vehicles, all of which are small lift-equipped buses. There may be benefits to exploring a different mix of vehicle types including lower capacity vans and minivans. These vans may or may not be equipped with vehicle lifts. If integrating with On Demand, it may be of value to have a higher number of low-floor vehicles.

To select the appropriate vehicle fleet, it is recommended that Regina Transit use Trapeze or another software to run simulations with existing and increased trip demand where certain low-floor buses are replaced with accessible vans. It should be assessed whether this change results in increased productivity without a corresponding increase in trip denials. Based on the results of the simulation, a new fleet mix may be implemented.

2.5 Communications

2.5.1 Recommendation 17: Implement Communications Strategy

Regular communication with Paratransit passengers with important information and service updates is an important component of an effective overall specialized transit service. There should also be opportunities for Paratransit passengers to raise concerns and ask questions. At the same time, sending communications too often or hosting too many events may result in a loss of interest and reduced engagement. A peer review of communication activities of other paratransit services was conducted and is illustrated in **Table 7**.

Regina Transit currently provides a newsletter which is mailed or emailed to registered Paratransit passengers.

Table 7: Peer Review of Communication Activities

	Newsletter	Events	Other
Regina Transit	Frequency: 2 times a year Distribution: Mailed or emailed to registered passengers	None	Intermittent in-person activities, meetings, surveys or events
Saskatoon Transit	Frequency: Every 4 months or 2-3 times per year Distribution: Physical or email newsletter	None	Updates on transit website, meet with organizations on a regular basis such as the Saskatoon Council on Aging
York Region Transit	Frequency: 2 times a year Distribution: Mailed to registered passengers, available online	Transportation Public Engagement Forum (not accessible transit-specific)	NA
TransLink	Frequency: 4 times a year Distribution: In vehicles and at high demand trip locations	Pre-COVID: 4 in-person Open Houses per year at varying geographical locations	Phone check-in with all clients during COVID-19
Halifax Transit	None	None	Response to inquiries via 311
Calgary Transit	Frequency: 4 times a year, special editions when necessary Distribution: Distributed online, customers can request physical copy	None	NA

Based on a review of other specialized transit services, the following policy regarding specialized transit communications is recommended:

1. Newsletters:

Regina Transit should publish newsletters two to four times per year. This provides the opportunity to provide seasonal updates regarding the service. Newsletters should be sent

via mail and/or by email to ensure convenient access to communicated information for all registered passengers.

2. Public Events:

An annual town hall should be hosted where passengers, regardless of Paratransit registration status, can learn about organizational priorities and strategies directly related to accessibility in transit and provide feedback on this work as well as the accessible service as a whole. These events may be hosted in person and/or virtually.

3. Customer Surveys:

Customers surveys should be completed every two-years, or as an add-on to public events, focused on passengers that cannot attend in-person or virtually. The customer survey can span any number of relevant issues that Regina Transit would benefit from obtaining information on. This could include communicating changes in policy and service, assessing customer experience and/or gathering information on key performance indicators. The survey should utilize different formats to assist as many people as possible to complete the surveys (i.e. electronic, paper, flyers, newsletters, etc.).

While the newsletters currently sent by Regina Transit provide valuable information, they should be expanded to include:

- Reporting on Paratransit performance metrics;
- Reminders about new and existing policies such as the no-show and late cancellation policy;
- Profiles on Paratransit operators and passengers;
- Travel Training success stories; and
- Newly accessible stops and features.

The number of newsletters to be sent per year should be determined based on the amount of content that is available to ensure an appropriate length of each newsletter.

While Saskatchewan does not currently have accessibility legislation in place, the government has stated it intends to develop such legislation. Legislation in Ontario (*The Accessibility for Ontarians with Disabilities Act, 2005*) and Manitoba (*The Accessibility for Manitobans Act*) mandate a minimum of one annual public meeting in which passengers and residents can provide feedback on accessibility plans as well as transit agencies' policies and practices regarding accessible services. It is likely that a similar requirement will be imposed if Saskatchewan introduces its own accessibility legislation. This requirement aligns with best practices related to communicating with the community and ensuring that all voices are heard in matters of accessible transit service.

2.5.2 Recommendation 18: Communications with Organizations

Regina Transit provides services to customers that may use the services or programs of approximately 20 non-profit organizations in the City. It is important that senior management at Regina Transit maintain regular communication with these organizations to identify any changes to customer needs, growth in demand or other issues. The frequency of communications needs to be balanced with other demands on senior staff time.

It is recommended that at least once annually, the above noted organizations have an opportunity to connect with senior management of Regina Paratransit services. This should start with an email, with the potential for phone, virtual or in-person follow-up should further discussion be requested. The purpose would be to provide updates on the services provided, and to solicit feedback on what issues/problems may exist for the consumers of the services. Where possible, groups with common or similar interests/mandates could be brought together for a joint in-person or virtual session.

2.6 Policy and Procedures

2.6.1 Recommendation 19: Develop a Policy to Address Issues Raised by Recommendations

Implementing the recommendations in this report will lead to new forms of service delivery which existing policies do not address. There are circumstances that may arise when implementing an integrated service delivery model that require policy documentation, such as the conditions for integrated trips.

All relevant Policies and Procedures and Standard Operating Procedures documents should be updated to reflect changes in policy and operations arising from the Transit Master Plan and changes in Paratransit service.

2.6.2 Recommendation 20: Create a Comprehensive Accessibility Plan

Saskatchewan is developing accessibility legislation that will provide minimum requirements related to accessibility in the province. During its first round of public engagement, the provincial government identified public transportation as a key theme for participants. Similar legislation already exists in other provinces, including Ontario and Manitoba, that address:

- the creation, implementation, maintenance, and documentation of multi-year accessibility plans;
- technical requirements for accessible features on vehicles (lifting devices, grab rails, etc.);
- providing fare and service equity between conventional and specialized transit services; and
- allowing passengers to book on the day of travel whenever possible, or up to three hours before closing on the previous day of travel.

While Regina Transit already complies with many of these requirements, it does not have a single comprehensive document that outlines all the policies, strategies, and actions undertaken that relate to promoting accessibility.

It is recommended that a comprehensive Accessibility Plan be developed that aggregates all documentation related to promoting accessibility, clearly outlining the work that has already been done and will be achieved in the future. The Accessibility Plan should emphasize the way in which all types of barriers to mobility are addressed. Such a document would ensure that Regina Transit is ready to meet any legislative requirements that may be introduced in the future. It would also be a useful resource for staff, local elected officials, and the public to understand how Regina Transit considers accessibility in the planning and operations of their service.

2.6.3

Recommendation 21: Update Policy to Mandate that Vehicle Driver Stands on Lift with Non-Ambulatory Passengers while in Operation

The current policy relating to passengers utilizing lifts to enter a Paratransit vehicle is that the driver stands on the lift in active operation with ambulatory passengers, but not with non-ambulatory passengers. This presents risks as issues may arise when the lift is in motion and the driver's ability to assist can be limited if they are not on the lift with the passenger.

It is recommended that Paratransit operators ride on the lift with the passenger in all circumstances, except when the combined weight of the passenger, mobility device, and operator are in excess of the lift's weight allowance or when the size of the mobility device makes it impractical or unsafe to do so.

2.6.4

Recommendation 22: Update Policy Related to Service Animals on Paratransit Vehicle Lifts

The current policy related to the boarding of service animals transported outside of a carrier for passengers utilizing the vehicle lift is that the service animal is loaded first through the front door, after which the wheelchair passenger boards separately on the lift. This practice may violate the Saskatchewan Human Rights Code which prohibits practices that interfere with the provision of services by a service animal. Separating passengers from their service animals for even a short time may be seen as interfering with the service animal's ability to provide their service.

This policy should be amended to allow service animals to board transit vehicles with their handlers unless it is unsafe to do so. If there are concerns with changing this policy, it is recommended that Regina Transit consult the Saskatchewan Human Rights Code for advice and guidance, and the Regina City Solicitor for legal advice on this issue to ensure no human rights violations are taking place and the safety of passengers and their service animals is maintained.

2.6.5 **Recommendation 23: Reintroduce Requirement for Minimum of two Paratransit Passengers on the Accessibility Advisory Committee (AAC)**

The City of Regina removed the requirement to have a minimum of two Paratransit passengers on the AAC in 2021. To effectively represent the needs of individuals who utilize accessible service on transit, the Committee must include individuals who are registered for and understand the Paratransit service. This is particularly beneficial when the AAC evaluates eligibility appeals. The ability for the Committee to make fair and impartial decisions in these cases would be significantly improved by the inclusion of members who utilize and understand the service in practice.

The recent decision regarding the composition of the AAC should be reversed and the requirement for a minimum of two Paratransit transit passengers on the Committee should be reinstated.

2.7 **Operations and Staffing**

2.7.1 **Recommendation 24: Hire An Additional Staff Resource to Support Paratransit Functions**

Several the recommendations in this report require additional staff resources to successfully implement. As such, it is recommended that along with the increased staffing levels needed to support Paratransit and On Demand services, an additional middle manager position should be created to support reassessments (**Recommendation 2**), Travel Training (**Recommendation 3**), review of existing taxi contract (**Recommendation 9**), follow-up on No Shows and Late Cancellations (**Recommendation 14**), education and communications (**Recommendation 17**) and the development and management of an Accessibility Plan (**Recommendation 20**). Further information about staffing recommendations can be found in **Supplement 6 (Organizational Review)**.

2.7.2 **Recommendation 25: Conduct a Change Management Plan**

Given the extent of a number of the recommendations noted above, it is recommended that a change management plan be developed to ensure an effective change management strategy is prepared and implemented to support the successful implementation of these recommendations. This is estimated to cost \$60,000 for the strategy and an additional \$20,000 the following year for implementation.

3.0

On Demand

As detailed in **Recommendation 5 (Section 2.3.1)**, it would be beneficial to integrate Paratransit and On Demand services by providing a single demand-responsive system. As a single system, the vehicles, drivers, and the operational policies and procedures of the Paratransit system would also apply to the On Demand services. This section explains the proposed On Demand service in Regina and its recommended operation.

3.1

Background

On Demand transit is a shared-ride, demand-responsive public transit service. The service model does not follow a fixed-route or schedule. Instead, customers pre-book trips and vehicles are routed dynamically to the passenger's pick-up and drop-off point.

Modern On Demand services utilize mobile app or web-based technology, which allows customers to plan, book, track and pay for their ride in real-time.

The software application generates a real-time dynamic route that is optimized to balance customer convenience (e.g. travel time) and efficiency (e.g. ridesharing).



3.2

When is On Demand Service Appropriate?

On Demand transit service is often introduced in new, low density communities or in communities where fixed-route transit service would not be effective. In established communities like Regina, On Demand transit can provide an additional layer of service to places where a fixed-route service is not effective. Service in these areas typically provides connections within that service area or connects customers to the nearest terminal or transit hub where they can connect to conventional transit service.

It is important to note that the introduction of On Demand transit services is not a one-size fits all solution and is not applicable in all contexts. There are many situations where fixed-route service will provide the most convenient level of service for customers and be more cost-effective. For example, fixed-route service in dense areas still carries high numbers of customers far more efficiently than On Demand models, and this type of service should not be considered along the busy Main Route corridors.

There are three reasons to introduce On Demand transit:

1. To improve the effectiveness and customer-experience of a fixed-route service that does not meet minimum ridership thresholds.
2. To introduce service in an area or during a period that does not warrant fixed-route transit service due to low demand.
3. To provide a second layer of transit service on top of fixed-route services to increase ridership.

3.3

Service Delivery Models for On Demand Transit

On Demand transit service can be structured in different ways depending on the goals of the municipality and the market in which the service operates in. Some typical service delivery models include:

1. **Origin-to-Hub (First-Mile/Last-Mile).** On Demand transit provides mobility to customers in lower demand areas to and from the nearest fixed-route transit stop. In this way, this service model provides first-mile/last-mile connectivity to the rest of the transit network, with the majority of a passenger's overall journey undertaken on fixed-route transit. Where possible, the connecting stop is typically a major hub/terminal, transfer point or stop that allows customers to complete their trips from a safe and accessible transfer point, connecting to multiple routes. The model is typically implemented in low density areas where fixed-route transit is uneconomical, is not offered, or to supplement an existing low-frequency fixed-route service.
2. **Origin-to-Destination.** On Demand transit vehicles provide a one-seat ride to connect any origin with any destination in the service area. This means that transfers are not required to a fixed-route service. This model is typically implemented in larger low-density geographic areas where there is no fixed-route service or in smaller geographic areas where it does not make sense to force a transfer. This model can be combined with an Origin-to-Hub model, where Origin-to-Destination is used for internal trips within an On Demand zone and Origin-to-Hub is used to connect customers outside of the On Demand zone.
3. **Flex-Route.** This is a simple form of On Demand transit which is typically implemented in low-demand areas and allows the transit agency to provide additional coverage using a limited resource. Flex routes operate on a fixed-route and fixed-schedule for certain portions of the route. However, at the passenger's request the driver can 'flex' off the route to pre-designated areas to pick up or drop off a passenger. The benefit of flex routes is that it can provide coverage to a larger area that may have limited demand without the need to invest in additional service. Extra travel time would need to be included in the route schedule to allow the driver to flex off the route based on a passenger request.

A high-level assessment of Regina Transit confirmed that a city-wide Origin-to-Destination model in Regina would not be effective. On Demand transit services operate effectively when ridership is below 10-12 boardings per revenue vehicle hour. System-wide ridership for Regina Transit was 22 boardings

per revenue vehicle hour in 2019, which is expected to increase with the service improvements recommended in the Regina Transit Master Plan. This level of service productivity is more suited to a fixed-route system and converting it to a pure On Demand service would result in an increase in vehicles and associated revenue vehicle hours, and a likely decrease in customer satisfaction.

A flex-route model was also not considered suitable to Regina. There are various complexities with flex-routes, with some stops being fixed and others requiring pre-booking. This may further confuse passengers trying to learn a new system.

The most effective On Demand model for Regina is an Origin-to-Hub model to connect passengers to Main and Local Route corridors, combined with an Origin-to-Destination model to allow passengers to better connect to local neighbourhood destinations directly and without a transfer. This model would only operate in select areas, rather than across the entire city.

The remainder of this report will review and discuss where an Origin-to-Hub/Origin-to-Destination model might be an effective approach within the City.

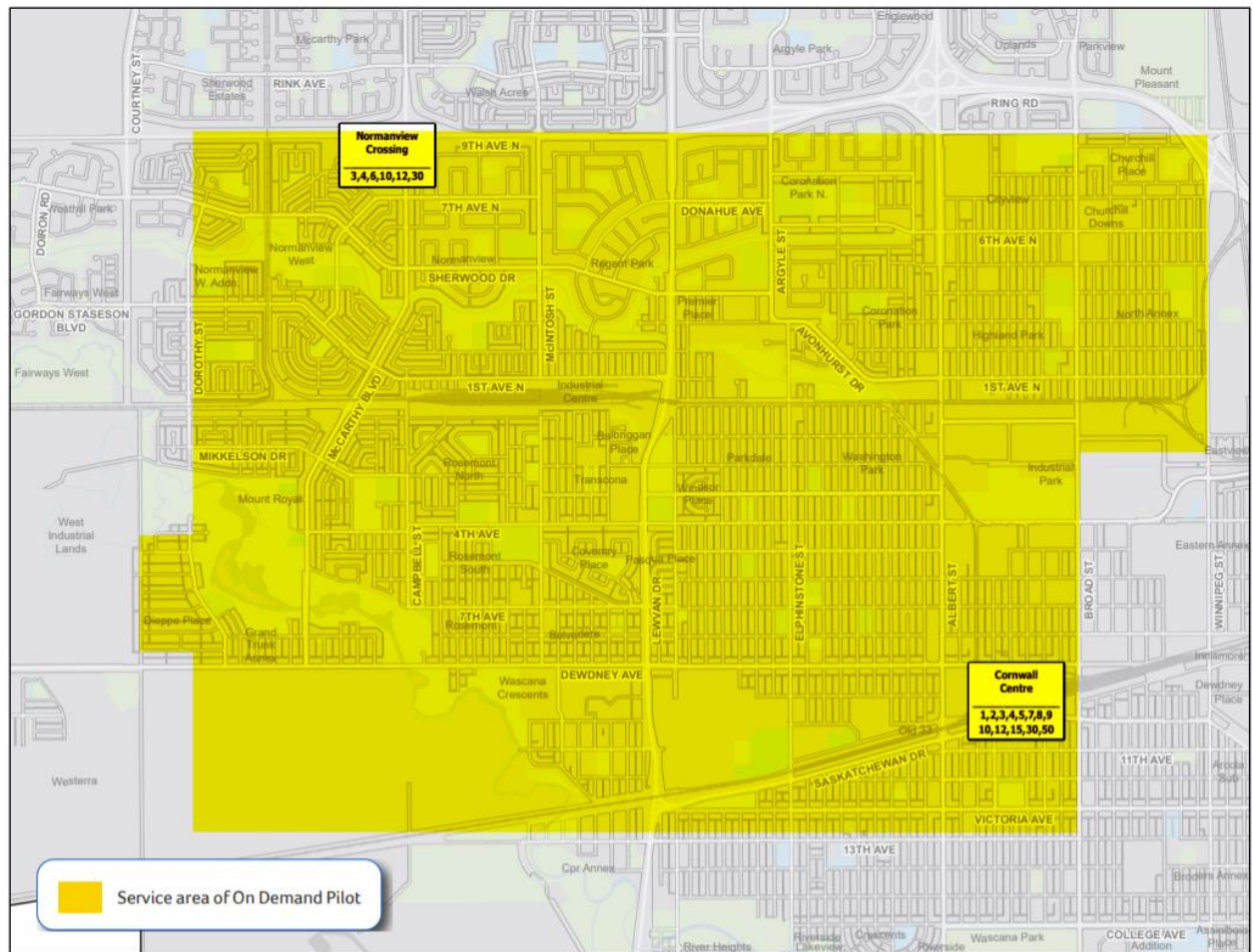
3.4 Existing On Demand Service

Regina Transit implemented a pilot On Demand service to replace Route 10 fixed-route service in the evenings on August 31, 2020. This service area is in central Regina, bounded by 9th Avenue North to the north, Winnipeg Street and Broad Street to the west, 13th Avenue to the south, and Dorothy Street to the east. This area is illustrated in **Figure 2**.

The On Demand zone includes Normanview, Downtown, Warehouse, Cathedral Area, Northgate Mall and Avonhurst Shopping Mall, providing access to several key destinations in the City. It operates using a stop-to-stop model that uses existing bus stops as pick-up and drop-off points.

The current On Demand service is available in the evenings only, between 7:00 p.m. and 1:00 a.m., Monday to Saturday. It replaces the Route 10 service for these hours, however, passengers can request pick-ups and drop offs at all bus stops in the catchment area regardless of whether they are served by that route. During the day, the area is served by conventional transit.

Figure 2: Current On Demand Service Area



3.5

Considering On Demand Service for Regina

The evaluation of locations in Regina to implement additional On Demand service was based on the criteria noted in **Table 8** below. The criteria addresses:

- the impact to the customer experience (headways/waiting time, directness of service);
- the accessibility and proximity to the service; and
- the productivity of the route and the potential for cost savings.

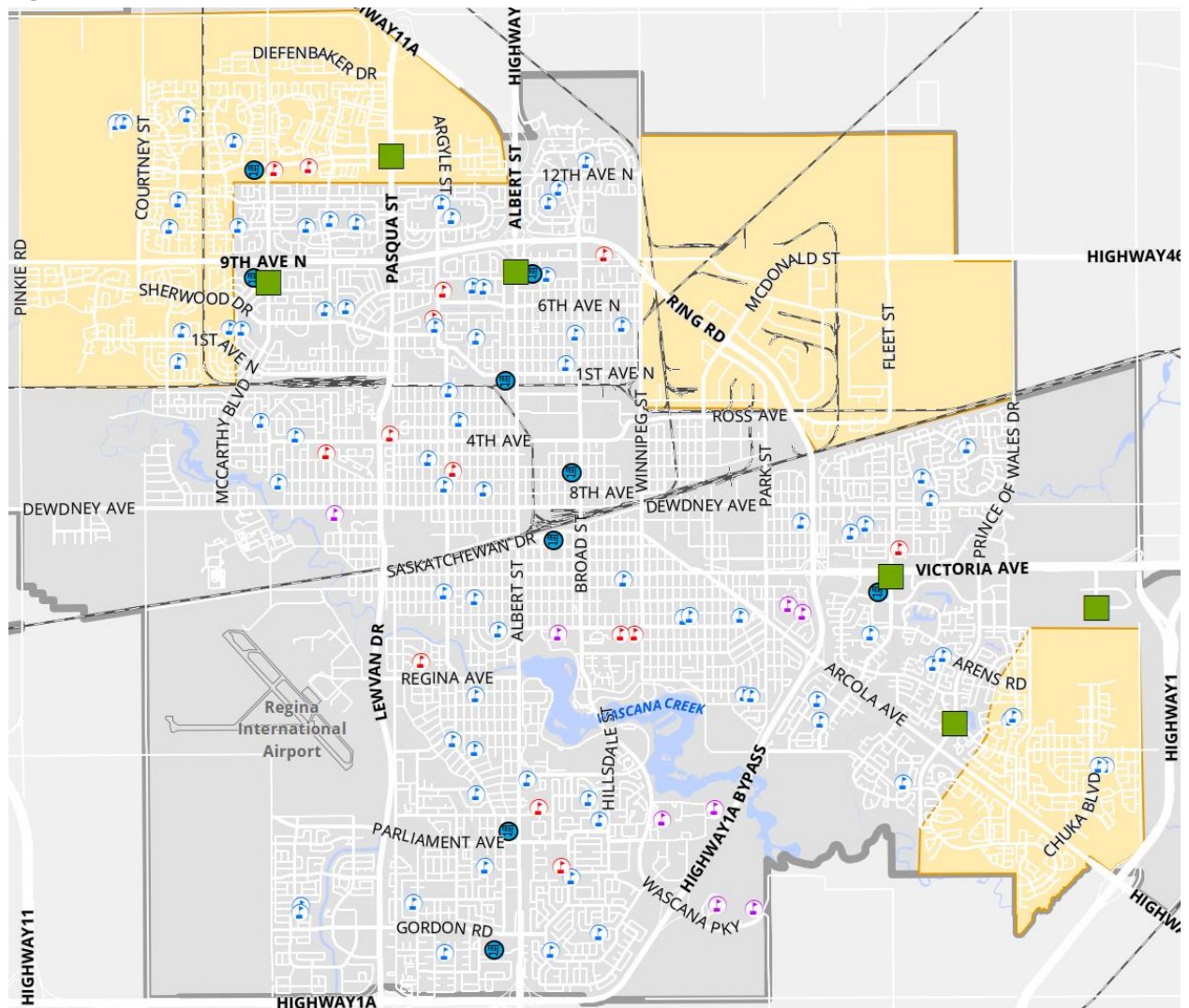
Table 8: Criteria for Fixed-Route Versus On Demand Transit

Criteria	Fixed-Route	On Demand	Discussion
Level of Service and Route Productivity²	<p>Area justifies headways of 30 minutes or better.</p> <p>Ridership of above 15 boardings per revenue vehicle hour.</p>	<p>Area justifies headways of 30 minutes or longer due to low ridership.</p> <p>Ridership falls below:</p> <ul style="list-style-type: none"> • 15 boardings per hour (urban areas with a single destination); • 10-12 boardings per hour (larger suburban areas with multiple destinations); • 2-4 boardings per hour (large undeveloped or rural areas). 	<p>When the frequency of any fixed-route is low, wait times to access service and the wait time to make transfers can be discouraging to customers. On routes where ridership is low enough to warrant 30-minute headways or longer, then On Demand service could be considered.</p> <p>In new service areas where ridership potential is uncertain, On Demand service can offer a lower risk scenario for transit agencies that are interested in offering a pilot service.</p>
Service Accessibility and Route Alignment	<p>Routes can be aligned such that most residents and/or destinations are near transit stops (less than 400 metres walking distance), while still remaining relatively direct with minimal deviations.</p> <p>High demand for service between similar origins and destinations along a clearly defined corridor.</p>	<p>Improving the proximity of service to residents and employees within a 400 metres walking distance of a stop necessitates the fixed-route to be indirect (i.e. one way, looping service).</p> <p>No clear origin / destination pairs along a particular corridor, or origins and destinations are more dispersed.</p>	<p>This criterion is typically a result of land use and community planning. For example, in neighbourhoods where different land uses are separated, and/or the community and the road network is circuitous, the topography is hilly or there is limited pedestrian infrastructure, it is harder to meet the 400 metre walkability guideline without having a very long and meandering (i.e. inefficient) fixed-route.</p> <p>When destinations are dispersed within a neighbourhood, or there's no clear major destination for those living in a particular area, then fixed-route service may be inefficient.</p>

Three areas of the City were identified as potential candidates for On Demand service. These areas are in the southwest, northwest, and northeast of the City and are illustrated in **Figure 3**.

² Note: The exact productivity rate is dependent of the geographic area and the operating model and cost implemented for On Demand service and should be used as a guide.

Figure 3: On Demand Zones – 5 Year Plan



3.5.1 Northwest

The Northwest On Demand Zone is an “L”-shaped area in the far northwestern corner of the City. This area is largely residential, made up of low density, detached homes along with several schools, parks, and a commercial node at Pasqua Street and Rochdale Boulevard. The On Demand zone would be served by two Neighbourhood Hubs: Normanview Crossing and Northgate Mall.

This neighbourhood is currently served by a number of conventional fixed routes including the 3, 4, 16, 17, and 30. Routes 3 and 4 operate seven days a week. In changing to On Demand, transit would be more flexible in navigating the curvilinear road network in this area, increasing access in local neighbourhoods.

3.5.2 Northeast

The Northeast On Demand Zone is bounded by the northern and eastern municipal boundaries of Regina Avenue, Ross Avenue to the south, and Winnipeg Street to the west. The area is largely made up of light and heavy industrial land uses, including the Co-op Refinery Complex. This zone would be accessed by Neighbourhood Hubs at Northgate Mall and Victoria Square.

This area is currently served by Routes 6 and 8. Route 6 operates weekdays only between approximately 6:00 a.m. and 6:00 p.m., while Route 8 operates every 30 minutes between 5:00 a.m. and 10:00 p.m. on weekdays and Saturdays and every 60 minutes between 8:00 a.m. and 7:00 p.m. on Sundays. The provision of On Demand services should increase access to this industrial area and provide greater connectivity to other parts of the City, through the designated Neighbourhood Hubs.

3.5.3 Southeast

This On Demand zone is located in the southeastern corner of Regina. The land use in the area is primarily low-density residential with some commercial nodes and pockets of higher density apartment residential uses. As parts of this area are still being developed, the road network is incomplete, creating barriers to the provision of fixed route transit service. Neighbourhood Hubs for this zone are recommended to be located at Victoria Square, the Aurora commercial area, and Sandra Schmirler Leisure Centre. These would provide access to a wide range of Local and Main Routes, serving a range of destinations in Regina.

This neighbourhood is currently served by two fixed routes, Route 22 and 60. Route 22 operates weekdays only between 6:30 a.m. and 10:30 p.m. with limited evening service and a frequency of every 30 minutes. Route 60 is weekday only as well, with service operating every 30 minutes between 6:30 a.m. and 6:00 p.m. The proposed On Demand service will provide more tailored access to the emerging parts of this zone. As the area grows, the On Demand zone can be adjusted to reflect the ridership demands and implementation of future fixed route services.

3.6 Stops and Access

On Demand transit service can be structured based on the traditional proximity targets of a transit system, or to provide more convenient service right to the curb of the passenger's origin and/or destination. Some typical pick-up/drop-off models include:

1. **Bus Stop.** The On Demand service picks up and drops off customers at predesignated transit stops only. It is common to use pre-existing fixed-route stops (e.g. when fixed-route service is replaced by On Demand service during certain periods of the day), or to designated On Demand stops. Stops are placed so that most residents are within a 400 metre walking distance of a stop.
2. **Corner.** Customers must walk a short distance to a street corner within 100 metres of their origin/destination to get picked up and dropped off by an On Demand service. This type of pick-up/drop-off point is only used by technology-based ride hailing services as stops are virtual and only visible on the mobile app. This is because the location of a corner stop can change with each trip request, as the stop is selected to minimize the travel time of the vehicle that is destined to pick up or drop off the next customer (e.g. the location of a corner stop may be the northeast corner of an intersection for an inbound vehicle coming from the south, or the southwest corner for an inbound vehicle coming from the north). Customers are asked to walk a short distance to optimize the service.
3. **Curb.** Customers are picked up/dropped off directly at the curb of their origin and/or destination. This model is typically used in more rural or low-density areas with limited ridership, where consolidating pick-up and drop-off points at a common stop would not significantly increase the efficiency of the service. For origin-to-hub service models, the curb is only used for one end of the journey.

Proximity of service should be considered when identifying how to operate the On Demand transit service in Regina.

Table 9: Evaluation of Stop Type Models

Guiding Principle	Bus Stop	Corner	Curb
Customer Experience	<p>Brand: Stops clearly identified as a Regina Transit service.</p> <p>Safety: Customers may have to walk farther to their origin and destination, which may be unsafe during late night service.</p> <p>Reliability: Reduces vehicle travel time, resulting in improved reliability. Reduces potential conflicts with parked vehicles or operation on narrow streets.</p> <p>Level of service: Consistent with fixed route.</p> <p>Stop Locations: Stops would be formalized and identified by Regina Transit. Since infrastructure is being built, there may be objections by residents.</p> <p>Scalable and Adaptable: Lowest level of scalability and adaptability, as this model requires the placement of stops and the installation of bus stop infrastructure.</p>	<p>Brand: No identified marker at the stop. Passengers may be confused about where to wait.</p> <p>Safety: Stop near pick-up and drop-off point can increase perception of safety, particularly with late night service.</p> <p>Reliability: Likely to have a slightly lower level of reliability due to the potential for deviations to pick up and drop off passengers at a corner, or need to operate on narrow streets.</p> <p>Level of service: Higher convenience for customers, shorter walking distance.</p> <p>Stop Locations: This model would have no formalized stop locations. There may be community concerns due to buses travelling on local residential streets and stopping at seemingly random locations for passenger pick-ups/drop-offs.</p> <p>Scalable and Adaptable: Highly scalable and adaptable. As this model does not require stop infrastructure and only requires passengers to walk a short distance.</p>	<p>Brand: No brand required. Passengers wait at the curb of their origin (e.g. home) or destination.</p> <p>Safety: Stop in front of pick-up and drop-off point can increase perception of safety, particularly with late night service.</p> <p>Reliability: Likely to have the lowest level of reliability due to the potential for significant deviations to pick up and drop off passengers at the curb and need to operate on narrow streets.</p> <p>Level of service: Highest convenience for customers, shortest walking distance.</p> <p>Stop Locations: This model would have no formalized stop locations. There may be community concerns due to buses travelling on local residential streets and stopping at seemingly random locations for passenger pick-ups/drop-offs.</p> <p>Scalable and Adaptable: Highly scalable and adaptable. As this model does not require stop infrastructure and only requires passengers to walk a short distance.</p>

Guiding Principle	Bus Stop	Corner	Curb
Equity	Booking: N/A Accessibility: Stops that don't have a hard accessible surface or are not connected to a sidewalk would not be accessible. Distance to bus stop would be the longest. Lowest level of accessibility.	Booking: N/A Accessibility: Stops that don't have a hard accessible surface or are not connected to a sidewalk would not be accessible. Distance to bus stop would be shorter making it more accessible if there is a sidewalk in place. Second lowest level of accessibility.	Booking: N/A Accessibility: This model is the most accessible and most consistent with the service provision of existing specialized service. Highest level of accessibility.
Sustainability	Ridership Growth: The need to walk to a bus stop would not offer any additional convenience. Lowest potential for ridership growth. Reduce GHG Emissions: Reduced travel time, fewest stops and increased opportunities for ridesharing. Highest potential for GHG reduction. Efficiency: Highest potential for ridesharing as passengers are required to access the service at common stops.	Ridership Growth: Reduced walking distance to the stop may make the service more attractive. Second highest potential for ridership growth. Reduce GHG Emissions: Increased number of deviations and stops (to pick up and drop off passengers). This also limits the potential for ridesharing. Second lowest potential for GHG reduction. Efficiency: Second lowest potential for ridesharing as vehicles spend more time stopping, which results in a slower service.	Ridership Growth: Pick up at a customer's door makes the service very attractive, particularly during inclement weather. Highest potential for ridership growth. Reduce GHG Emissions: Increased number of deviations and stops (to pick up and drop off passengers), since there are no shared stops in this model. This also limits the potential for ridesharing. Lowest potential for GHG reduction. Efficiency: Lowest potential for ridesharing as vehicles spend more time stopping, which results in a slower service.

Recommendation

Based on the above assessment, it is recommended that Regina Transit operate a 'bus stop' model for its On Demand service. This may require the installation of additional stops in the On Demand service area to meet the proximity targets set for this service.

4.0

Financial Plan

A financial plan was developed to identify the potential budget impacts of the proposed recommendations noted above. This is based on the projected growth in Paratransit registrants and ridership due to population growth, ridership and associated service hours, vehicle requirements and operating cost changes due to the Paratransit recommendations noted in this plan, as well as the introduction of On Demand service. These were forecast based on a 2022 base year, with the long term representing a period approximately 25 years in the future.

Table 10 presents the future forecasted characteristics and performance of Regina Paratransit and On Demand transit based on the Transit Master Plan. The values in the table show the anticipated growth in registrants and ridership.

Table 10: Forecast Service Performance

	2019	Base	Short Term	Mid Term	Long Term
Population	238,000	260,000	280,000	320,000	360,000
Registrants	1,800	1,700	2,200	2,600	2,900
Revenue Service Hours	74,000	81,000	109,000	117,000	125,000
Paratransit Ridership	206,500	169,600	243,800	273,500	306,600
On Demand Ridership	0	0	108,000	108,000	108,000
Total Ridership	206,500	169,600	351,800	381,500	414,600
Registrants per Capita	0.01	0.01	0.01	0.01	0.01
Paratransit Rides / Registrant	114.72	99.76	110.82	109.40	105.72
Rides/ Revenue Service Hour	2.79	2.09	3.23	3.26	3.32
Revenue Service Hours/ Capita	0.31	0.31	0.39	0.37	0.35

Changes to registrants and ridership are primarily due to:

- an increase in Paratransit registrants and associated ridership due to a growing and aging population;
- an increase in Paratransit trips per registrant through recommendations that improve parity between Paratransit and conventional transit (e.g. reduction in same-day trip denials and an increase in hours of service), and anticipated new Province-wide accessibility legislation;
- a reduction in Paratransit trips per registrant by making the conventional system more accessible, expanding travel training and changes to the eligibility and the application process; and
- new On Demand transit trips that will be integrated with Paratransit services, but will primarily be conventional transit passengers.

Rides per Paratransit registrant is expected to go down as the conventional service becomes more accessible and additional travel options are available for Paratransit registrants that have conditional eligibility. Riders per hour will increase, primarily due to the introduction of On Demand software and service, which will see an increase the ability to make real-time adjustments to same-day trip requests and introduce new On Demand passengers to the demand-responsive services. Revenue service hours per capita will also increase as a result of the expansion of On Demand transit, the increase in Paratransit hours of service to achieve parity with conventional transit and reduction in trip denials.

The proposed recommendations are intended to be phased in across the lifespan of the Transit Master Plan. The approximate implementation timeline and associated costs of recommendations are described in **Table 11**. New costs identified are cumulative and carry over to the next year, unless identified as a one-time cost below.

Table 11: Phasing Plan for Paratransit Recommendations plus New Annual Costs

	Short Term	Mid Term	Long Term
On Demand Transit	\$750k		
Expand Paratransit Service Hours to Match Conventional	\$125k	\$35k	
Third-Party Review Agency (Application Process)	\$70k		
Increase in Travel Training Budget	\$6k		
New Mid Manager Staff Position	\$90k		
New On Demand Software	\$305k	\$25k	\$25k
New Supervisors		\$70k	
New Call Centre Staff	\$115k	\$115k	\$115k
One time Change Management Plan	\$80k		

The financial impact of the Paratransit recommendations include:

- operating costs to implement On Demand transit service;
- additional Paratransit service hours to increase hours of service and to reduce same-day trip denials;
- additional staffing positions due to growth and to implement some of the recommendations in the plan (call centre staff, a new supervisor and new mid-manager position);
- approved increases in Paratransit contractor hourly rates between 2019 and 2026; and
- costs for third-party eligibility assessment and travel training.

A reduction in Paratransit service hours is expected as a result of an enhanced eligibility process, which will increase opportunities for registered Paratransit passengers to access conventional services within their abilities, leading to a lower number of Paratransit trips.

The increase in operating costs and revenue are noted in **Table 12** below while performance measures are illustrated in **Table 13**. Over the next 20 years, demand-responsive transit net operating costs are anticipated to increase from \$5.7M in 2022 to \$10.4M by 2046. A big part of this increase is due to higher hourly operating costs (including fuel) that are anticipated over the next four years. However, the net operating cost per passenger between 2022 and 2046 is anticipated to go down, primarily due to increased efficiencies from a number of recommendations identified in the plan.

Table 12: Financial Forecast

	2019	Base	Short Term	Mid Term	Long Term
Average Fare	\$1.32	\$0.96	\$1.43	\$1.42	\$1.41
Average Annual Paratransit Fare Revenue	\$272,200	\$162,500	\$321,300	\$360,500	\$404,100
Average Annual Paratransit Other Revenue	\$418,700	\$343,500	\$418,700	\$418,700	\$418,700
Average Annual On Demand Revenue	\$0	\$0	\$182,500	\$182,500	\$182,500
Average Annual Paratransit Total Operating Cost	\$5,236,400	\$6,274,600	\$7,901,500	\$8,981,300	\$9,794,300
Average Annual On Demand Total Operating Cost	\$0	\$0	\$1,589,000	\$1,614,200	\$1,639,400
Average Annual Total Operating Cost	\$5,236,400	\$6,274,600	\$9,490,500	\$10,595,500	\$11,433,700
Average Annual Net Operating Cost	\$4,545,500	\$5,768,600	\$8,568,000	\$9,633,800	\$10,428,400

Table 13: Paratransit Performance Indicators

	2019	Base	Short Term	Mid Term	Long Term
Revenue/Cost Ratio	0.13	0.08	0.10	0.09	0.09
Net Operating Cost / Passenger	\$22.01	\$34.01	\$24.35	\$25.25	\$25.15
Net Operating Cost / Revenue Service Hour	\$61.43	\$71.22	\$78.61	\$82.34	\$83.43
Net Operating Cost / Capita	\$19.10	\$22.19	\$30.60	\$30.11	\$28.97

To support the recommendations above, an increase in the number of vehicles in the vehicles is required. It is assumed that the On Demand service will use the same fleet as the existing Regina Paratransit service. The fleet expansion and replacement plan is included in **Table 14**, including estimated capital costs.

Table 14: Forecast Fleet Plan and Capital Costs

	Base	Short Term	Mid Term	Long Term
Total Buses	35	46	49	75
Peak Paratransit Buses	30	33	36	172
Peak On Demand Buses	0	6	6	18
Spare Buses	5	7	7	17
Spare Ratio	14%	15%	14%	0
Replacement Buses	6	21	79	81
Expansion Buses	2	11	3	4
Capital Cost	\$1.16M	\$4.65M	\$11.9M	\$12.3M