



PUBLIC TRANSPORTATION MASTER PLAN

May 2024





LLOYDMINSTER PUBLIC TRANSPORTATION MASTER PLAN

Final Report

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ACKNOWLEDGEMENTS

Land Acknowledgement

The City of Lloydminster acknowledges that we are located on Treaty 6 Territory, and the City of Lloydminster respects the histories, languages, and cultures of First Nations, Metis, Inuit, and all First Peoples of Canada, whose presence continues to enrich our vibrant community.

Project Acknowledgement

WATT Consulting Group and the City of Lloydminster would like to thank the residents and visitors of Lloydminster who provided invaluable feedback, ideas, and perspectives throughout the development of the Public Transportation Master Plan. In addition, we would like to thank City of Lloydminster staff, City of Lloydminster Council, and local community partners for all of their contributions throughout the process.

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Left Turn Right Turn





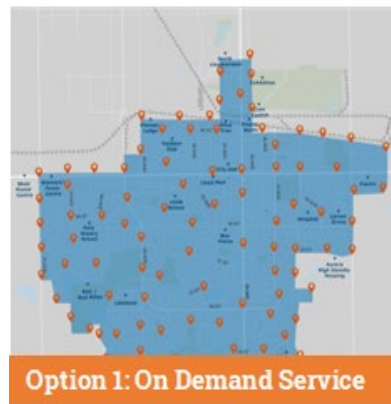
EXECUTIVE SUMMARY

Lloydminster does not have a public transportation system currently. The purpose of the Public Transportation Master Plan was to conduct a high-level assessment to better understand public transportation needs in Lloydminster as well as determine the community's level of endorsement of such services.

Overall, the policy and planning context in Lloydminster is conducive to the development of a public transportation system based on identified and complementing priorities. Public transportation is identified as being needed to support immigrants, shift workers, seniors, and differently abled citizens in Lloydminster. Public Engagement survey response rate (2,512 responses, close to 10% of the City's population) indicates a high level of interest in the topic of public transportation. Irrespective of car ownership, a majority of respondents (84%) have expressed support for public transportation services in Lloydminster in the first round of engagement.

Four service options were developed to provide a perspective of feasible public transportation options. The options ranged from minimal service to high levels of service.

These options were then taken out to the public again for feedback, with some information about taxation impacts from implementing these options. The second round of engagement also yielded a high level of support among the respondents, with a medium level of service garnering the most support. Interestingly, the community seemed less interested in On Demand Transit, likely stemming from the technological implications of this service as well as some unfamiliarity with how the service operates.





The question of whether to provide public transportation in Lloydminster has been a recurring one, and does not depend entirely on quantitative facts, but rather qualitative information. Public transportation is a service that a community can opt to provide, or not provide, based on the overall goals and values of the community. Previous attempts have identified the potential scope of service, where this study confirmed two details:

1. Established a need for public transportation services and the community's acceptance of said services in Lloydminster.
2. Identified potential feasible options for introducing these public transportation services in Lloydminster to meet this need.

Depending on factors such as Council direction, Council's Strategic Plan, future Operating and Capital Budget constraints, as well as community direction, potential next steps in moving this process forward would be to determine if public transportation services will be implemented in Lloydminster and if so, develop a detailed implementation plan to support this decision.



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1.0 INTRODUCTION

The City of Lloydminster's (City) Public Transportation Master Plan marks the first of its kind within the City's suite of master plans. This document, once finalised, will serve as a guiding document regarding direction and planning considerations relating to the potential implementation of a public transportation system in Lloydminster.

Currently, the City does not have a public transportation system but does have some foundational transportation services that support seniors and diversely abled populations in the community. These programs provide the initial building blocks to develop a more extensive city-wide service to improve community mobility and support alternate transportation choices.

The Lloyd Needs project, completed in July 2022, surveyed residents to assess social needs prevalent in Lloydminster – to which public transportation was identified. Supporting this, City Council included the evaluation of public transportation opportunities as a goal within the 2022-2025 Strategic Plan. Providing the framework for this vibrant and growing community, Lloydminster's Strategic Plan encourages higher density residential uses and employment growth in proximity to infrastructure that supports multiple transportation options. It also speaks to investigating the feasibility of implementing a public transportation system, along with encouraging the design of neighbourhoods to allow for the easy implementation of public transportation as Lloydminster grows.

As a result, the City has undertaken this comprehensive feasibility study, hereinafter referred to as the Public Transportation Master Plan, to gauge the community's acceptance of public transportation and understand how public transportation could serve local travel needs most effectively.

1.1 Project Background

The Public Transportation Master Plan project was led by Watt Consulting Group (Watt) in collaboration with the City's core project team including participation from the Transportation Committee, City Council, interest groups, and the public at large. The purpose of the Public Transportation Master Plan was to conduct a high-level assessment to better understand public transportation needs in Lloydminster as well as determine the community's level of endorsement of such services, understand the potential resources and infrastructure needed to develop this system, and identify feasible public transportation service models that could meet the mobility needs of the community. The data collected regarding all of these areas helped derive the community's interest level associated with supporting public transportation which was



deemed the critical question to answer as part of this study. The scope of this study was restricted to areas within the City of Lloydminster only. Neighbouring rural municipalities were not included however, efforts were made to reach out to Onion Lake Cree Nation, but no response was received.

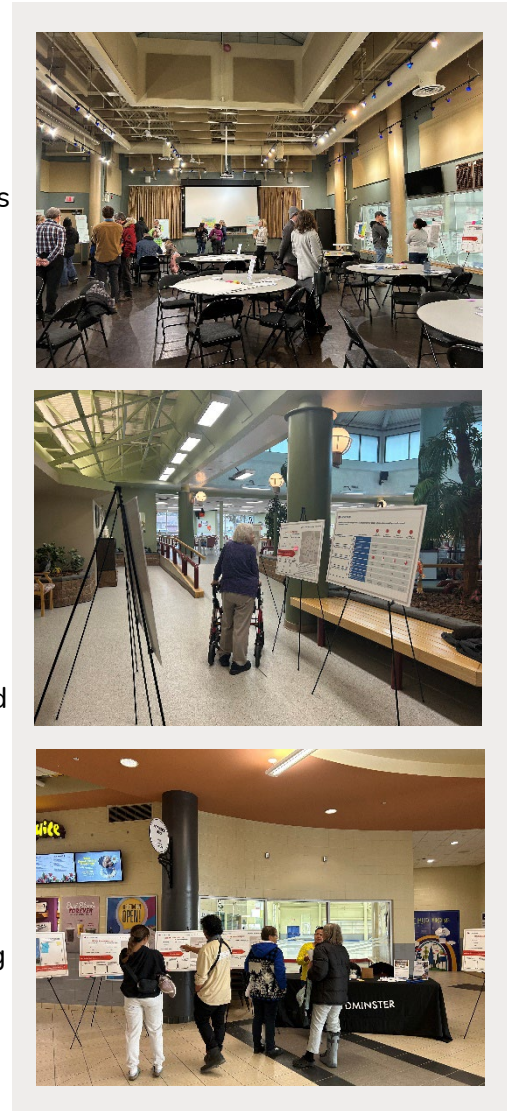
1.2 Project Objectives

Objectives of the Public Transportation Master Plan include:

- Understanding the transportation needs and opportunities for residents, major employers, and various interest groups of Lloydminster;
- Determining how connections to key local destinations can be delivered, coordinated, and optimized as effectively as possible, including potential partnerships with existing transportation service providers; and
- Developing and delivering a final Feasibility Study that describes the recommended service types and levels, potential route map(s), projected high-level operating and capital costs to assist decision makers in moving forward on improved mobility where feasible.

Final decisions regarding implementation strategies were not considered part of this scope of work as the key item responded to was to determine the communities' level of support for implementing a public transportation service where the final implementation plan and implementation strategies will be formalized as part of the next stage if the service is deemed a priority and furthered.

In addition, potential operating and governance models, funding sources and partnerships were also briefly reviewed as part of this study process and some information on this has been included in **Appendix E** of this report.



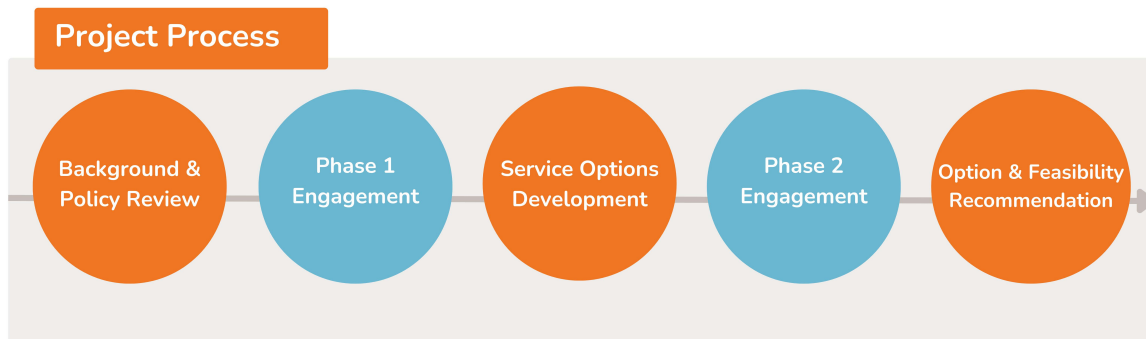


1.3 Project Process and Timeline

Undertaken from September 2022 – February 2024, the Public Transportation Master Plan project was guided by a core project team consisting of members of the Engineering Services team with support from the Transportation Committee made up of a cross-section of staff from various City departments and sought to collaboratively involve key interest groups and community members.

Key steps in the project process included:

- A review of past community plans and analysis of community demographics, key destinations, and transportation data including travel demand patterns.
- A review of the City’s current Transportation Master Plan, ISL 2016.
- Phase 1 Engagement, which intended to gather initial thoughts on public transportation and community travel patterns.
 - An online survey was available October 26 – November 16, 2022, with printed copies also available during the same timeframe.
- Development and evaluation of public transportation service options that could address the mobility needs of the community.
- Phase 2 Engagement, which involved presenting the service delivery options to the community through open houses, pop-up booths, and a second online survey available from October 18 – November 08, 2023, with printed copies also available during the same timeframe.
- Meetings with the Transportation Committee throughout the duration of the project to gauge feedback on what was being presented to the public, how the options developed could be most suitable for Lloydminster, and to determine the most appropriate recommendation for moving forward.



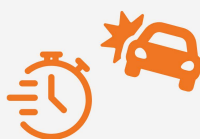


Benefits of Transit Service in a Community



Economic

Job creation & encourages income and taxes through transit operations and construction



Transportation User

Saves \$ on vehicle costs, reduces collision rates & saves time by avoiding congestion



Environmental

Reduces greenhouse gas emissions, land consumption & travel distances



Social and Community

Reduces economic costs of health care, hospital admissions & improves cardiovascular health



2.0 COMMUNITY CONTEXT

2.1 Community Overview

Lloydminster is uniquely a bi-provincial city, situated on the border of Alberta and Saskatchewan. Nestled almost equal distance between the major centres of Edmonton to the west and Saskatoon to the east, Lloydminster serves as the economic and service hub for several surrounding rural communities in the Rural Municipality (RM) of Wilton, the RM of Britannia, and the County of Vermilion River. Lloydminster is well-positioned for goods movement and industrial operations with the intersection of Highway 16 (44 Street) and Highway 17 (50 Avenue) in the heart of Lloydminster and both CN and CP rail lines passing through.

Lloydminster offers a range of economic opportunities, with strong ties to natural resource extraction, manufacturing, and agricultural sectors, in addition to retail, health and social service sectors that are steadily growing. Recreational opportunities are available year-round with well-used facilities including the Bud Miller All Seasons Park, the Servus Sports Centre, the Bioclean Aquatic Centre, and others. Lloydminster also offers plentiful educational and training opportunities, with Lakeland College attracting post-secondary students from across Canada and internationally. Health services are provided via the Lloydminster Hospital and a variety of health centres, clinics, and long-term care facilities.

2.1.1 Guiding Plans / Community Planning Framework

Transportation and mobility should be integrated with current and future land use. As such, established community plans, policies, and strategies for the City provide guidance and help determine the need for public transportation in Lloydminster. These guiding documents, and their relevance to the Public Transportation Master Plan, are summarized below:



Municipal Development Plan: Connection to our Future (2023)



Overview:

The Municipal Development Plan (MDP) provides guidance for how the Lloydminster community will develop and change over time. Municipalities in Alberta are required to have an MDP to plan future land use, development, and transportation issues, among other items.

Relevance:

Future land use and development plans help determine density and travel patterns, and how the overall transportation network can adapt to accommodate a growing community.

Area Structure Plans



Overview:

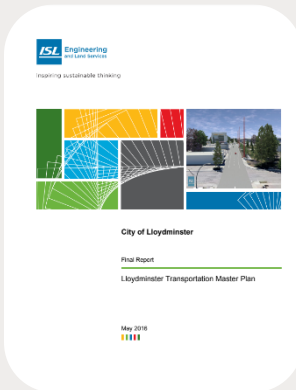
Area Structure Plans implement the long-term vision of the Municipal Development Plan with more detail at the neighbourhood level.

Relevance:

More detailed planning at the neighbourhood level provides guidance as to where key destinations may be located to plan future transportation networks.



Transportation Master Plan (2016)



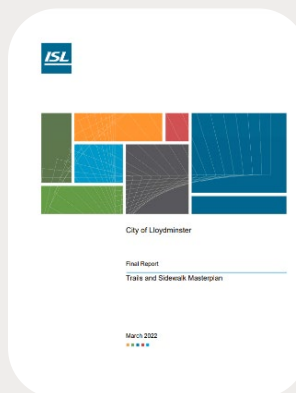
Overview:

The Transportation Master Plan (TMP) analyzes existing transportation conditions in the City and directs the implementation of future transportation facilities.

Relevance:

A desire for public transit was expressed throughout the TMP engagement process. Additionally, priorities for improvements help determine where adequate infrastructure would be for public transportation.

Trails and Sidewalks Master Plan (2022)



Overview:

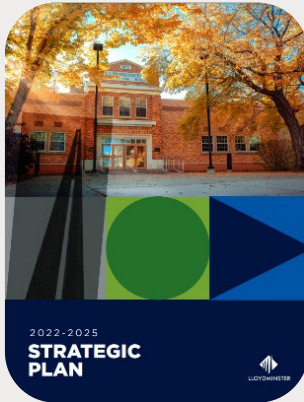
The Trails and Sidewalks Master Plan identifies opportunities for treating trails and sidewalk connections in the City and surrounding areas as “all-season” transportation infrastructure to connect residents to various destinations for all types of trips.

Relevance:

A robust trail and sidewalk network creates a supportive environment for public transportation by providing safe and convenient pedestrian connections to the overall network.



Strategic Plan (2022-2025)



Overview:

The Strategic Plan for 2022-2025 provides residents an overview of the short- and long-term priorities adopted by City Council.

Relevance:

Evaluating the opportunity for public transit as a transportation option in Lloydminster is identified as a desired result of Council's goal of Efficient Transportation. Further, the Strategic Plan supports high density development, which are typically transit-supportive land uses.

Overall, the policy and planning context in Lloydminster is conducive to the development of a public transportation system based on identified and complementing priorities.



2.1.2 Demographics

The 2021 census population for Lloydminster was 31,582, which is roughly a 1% increase from 2016 (31,400). The majority of the population lives on the Alberta side, with under half of the population is living on the Saskatchewan side, as shown in Figure 1.

Based on the projections outlined in the Municipal Development Plan, the medium-high growth scenario for Lloydminster is 2.1 - 2.2% per year, with the population expected to be more than double by 2051. This scenario anticipates that 70% of growth will be noticed on the Alberta side, and the remaining 30% being noticed on the Saskatchewan side.

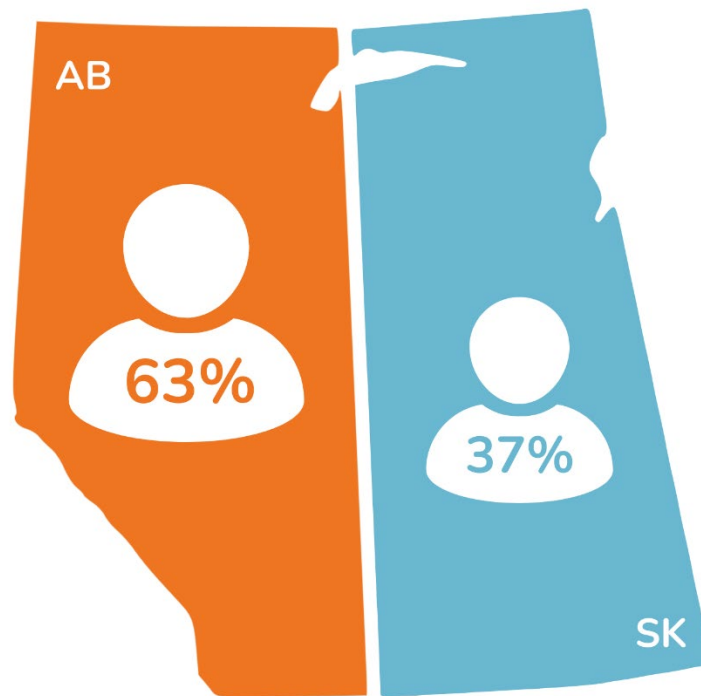


Figure 1. Population Distribution by Province, 2021 Census

Recent immigrants (i.e. newcomers to Canada that moved to Lloydminster between 2016 – 2021) comprise just over 2% of the City’s total population. As Lloydminster grows, the immigration rate is expected to increase simultaneously.



With a median age of 35.2, Lloydminster proves to be a youthful community comprised of young families and working-age adults. The two largest age groups are 30-44 (25%) and 0-14 (22%), with only 5% of the population being over the age of 75.

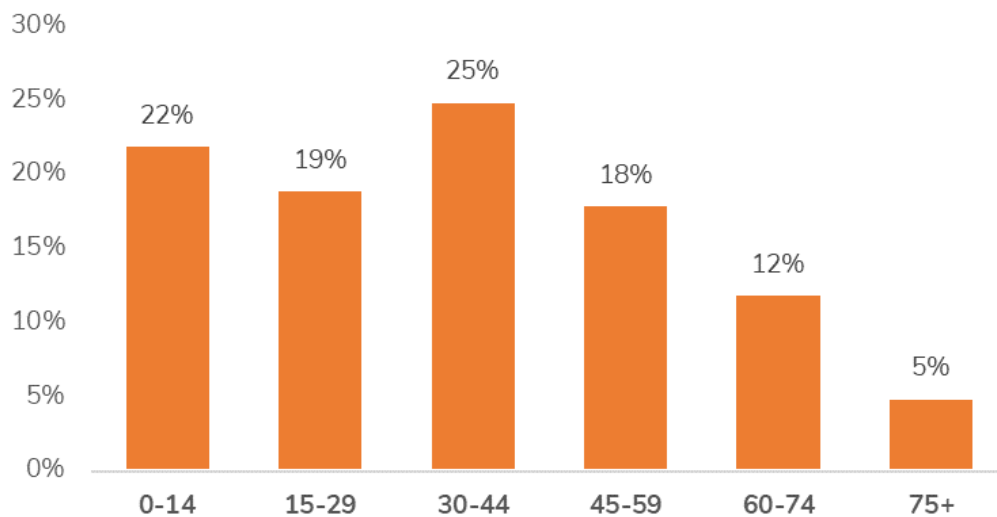


Figure 2. Age Distribution, 2021 Census

Data from the 2021 Statistics Canada census shows that in 2020, the median household income in Lloydminster was \$93,000 (\$81,000, after-tax). Between provinces, the Alberta side of the City has a higher after-tax median household income (\$83,000) than the Saskatchewan side (\$73,000), as shown in Figure 3. Approximately 12% of the City’s population aged 15 and older have a total income below \$20,000, whereas 16% have a total income higher than \$80,000. Therefore, Lloydminster is a relatively affluent community with more people in the working-age population with a total income higher than \$80,000 than with a total income below \$20,000, suggesting that transit solutions in Lloydminster should be able to cater to both choice riders as well as people that might not have any other option but to use public transportation services.

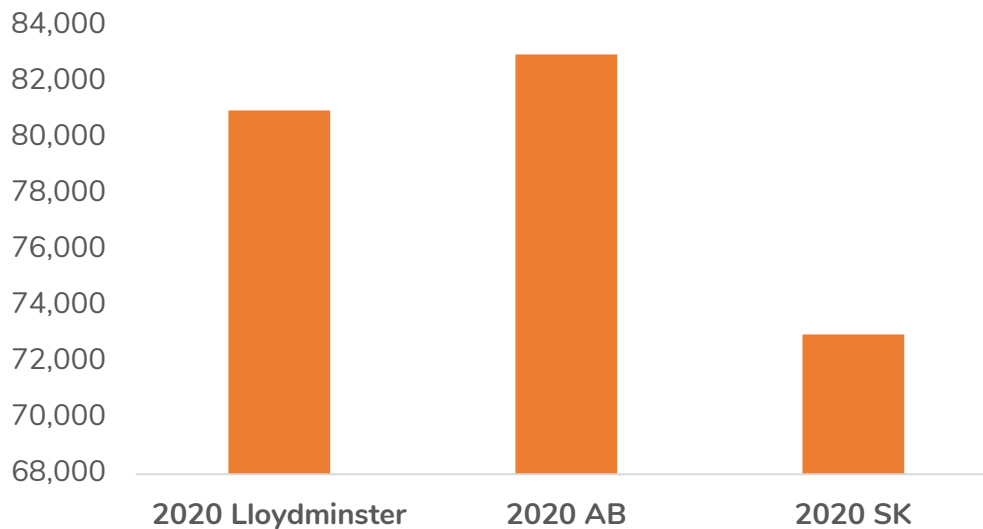


Figure 3. Median Household Income, After Tax, 2020

2.1.3 Emerging Transit Markets

Although public transportation is a service intended for any person, there are particular demographic markets that are more likely to utilize the service due to facing more barriers to accessing, owning, or having the ability to drive a private vehicle. These markets include, but may not be limited to, youth, seniors, lower-income families, and recent immigrants.

Approximately 20 – 25% of the City’s population falls within the typical public transportation market categories, considering that some residents may identify to belong in more than one of these markets. Therefore, it can be estimated that approximately one quarter of the Lloydminster community would access a public transportation service, not including those who may have other travel options but choose to use public transportation due to cost, convenience, sustainability measures, or other purposes.

2.2 Current Transportation Services

2.2.1 Border City Connects

Border City Connects (formerly Lloydminster Handivan) provides transportation services to the residents of Lloydminster and surrounding areas that have special needs or



mobility issues. It is a non-profit charitable society, governed by a volunteer board that consists of a variety of community members and a part-time executive director. Initially started by community members in 1980 to find a solution for the transportation needs of a fellow Lloydminster resident who had mobility challenges, there are now three (3) services offered under the Border City Connects umbrella:

- **Border City Express:** Providing transportation to serve mobility challenged individuals in the Lloydminster community with door-to-door service to their destination and back home.
- **Border City Caravan:** Providing transportation for both able-bodied and physically challenged members to out-of-town non-emergency medical appointments utilizing minivans.
- **Border City Shuttle:** A private-hire shuttle program for community members to secure for events to provide guests with safe and reliable rides home.

Figure 4 shows the number of rides provided by Border City Connects for the purposes outlined above since 2019. Ridership declined in 2020 due to the impacts of COVID-19 but has continued to grow since.

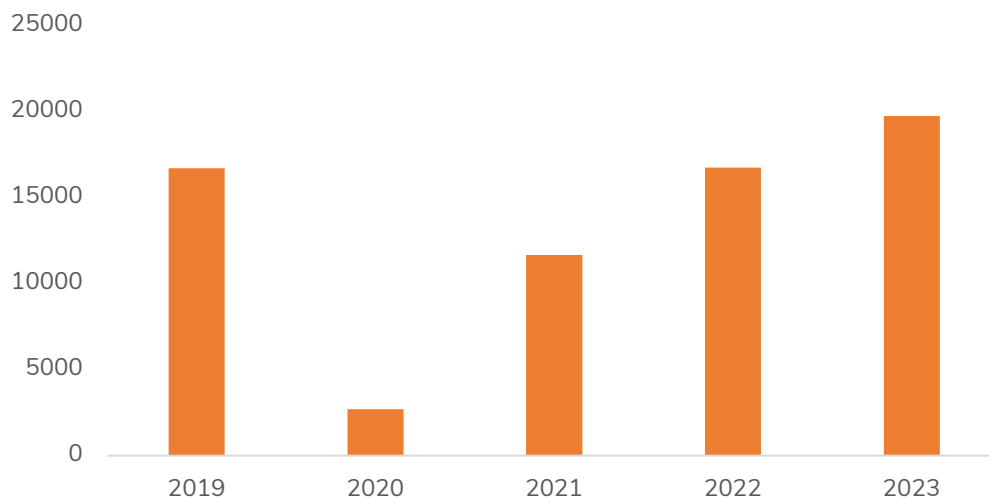


Figure 4. Border City Connects Ridership, 2019-2023

2.2.2 Taxi Service in Lloydminster

The only means of transportation in Lloydminster, other than a personal vehicle, is the taxi service in Lloydminster. At the time of preparing this report, there are three (3) companies that provide taxi services in Lloydminster and enable travel in and around



Lloydminster, if a resident does not have a personal vehicle. Everyday travel in taxis can become increasingly cost prohibitive as well as inconsistent wait times and service quality.

2.2.3 Seniors Taxi Program

The Seniors Taxi Program assists Lloydminster seniors (people ages 65 and older) with transportation costs using five-dollar (\$5.00) vouchers that can be exchanged with local taxi providers for one-way, non-stop transportation within Lloydminster city limits. This is a City-run program through Family and Community Support Services, with vouchers available for purchase at locations throughout Lloydminster. Anecdotal information suggests long wait times for this program as it can get oversubscribed quickly on a popular day or during evening hours.

Since the inception of this program, it is estimated that on average 20,000 vouchers are used every year. Over the last two (2) years, 2022 and 2023, the program has experienced consistent growth in ridership as seen in Figure 5, indicating a desire for alternate travel options in Lloydminster due to the fact that the Seniors Taxi Program only serves a portion of the transit potential in the community.

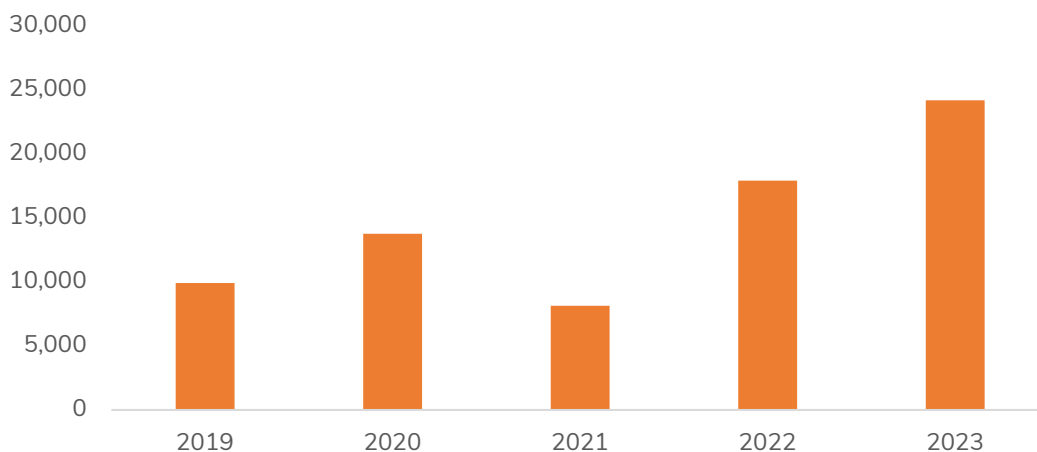


Figure 5. Seniors Taxi Vouchers Used, 2019-2023

2.2.4 School Bus Service in Lloydminster

Both the Lloydminster Public School Division (LPSD) and Lloydminster Catholic School Division (LCSD) have the responsibility of transporting students to and from their



designated school within the respective school catchment area and as well as those students who live beyond the established parent responsibility zones, which are approximately 0.6 kilometres for students in kindergarten to Grade 6, 0.9 kilometres for Grades 7-9 and 1.5 kilometres for Grades 10-12. Both LPSD and LCSD have identified that they experience capacity issues and would be supportive of a public transportation service in Lloydminster that can provide an alternate option for students to get to school. Further conversations regarding partnerships or ride sharing were not initiated as the information needed to support this conversation will be prepared as part of potential future implementation plans if a public transportation service is furthered.

2.3 Key Existing Travel Patterns

2.3.1 Travel Demand Patterns

As part of the Transportation Master Plan project, completed in 2016, travel demand patterns of Lloydminster residents were analyzed in terms of where trips tend to start and end on a typical day. As shown in the maps below, most travel tends to move East – West in the City, crossing the North – South screen line (shown in red in Figure 6 to the right). North – South travel crossing the East – West screen line (shown in green in Figure 7 on the next page) is less common. Due to these patterns, it is perceived that there is a larger desire for east to west movement for daily activities, such as employment, school, shopping, recreational activities, etc.

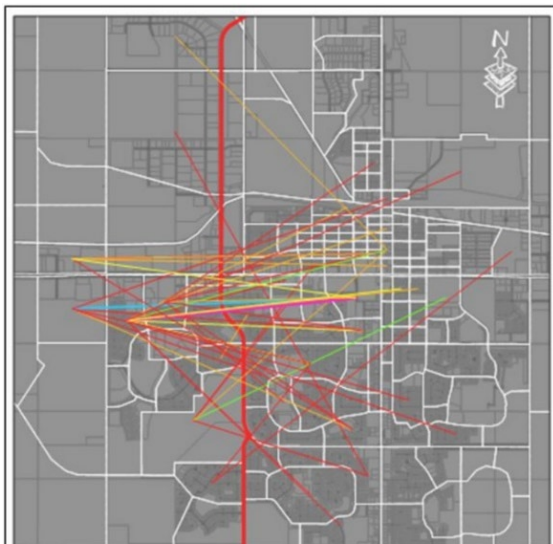


Figure 6. North-South Screen Line (East – West Movement)

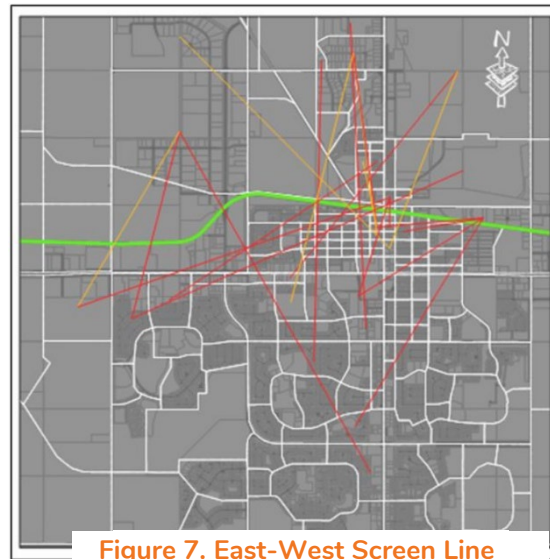


Figure 7. East-West Screen Line (North - South Movement)



2.3.2 Land Use

How land is utilized directly influences where people travel to. Areas that offer employment and educational opportunities, essential services, recreation services, and higher density residential spaces will see more traffic than areas with lower density and fewer services. As depicted in the land use map, Figure 8, Lloydminster's commercial and service activity is primarily centralized around the main corridors of Highway 16 (44 Street) and Highway 17 (50 Avenue). Most residential lands are intended for lower density and single-detached homes, with a few higher density residential areas scattered throughout the City. Light- to Medium- Industrial uses encompass most of the City's land north of 52 Street. Public services (i.e., schools, health care, municipal recreation centres, etc.) are integrated throughout Lloydminster.

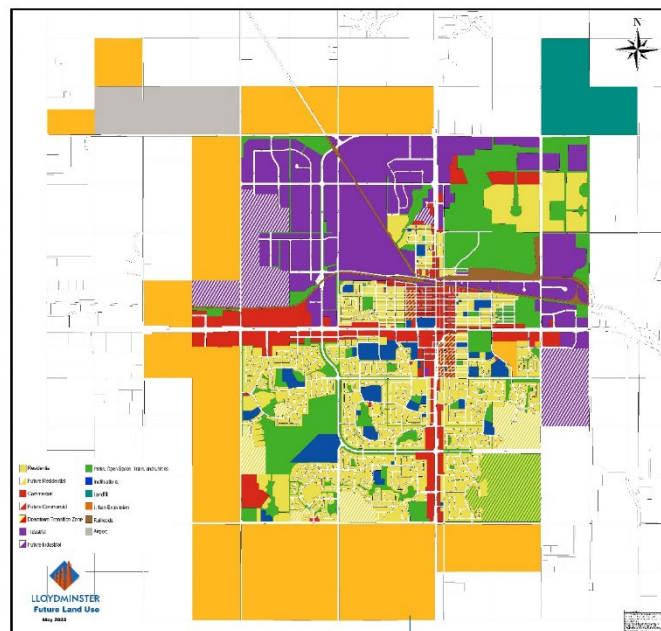


Figure 8. City of Lloydminster Land Use Map

Is Lloydminster's land use conducive to public transportation?

While the low- to medium-density development in Lloydminster is not ideal for public transportation services (results in low ridership due to dispersed land use), as higher density development allows for public transportation to move more people more efficiently, the compact land use pattern, short distances between origins and destinations, and short travel times are conducive to an efficient public transportation system in Lloydminster.



2.4 Overview of Transportation in Similar Communities

To better understand possible public transportation services in Lloydminster WATT completed a comprehensive review of existing public transportation services in similar sized communities to provide some context on key decision points such as type of public transportation service (fixed-route, On-demand, etc.) provided, cost of public transportation service to the local government, range of fares collected, public transportation usage, etc. This background review helped understand a feasible range of costs that can be expected from providing similar services in Lloydminster. Based on the size of Lloydminster, Innisfil, Ontario, Fort Saskatchewan, Alberta, and Brandon, Manitoba were selected.

2.4.1 Innisfil, ON Transit



Located along the western shore of Lake Simcoe directly south of Barrie and approximately 80 km north of Toronto, The Town of Innisfil has an area of 262.39 square km with a population of 43,326 (2021).

Innisfil Transit has been providing door-to-door On-Demand service through a partnership with Uber since May 2017 – Canada’s first ridesharing and transit partnership – along with a partnership with Barrie Taxie to provide accessible trips. In 2021, the municipality provided approximately 63,000 trips at a cost of \$730,000 (approximately \$11.50 per trip), serving 4,200 different riders representing 10% of their population. Fares range from \$4.00 to \$6.00 one-way.

Rider satisfaction surveys undertaken in 2017, 2018 and 2019 consistently scored above 70%.

Expanded and fixed-route services are currently being explored to plan for projected population growth with the town forecasted to reach approximately 85,000 people by 2051.

2.4.2 Fort Saskatchewan, AB Transit



Fort Saskatchewan is located 25 km northeast of Edmonton and is one of the 24 municipalities making up the Edmonton Metropolitan Region Board. It has an area of 56.5 square km with a population of 27,088 (2021).



Fort Sask Transit provides fixed route service with two local routes contracted to Pacific Western Transit and one regional route connecting to the Clareview Station in northeast Edmonton contracted to Edmonton Transit System. In 2021, the municipality provided approximately 56,000 boardings at a cost of \$1.3 million (approximately \$23 per boarding). Local fares ranged from \$2.00 - \$2.50 one-way, increasing to \$3.00 one-way effective February 1, 2024.

2.4.3 Brandon, MB Transit



With a population of 51,313 (2021), Brandon is the second-largest city in Manitoba and is located in the southwestern corner of the province approximately 214 km west of Winnipeg and 120 km east of the Saskatchewan border. It has an area of 79 square km.

Brandon Transit provides fixed-route service with eight (8) routes operated by the city. In 2021, the municipality provided approximately 690,000 boardings at a cost of \$3.3 million (approximately \$4.70 per boarding). Fares range from \$1.35 - \$1.75 average one-way. Brandon Transit operates with a 60% Provincial / 40% municipal cost-share agreement.

An On-Demand pilot project was operated by Brandon Transit for less than a year (November 2021 to September 2022). The service operated from 6 pm to midnight, Monday to Saturday with a fixed-route services from 6 am to 6 pm (and 9 am to 7 pm on Sundays). This was a rare case of On-Demand service implementation not being successful with low rider satisfaction. Customers reported not liking having to wait and that technology was a barrier (lack of mobile data access).

Why are case studies important?

The case studies above highlight transit systems in municipalities that are similar in population to Lloydminster. The case studies provide some insight into the costs and metrics associated with operating the respective public transportation service. As Lloydminster draws closer to potentially implementing a public transportation service, it is recommended that as part of future implementation plan processes, Administration speak with municipalities where public transportation is operating currently or operated in the past but ceased with respect to garnishing insight into issues and opportunities associated with implementing and operating public transportation services. These lessons learned will be insightful in the City's path to implementation.



3.0 PHASE 1 ENGAGEMENT: UNDERSTANDING TRANSPORTATION NEEDS & OPPORTUNITIES

3.1 Overview

A public transportation network must not only support future economic development and resilience of the community, but it must also ensure financial viability and prudence for the taxpayers of Lloydminster. For these reasons, a comprehensive community engagement process was undertaken such that the Public Transportation Master Plan results would be informed by robust and meaningful input from residents and key interest groups.

3.2 Objectives:

The objectives of the Phase 1 Engagement included:

- Evaluating feasibility based on residents’ transportation needs, interest, and willingness to use and support a public transportation system; and
- Gaining an understanding of travel patterns and trip purposes to determine options for developing a public transportation system that best accommodates the community’s needs, if deemed feasible.

3.3 What Was Done

From October 26 to November 16, 2022, Lloydminster residents, key community groups, and interested parties, were invited to provide input for the Public Transportation Master Plan using a variety of activities, including:

- **Survey #1** was available online on the Your Voice Lloyd platform. Paper copies were distributed throughout the community via supporting organizations and were collected at City Hall, the Operations Centre, and the Lloydminster Public Library.
- **A Question Forum** was available on the Your Voice Lloyd platform, where participants could access an interactive


By the Numbers...

5.1 K	Your Voice Lloyd site visitors	
5	Interviews conducted	
2,512	Survey responses	
3	Questions asked in the Question Box	



- FAQ section and ask project-related questions.
- **Interviews with key community groups and interested parties** took place virtually with organizations that serve seniors, youth, families and people with disabilities.

Promotional Tools

	City Website, Facebook, Instagram, Twitter		Pop-up Information Booths
	Meridian Source, Morning News, Weekly Bean		Real Country 95.9, The Goat 106.1
	Digital Billboards		Prime Time Local News
	Media Release distributed to local media sources		Information shared with Community Organizations



3.4 What We Heard

Key takeaways from the first phase of engagement are outlined below. This input guided the development of public transportation options suitable for Lloydminster, as explored in **Section 4**.

Key Takeaways: Phase 1 Engagement

- The survey response rate (2,512 responses, close to 10% of the City's population) indicates a high level of interest in the topic of public transportation.
- Irrespective of car ownership, a majority of respondents (84%) have expressed support for public transportation services in Lloydminster.
- The most popular destinations travelled to in Lloydminster are Walmart, Superstore, and Lloyd Mall, respectively.
- Currently, the most common transportation modes among respondents are driving one's own vehicle, being a vehicle passenger with a family member, or walking, respectively.
- Travel to identified top destinations occurs every day of the week (indicating school or work travel), or at least one to two times a week (indicating shopping or recreation related travel).
- The top purposes for travelling are shopping, work, and recreation / leisure, in descending order.
- Public transportation is identified as being needed to support immigrants, shift workers, seniors, and differently abled citizens in Lloydminster. Discussions with interest groups identified public transportation as a basic service in a community, that is currently unavailable in Lloydminster.
- Alternatives to public transportation, such as cycling and ridesharing initiatives, are transportation areas of interest among respondents, indicating a desire to use other modes of transportation when possible.



4.0 OPTIONS DEVELOPMENT

4.1 Rationale

4.1.1 Demand Forecasting

One of the foundational elements of determining what kind of system would be the most useful in a community is understanding the kind of transit demand that can be expected. Typically, this would be based on the total number of daily trips generated in the community, including work and non-work-related trips. In Lloydminster, the Transportation Master Plan, ISL 2016, provides this number. A mode-share percentage would then be applied to determine a potential ridership estimate for this service. In Lloydminster this methodology yielded a higher than usual estimate in spite of using a conservative mode-share estimate of 1.1%.

As a result, the case studies of peer communities (similar area and population) that had an existing public transportation service were used as guides to develop a reasonable average travel demand as opposed to the 1.1% mode-share value. Using this background information, an assumption of 10 to 12 boardings per hour as a target, as opposed to the 35 boardings per hour, for a public transportation service in Lloydminster was used. This is the number used in all the ridership calculations in this report and influences what projected revenues could be from this service, if implemented. Ridership can be low in the beginning when the service is first implemented but would gradually (over a period of six (6) months to one (1) year) increase to the 10 to 12 boardings per hour, implying that initial ridership numbers will be lower than estimated and should be understood as part of any potential implementation strategy.

What is Mode Share?

A modal share (also called mode-share or modal split) is the percentage of travelers using a particular type of transportation or number of trips using said type.

For Lloydminster, a mode-share of 1.1% was assumed, this means that for every 100 trips daily, 1.1% of them would be on a transit vehicle. This is a conservative estimate for mode-share. For Lloydminster, even this conservative approach yielded a rather high estimate of 430 trips per day on public transportation, which if assuming 12 hours of service per day, will amount to 35 boardings per hour. 35 boardings per hour, is high ridership even for a well-established system for a city the size of Lloydminster.

What is a Boarding?

One boarding: When a passenger gets on the bus to complete a single one-way trip, that is counted as “one boarding”. If the passenger gets a ride from a friend for their trip back home from the destination, they got to using the bus, then only their “one boarding” is counted towards ridership data. However, if they took a trip back on the bus from their destination to their origin and completed a round trip, then this would count as “two boardings”. In each case, the passenger will be expected to pay a fare. In some communities, they are able to buy a Day Pass, that allows them to travel a number of times on that fare product.



4.1.2 Peak Demand

Using the National Travel Survey Data, as well as the travel analysis conducted as part of the Transportation Master Plan, ISL 2016, it was established that peak travel demand would occur between 6 am and 6 pm, with demand being lower later than 6 pm but not non-existent, especially while considering shift workers at the Cenovus Energy Inc. refinery, or other commercial/retail outlets and their operational hours in Lloydminster. Engagement results reinforce this understanding of travel demand in Lloydminster as well.

4.1.3 Corridors, Origins and Key Destinations

As part of this study, potential public transportation travel patterns were modelled based on the origin and destination information identified in the Transportation Master Plan, ISL 2016 and the existing land use in Lloydminster. Based on employment locations and population clustering in the southern portion of Lloydminster and the travel demand patterns, the results identify that the collector roads provide greater connection opportunity for public transportation in Lloydminster. Destinations are clustered along the two main axes of Lloydminster, Highway 16 (44 Street) and Highway 17 (50 Avenue), respectively, while origins are focused in the southern quadrant of the city and travel direction will mimic car travel and be predominantly east-west focused. Snow and ice removal are prioritized for arterial (Priority 1) and collector (Priority 2) roadways, which are identified in Figure 9. Public transportation routes typically aim to remain on roadways that are prioritized for snow and ice removal to prevent service disruptions during inclement weather conditions.

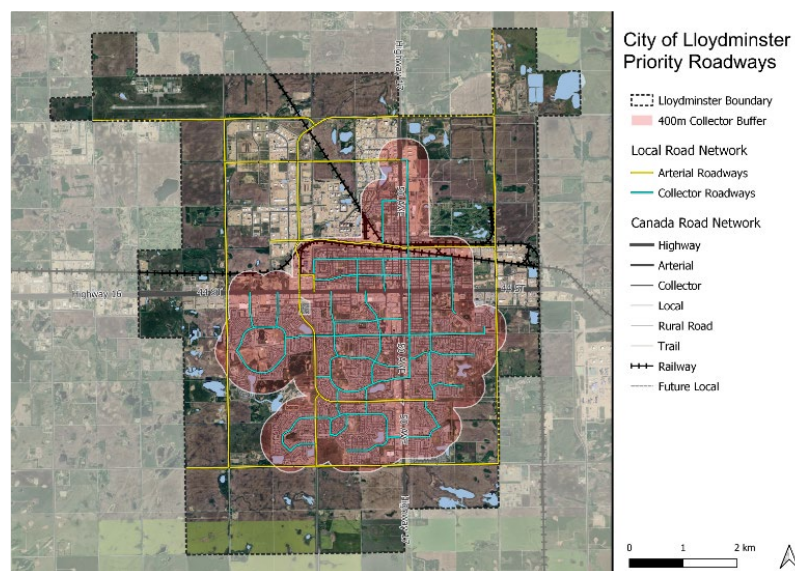


Figure 9. Priority Roadways Map



In addition to the modelling work conducted by WATT, the Transportation Committee guiding this project also provided high-level recommendations for key destinations to be considered as part of this study as identified within Figure 10. These locations were further refined through both rounds of engagement.



Figure 10. Key Destinations Map



4.1.4 Target Groups

The Transportation Committee overseeing this study identified the following groups as being high priority for needing improved mobility options:

- Lower Income Adults and Families
- Seniors
- Youth
- Recent Immigrants

In addition to prioritizing the mobility needs of these groups of people while designing options, high usage destinations in Lloydminster, including Walmart, Superstore, Lloyd Mall, among others, were also identified as needing to be connected by any options that were developed.

The Transit “Toolbox” - Service Design Types

The design of public transit systems - and transportation options in general - draws from a suite of service types. These range based on the degree that service is fixed or flexible. The difference between fixed and flexible is summarized as follows:

Fixed Route Services

Operate using a published schedule and route map with set bus stops.



Flexible Demand Responsive Services

Offer service between specific locations and times as need arises.



Between these two ends of the spectrum, there are a number of other possibilities which work well for municipalities the size of Lloydminster. One such type of service is On Demand service.

On-Demand Services

Operate similar to Flexible demand responsive services, without a schedule, but use technology apps, cellphones for trip booking, tracking vehicles and overall are a customer friendly version of the original flexible demand responsive service.





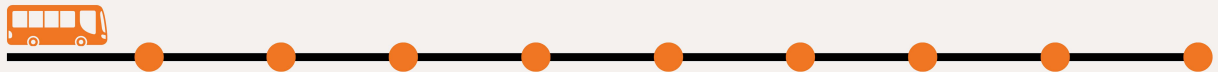
Service Design Types

Each of these service design types may be used to serve specific community needs based on expected ridership and commonality of travel patterns, the land use and layout of communities and the level of physical mobility for passengers.

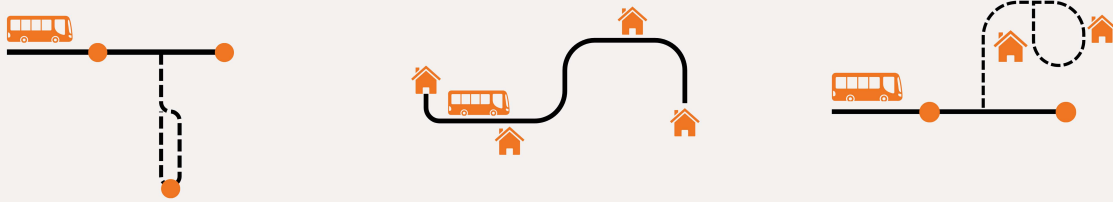
The service types may also be layered together. Using several different types has advantages since services that are more “fixed” in terms of either routing or schedule will normally carry more passengers for a lower cost than fully demand responsive options but will not meet all community needs.

Fixed Route & Deviated Fixed Route

Fixed Route



Deviated Fixed Route



Limited Service Route

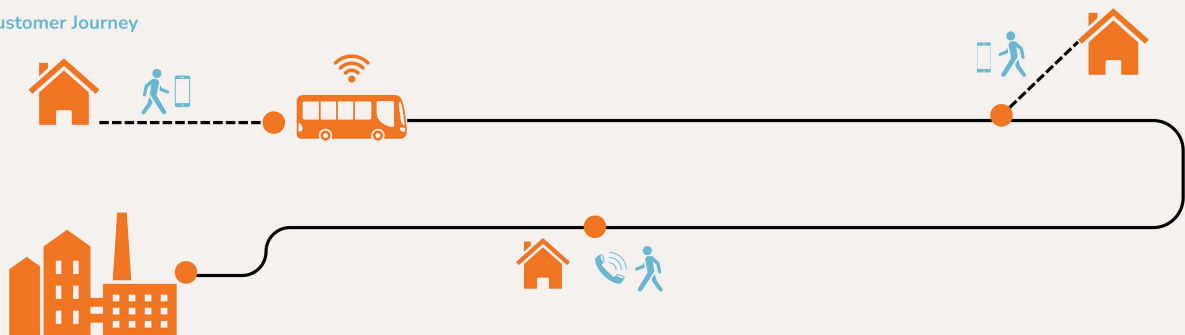
Door-to-Door Pickup

Fixed Route & Limited Door-to-Door Pickup

On-Demand Transit

Shared. Flexible routing. Right-sized vehicles. Travel behaviour incentives.

Customer Journey



Curb-to-Curb

Stop-to-Stop

Flex Route



4.2 Service Options

Selecting from the general service design types presented above and the identified issues and opportunities, potential travel patterns, and projected demand, several public transportation improvement options were developed for Lloydminster.

None of these options are meant to be a final solution but instead are a macro-level demonstration of the types of service options that will work for Lloydminster. The options were developed with the intent of obtaining community priority and/or preference for each. The feedback obtained regarding each option will help inform the next steps of this process.

4.2.1 Option 1: On-Demand Service

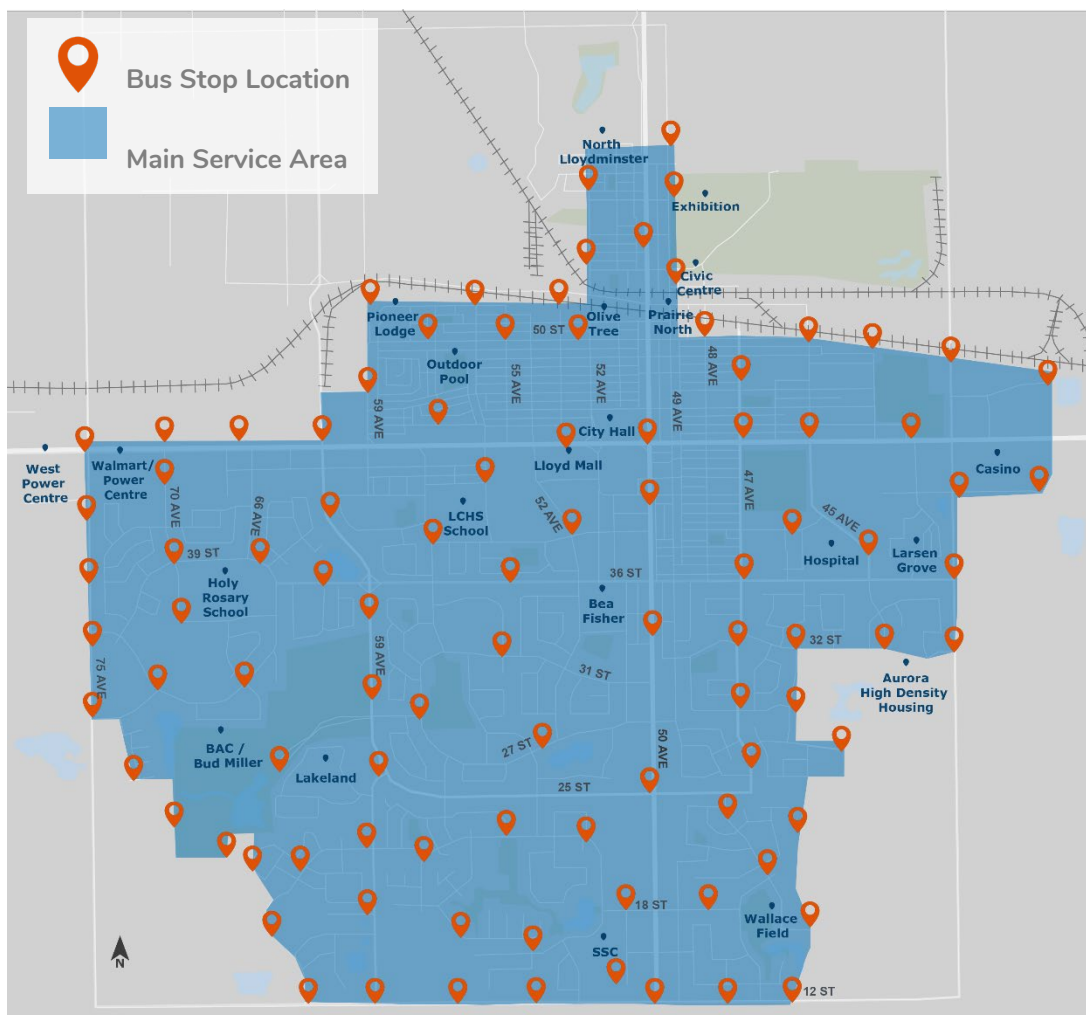


Figure 11. Option 1: On-Demand Service



Rationale

Option 1 explores the possibility of serving all of Lloydminster with Digital On-Demand Transit (DODT). DODT is a service type that uses technology to provide transit service on an ‘as-needed’ basis. DODT may be compared to “Uber” for public transportation but is always a shared ride and invariably much cheaper than Uber.

Given the compact size of Lloydminster, DODT would be a suitable service, with short wait times, given that distances of travel in Lloydminster are quite short. This would have been an ideal solution for Lloydminster, however, DODT is suitable in low density areas, where ridership estimates are not expected to exceed six (6) boardings per hour. In Lloydminster, modelling has shown that in year 1 and year 2 DODT will be a suitable solution, however in later years, with increased ridership, wait times are anticipated to increase and as such additional resources will be needed to efficiently maintain the service and provide base levels of customer satisfaction, at which stage, fixed route transit will likely be a more suitable solution.

Service Details

- City wide service area
- Virtual stops (no infrastructure costs)
- Vans potentially stationed at a central hub or other stand-by area.
- Service from 6 am to 8 pm, Monday to Sunday, is proposed.
- Wait times during peak periods likely greater than 30 minutes.
- Customers will need to be trained on using the app associated with the service.
- Typically, service will be contracted out to a DODT service provider (some examples include VIA, Rideco, Spare, etc.).
- DODT service providers are able to provide turnkey solutions (provide vehicles, operators, dispatchers and software) or just provide the software solution.

Estimated Service Cost

For the purposes of this report, year 1 costs include all capital costs including purchasing or renting vehicles and operating costs including wages, fuel, maintenance, insurance, marketing, administration, etc. to initiate the service. Costs for year 2 and onwards include only on-going operating costs such as wages, fuel, maintenance, insurance, marketing, administration. Costs also reflect 2023 prices of vehicles, fuel, wages etc. and do not

Year 1: \$ 1,300,000

Year 2 & Onwards: \$ 1,100,000



account for inflation. **Appendix C** provides detailed costing information for Option 1: On-Demand Service.

Ridership Potential

DODT service is characterized by low ridership. The service typically operates by transporting 3-4 passengers simultaneously with a maximum capacity of 6 passengers. A conservative estimate of ridership at 6 boardings per hour would yield an annual ridership of approximately 60,000 boardings per year.

Assumptions

The success of a DODT service is heavily dependent on wait times and the satisfaction of users. There are some assumptions built into the design of this service for it to be successful in Lloydminster, including:

- Only DODT service is provided, no other form of public transportation service is provided.
- There will only be two (2) vans in service during defined service hours (6 am to 8 pm), vans might overlap or not depending on the demand for service.
- With two (2) vans in service, anticipated wait times will be between 17 to 30 minutes, with 30 minutes being the maximum a customer should be waiting for this service.
 - Due to the technology available through operating a DODT service, wait times are often identified to the user at the time of requesting a service. If the anticipated 17-to-30-minute wait time is constantly exceeded, there is an indication that this service has reached its capacity and that changes need to be made. For Lloydminster, based on demand modelling, it is forecasted that after the first two (2) years, these wait times will be exceeded on a regular basis.
- Average Trip Length: 12 to 16 minutes, this has been determined based on distances between major destinations in Lloydminster.
- Maximum people in van at the same time: 3 to 4, this is typical in this type of service.
- Average Trip Denials: 0 to 7.
 - Ideally there are no trip denials in this service, as when a user books a trip, they should be able to get service within the 17-to-30-minute wait time defined above. If that is not possible due to the service being over-



subscribed and a trip cannot be accommodated within the requested window, it will be denied. The higher the number of trip denials, the lower the efficacy of the service.

Changes in these assumptions will change the outcomes of this service, in terms of ridership as well as the size and number of vehicles needed to operate this service.

Other Considerations

DODT was a less preferred option in the community. Phase 2 engagement results explored in **Section 5.0** indicate that the community would be least likely to use Option 1 and ranked it lowest with respect to value for taxpayer money spent. Some of the reasons for this may include:

- The community is reluctant to adopt high technology solutions.
- There is a learning curve associated with On Demand services and people are likely more familiar with regular public transportation services from living in larger cities.

Is DODT suitable for Lloydminster?

DODT is suitable in places with low-density, spread-out development, where high ridership is not expected. Given its compact area and medium density, in theory, On-Demand could be ideal for Lloydminster.

While On-Demand could be a suitable approach initially in Lloydminster, it will likely not stand the test of time with the demand potential for public transportation anticipated in Lloydminster, so likely not a suitable approach.

Engagement Comments: DODT

“An on-demand system would be the most costly and least effective system. Basically, you'd be running a taxi service that costs less but with very poor service.”

“People might not use the on-demand service because they don't know about it/ don't know they would need an app. That's why I'm in favour of the other options.”



4.2.2 Option 2: Base Level Service

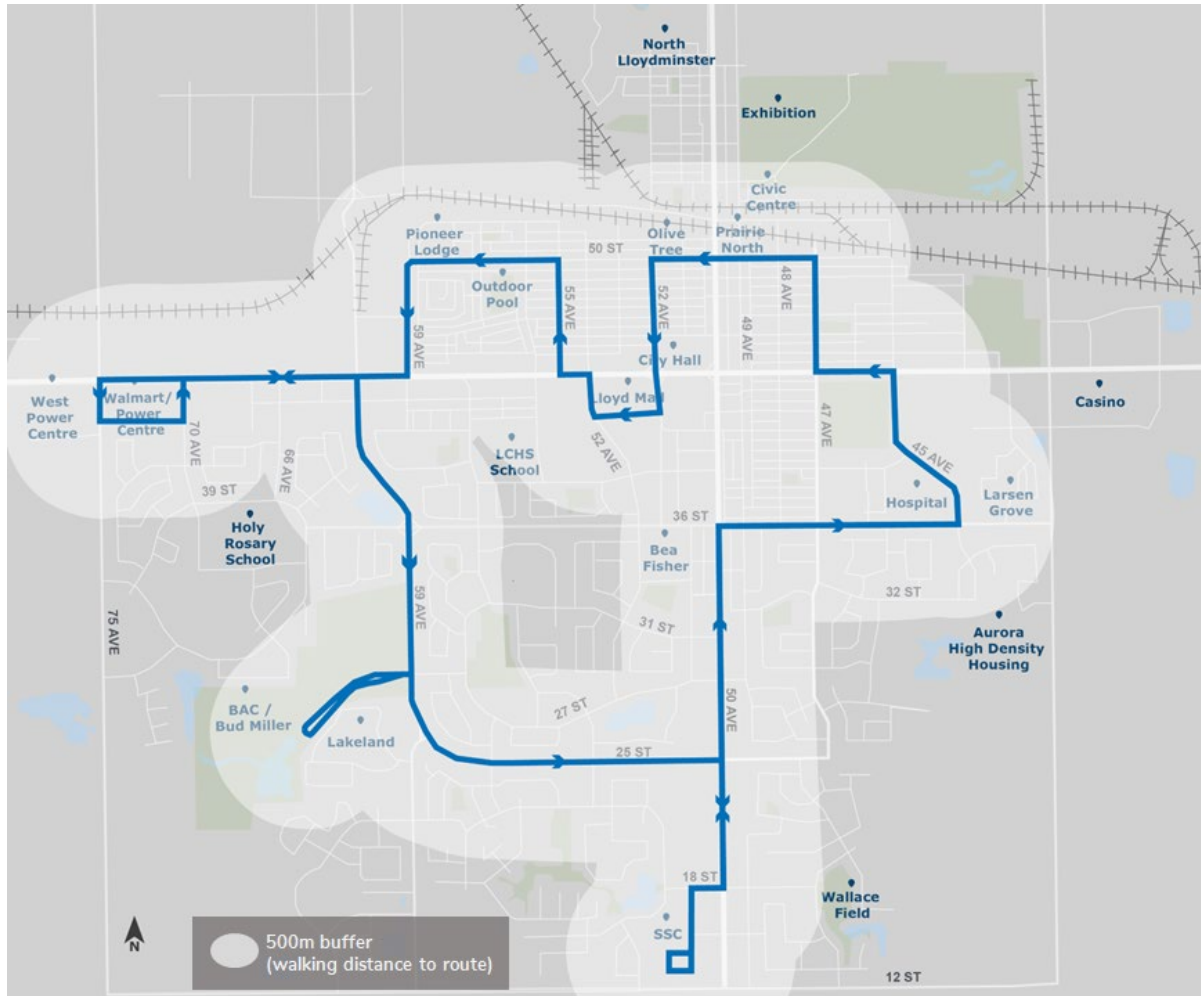


Figure 12. Option 2: Base Level Service

Rationale

A simple one-way loop serving major destinations in a community is the easiest, most cost-effective way of introducing public transportation service in a community. Eventually, if there is good uptake in the service, this loop could evolve into a bi-directional loop or could be split up into two (2) one-way loops for improved frequency and a higher level of service.



Option 2 is based on the above theory of simplicity. It is a single one-way loop, providing fixed-route service that is designed to serve all major destinations in Lloydminster. It provides basic coverage across Lloydminster and is devised to provide an introductory level of service, which can be built up over time. It is cost-effective, uses only one (1) vehicle, and provides public transportation service at a 60-minute frequency.

Service Details

- Many areas of Lloydminster are neither covered by the service nor within walking distance of this service.
- This service is designed to have physical stops.
 - The location, number, and/or service level of the physical stops has not yet been determined as this is tied to the final implementation of a public transportation service. For the purpose of this study, assumptions have been made regarding physical stops to account for the potential costs.
- Uses one (1) bus in service, with one (1) spare.
- Bus Route starts at Servus Sports Centre (SSC), ends at Walmart, and then back again to SSC, serving all major destinations.
- Service from 6 am to 8 pm, Monday to Friday, is proposed, with no weekend service.
- 60 minute frequency between trips, providing for fourteen (14) trips per day.

Walking Distance

A suitable distance to walk to a bus stop is typically considered to be 400 to 500 metres.

Estimated Service Cost

For the purposes of this report, year 1 costs include all capital costs including buying or renting vehicles, a fixed annual amount for stop infrastructure and operating costs including wages, fuel, maintenance, insurance, marketing, administration to initiate service. Year 2 costs and onwards include only on-going operating costs such as wages, fuel, maintenance, insurance, marketing, and administration. Costs also reflect 2023 prices of vehicles, fuel, wages etc. and do not account for inflation. **Appendix C** provides detailed costing information for Option 2: Base Level Service.

Year 1: \$ 950,000

Year 2 & Onwards: \$ 500,000



Ridership Potential

One-way loops, while cost-effective and simple to understand, come with their disadvantages. Disadvantages include long travel times given that people have to traverse the entire loop, even if the destination is a short distance away; coverage is minimal as the proposed service only operates on major streets, and system users must walk to and from major streets to access the service. For these reasons, ridership potential of this option is projected to be low at approximately 40,000 boardings per year. It is to be noted that the ridership levels projected are lower than those for Option 1. This is because service is restricted to weekdays only in this option, resulting in a lower number of in-service days and consequently lower ridership.

Other Considerations

Option 2 provides basic service coverage and service levels, however, is not particularly customer friendly option. In Lloydminster, while this could be an initial approach, Option 2 might prove to be quite ineffective in providing a viable mobility option especially during the winter weather conditions where users are anticipated to need to walk potentially long distances to access the service as well as wait for long periods of time in inclement weather to complete their trip. In addition, this option does not lend itself to being phased from On-Demand service, given the relatively higher frequencies, if the City decided to introduce Option 1 as a starting point for public transportation service in Lloydminster.



4.2.3 Option 3: Medium Level Service

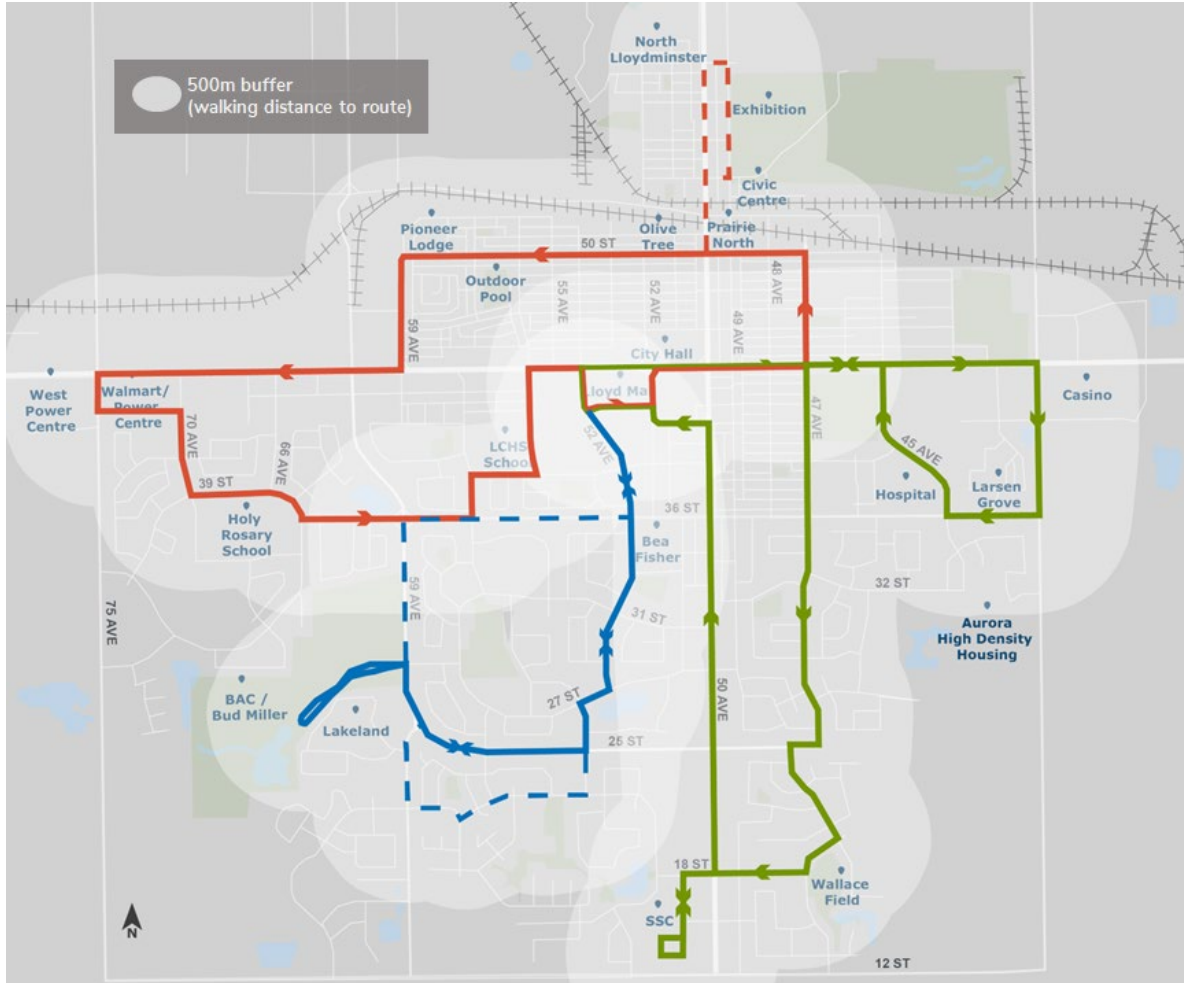


Figure 13. Option 3: Medium Level Service

Rationale

Building on Option 2: Base Level Service, Option 3: Medium Level Service is designed to provide a public transportation service that is not quite basic, but also is relatively efficient in providing service and cost-effective. It seeks to support a higher level of service coverage in the community; therefore, a larger number of people are easily able to access the service. This is achieved by ensuring that walking distances to transit stops are within the prescribed standard of 400 metres to 500 metres for most users. Option 3 seeks to ensure trip times are within a 30 minute frequency, ensuring relatively efficient travel around Lloydminster.



For Lloydminster, Option 3 proposes the use of two (2) buses that provide service along three (3) fixed routes. Each route completes a one-way loop within a 30 minute period. The blue route is paired alternately with the green route and the red route, giving it a 30 minute frequency and the red and blue routes a 60 minute frequency. Given that Lakeland College and Bud Miller All Seasons Park are both served by the blue route, it was important to ensure a high level of service to both those destinations. All three routes, not only connect all major destinations in Lloydminster, including north Lloydminster, they also serve the residential neighborhoods making it easier for youth, seniors and adults that might have difficulty walking long distances, to access the service.

Service Details

- Most major destinations and most residential areas of Lloydminster are covered by the service and are within walking distance of the anticipated routes.
 - Neighbourhoods not served by the routes in this option include: *Lakeside, Aurora, areas of Parkview and some areas of College Park.*
- Provides direct access to major high schools.
- This service is designed to have physical stops, which have not been determined at this time.
 - The location, number, and or service level of the physical stops has not yet been determined as this is tied to the final implementation of a public transportation service. For the purpose of this study, assumptions have been made regarding physical stops to account for the potential costs.
- Uses two (2) buses in service, with one (1) spare.
- Bus routes start at a central location, still to be determined, along Highway 16 (44 Street) serving all major destinations.
- Service from 6 am to 8 pm, Monday to Friday, is proposed, with no weekend service.
- Two (2) routes operate on a 60 minute frequency between trips, while one route operates on a 30 minute frequency.



Estimated Service Cost

For the purposes of this report, year 1 costs include all capital costs including buying or renting vehicles and operating costs include wages, fuel, maintenance, insurance, marketing, and administration to initiate service. Year 2 costs

Year 1: \$ 1,600,000

Year 2 & Onwards: \$ 1,000,000

and onwards include only on-going operating costs such as wages, fuel, maintenance, insurance, marketing, administration. Costs also reflect 2023 prices of vehicles, fuel, wages etc. and do not account for inflation. **Appendix C** provides detailed costing information for Option 3: Medium Level Service.

Ridership Potential

With shorter travel times and relatively higher frequency on one route this option has the potential of serving more people, in a more efficient manner. Based on the benefits of improved coverage it provides as well as better access to all key destinations in Lloydminster, ridership potential is higher in this option, compared to Option 1 or 2, with an anticipated 85,000 boardings annually.

Other Considerations

Despite consisting of three (3) separate routes which makes this a more accessible option, the routes that comprise this option are one-way loops, with the larger loops having a 60 minute frequency. This means that overall users are still travelling long distances in a loop to complete their trip which could be a disincentive for some users. The biggest drawback of this option, however, is that it does not lend itself to being phased from On-Demand transit, given the relatively higher frequencies, if the City decided to introduce Option 1 as a starting point for public transportation service in Lloydminster.



4.2.4 Option 4: High Level Service

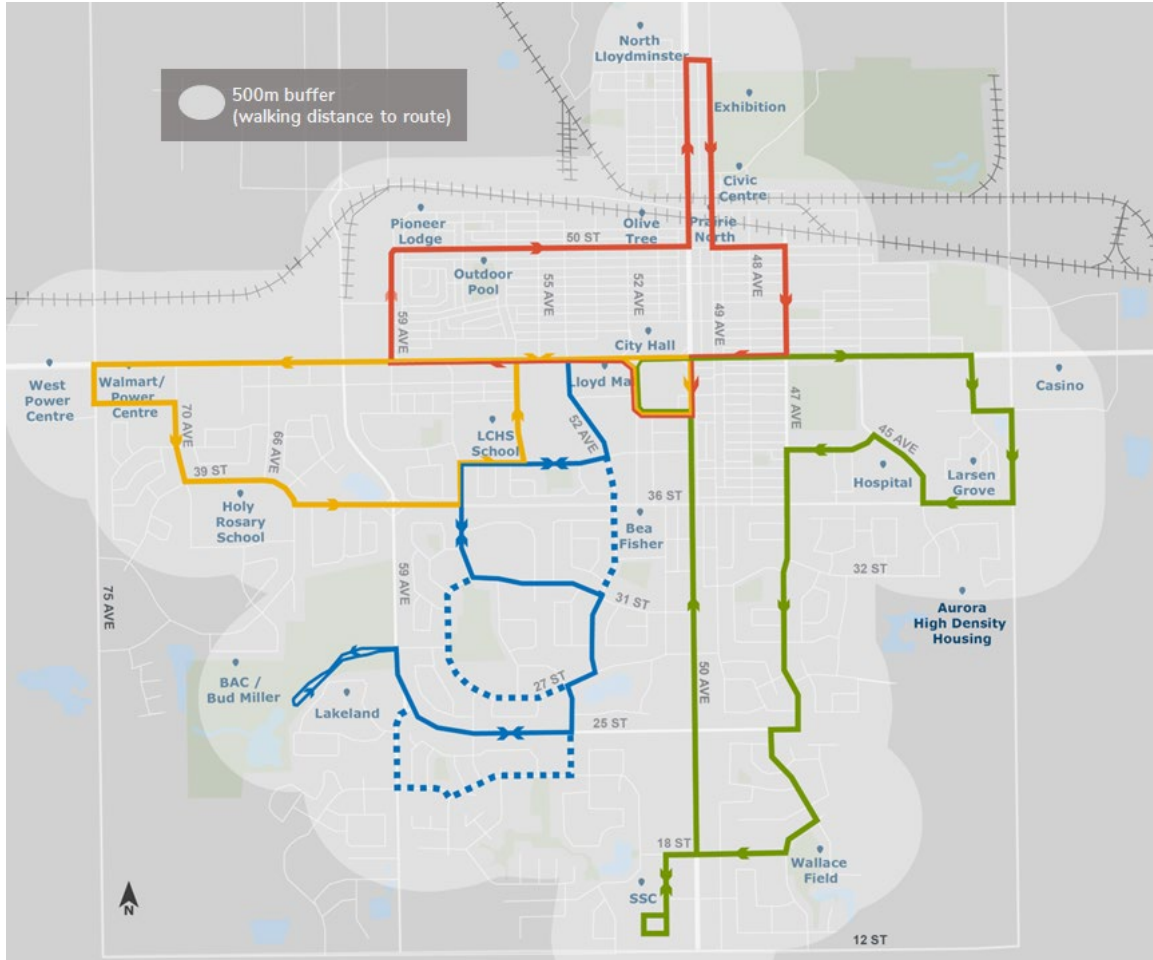


Figure 14. Option 4: High Level Service

Rationale

Building on Option 3: Medium Level Service, Option 4: High Level Service shifts the focus onto ridership. To ensure ridership, one needs to guarantee frequency and consistency in the service and routing that takes the user where they want to go in the most direct way possible.

In order to achieve all this in Lloydminster, Option 4 works with four (4) one-way fixed routes served by four (4) buses. Each route works within a 30 minute window and all four (4) routes meet at a central location every 30 minutes to ensure that users could switch routes if required. A refinement of this option could be interlining, which ensures the minimal number of transfers needed. An example would be:



Bus 1 would start as a green route and then once it reaches the central point it switches to become the orange route. Users travelling from Servus Sports Centre (SSC) to the Lloydminster Exhibition Association grounds, would stay on the bus, because it becomes the orange route and are seamlessly able to make the connection to the Lloydminster Exhibition Association grounds. These details will be finalized at the implementation stage.

Service Details

- Most major destinations and most residential areas of Lloydminster are covered by the service and are within walking distance of the anticipated routes.
 - Neighbourhoods not served by the routes in this option include: *Lakeside, Aurora, and some areas Parkview and College Park.*
- Provides Direct access to major high schools.
- This service is designed to have physical stops, which have not been determined at this time.
- Uses four buses in service, with one spare.
- Bus routes start at a central location, still to be determined, along Highway 16 (44 Street) serving all major destinations.
- Service from 6 am to 8 pm, Monday to Sunday, is proposed.
- This option provides the highest coverage, frequency, and access of any of the options discussed above. It is also the most expensive option to get started and operate on an annual basis.

Estimated Service Cost

For the purposes of this report, year 1 costs include all capital costs including buying or renting vehicles and operating costs include wages, fuel, maintenance, insurance, marketing, and administration to initiate service. Year 2 costs and onwards include only on-going operating costs such as wages, fuel, maintenance, insurance, marketing, and administration. Costs also reflect 2023 prices of vehicles, fuel, wages etc. and do not account for inflation. **Appendix C** provides detailed costing information for Option 4: High Level Service.

Year 1: \$ 3,000,000

Year 2 & Onwards: \$ 2,000,000



Ridership Potential

By providing the highest level of coverage, the highest frequency, and the highest level of accessibility to system users of all options, Option 4 has the greatest potential for high ridership. Based on the benefits Option 4, ridership potential is higher in this option, compared to Option 1, 2 or 3, with an anticipated 350,000 boardings annually.

Other Considerations

Option 4 is a high yield, high-cost solution to public transportation service in Lloydminster. A system similar to Option 4 is a system to build towards and not an option to consider while starting out service in a community that has never had public transportation services. The advantage of this option is that one can build up to this option from either On-Demand service or from a two (2) bus option with similar routing, that arguably could provide more coverage than Option 3, but at lower frequencies (since all routes will have 60-minute frequencies).



4.2.5 Option Comparison

As discussed in Section 4, four (4) viable options were considered in this study all which can respond to the mobility needs of Lloydminster in varying degrees, some are cost effective while others provide effective public transportation service at a higher cost. Provided below is a table that compares all options across several qualitative and quantitative service parameters or characteristics.

Service Characteristics	1 Option 1: On-Demand Service	2 Option 2: Base Level Service	3 Option 3: Medium Level Service	4 Option 4: High Level Service
Number of Routes	-	1	3	4
Service Frequency <i>How often the bus arrives at a particular stop</i>	Service wait time: 30 minutes	60 minutes	2x 60 minutes 1x 30 minutes	30 minutes
Service Span <i>When service starts and ends</i>	Service window: 6 AM - 8 PM Monday - Sunday	6 AM - 8 PM Monday - Friday	6 AM - 8 PM Monday - Friday	6 AM - 8 PM Monday - Sunday
Service Coverage				
Number of Buses	2 in service & 1 spare	1 in service & 1 spare	2 in service & 1 spare	4 in service & 1 spare
Estimated Annual Ongoing Operating Cost	\$\$	\$	\$\$	\$\$\$
Estimated Startup Capital Cost	\$\$	\$	\$\$	\$\$\$
Estimated Average Additional Annual Property Tax Impact (Based on property values ranging from \$250,000 to \$500,000)	\$60 to \$120 (3% increase)	\$40 to \$80 (2% increase)	\$70 to \$140 (4% increase)	\$130 to \$260 (7% increase)

Figure 15. Service Option Comparison Table

Option 3: Medium Level Service is preferred as it provides city-wide service coverage, relatively high access to transit service at the neighbourhood level, while at a relatively reasonable cost. Phase 2 engagement results also indicate that the community is supportive of Option 3 among all four (4) options.



4.2.6 Option Phasing

Introducing public transportation service in a community for the first time is an exercise in balance between efficiency and effectiveness.

The ideal approach introduces a level of service that will be effective in addressing the mobility needs of the community while simultaneously being judicious and efficient in the use of resources. For this reason, it is almost always recommended to start small and incrementally grow the service.

For Lloydminster, this incremental growth can be achieved in two different ways with the options identified above. They are illustrated below:

On-Demand Transit Service Phasing

Assuming the City decides to implement fixed route service in Lloydminster using, incremental improvement in service can be achieved in two ways as illustrated below.

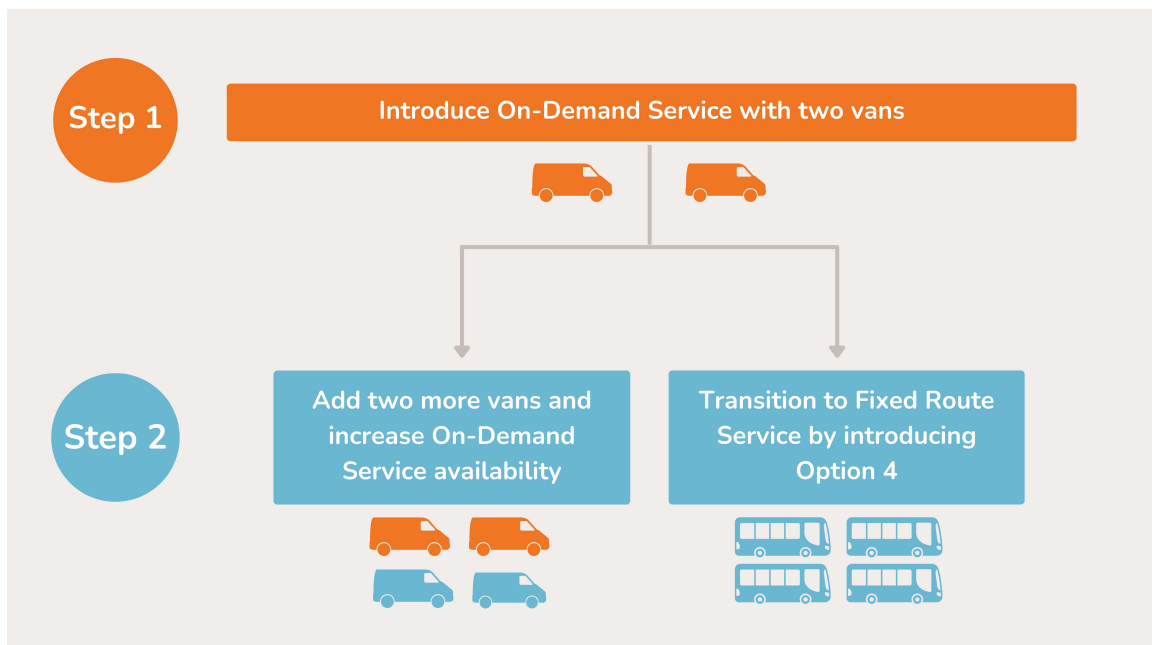


Figure 16. Service Phasing Option - On-Demand Transit

This path is unfortunately not truly an incremental increase in service. In order to maintain the effectiveness of Option 1 or to maintain the same or better levels of service provided by Option 1 (i.e., Wait times of up to 30 minutes maximum), the transition to



fixed route service implies the introduction of Option 4. Transitioning from Option 1 to Option 4, would result in doubling of costs, both capital and on-going operational costs, losing out on cost-efficiency while trying to maintain effectiveness.

Fixed Route Public Transportation Service Phasing

Assuming the City decides to implement fixed route service in Lloydminster using Option 2: Base Level Service, incremental improvement in service follows a linear path as illustrated below.

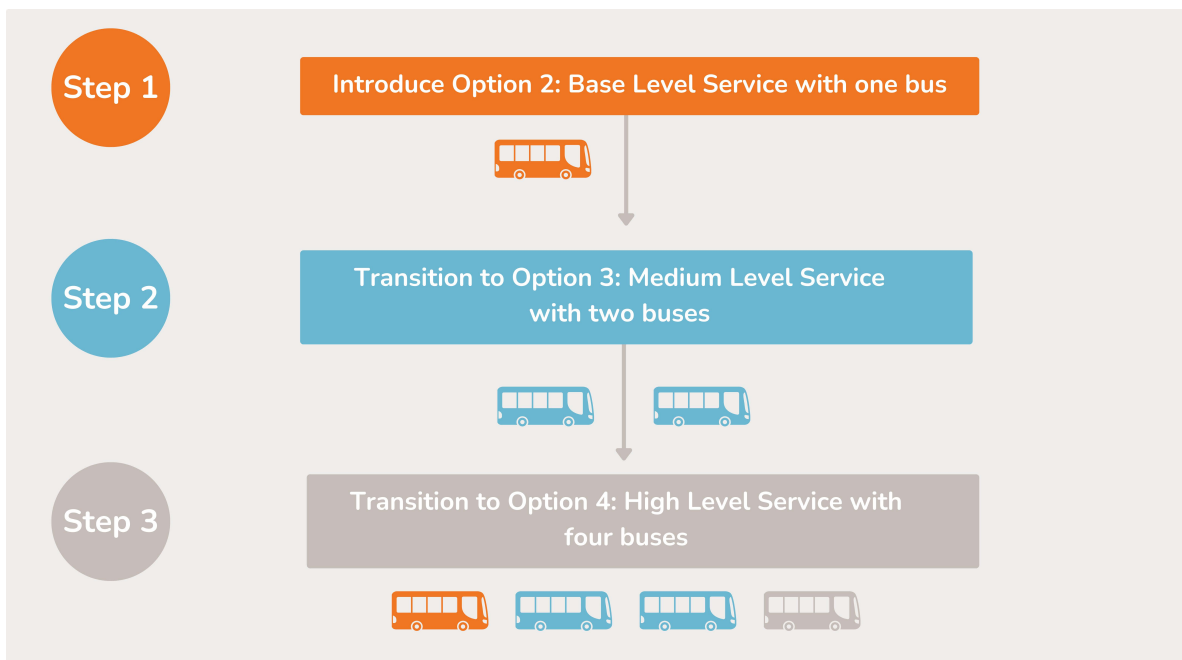


Figure 17. Service Option Phasing – Fixed-Route

This path does achieve incremental improvements in both effectiveness of service as well as cost-efficiency.



5.0 PHASE 2 ENGAGEMENT: DEVELOPING PUBLIC TRANSPORTATION OPTIONS

5.1 Overview

As the first phase of engagement endeavored to determine the general level of support for public transportation, the second phase involved more detailed feedback to provide insight into what level of service the residents of Lloydminster would support, and how much the community is willing to spend on such a service.

5.2 Objectives

The objectives of Phase 2 Engagement included:

- Gathering feedback on the service options, in terms of the community’s likelihood to use each option, which option best meets travel needs, and which option is the most valuable use of taxpayer dollars (if any).
- Understanding what time of day the residents of Lloydminster would be most likely to use public transportation, and how much the residents of Lloydminster would be willing to spend on a one-way fare.

By the Numbers...

917

Survey respondents



176

Pop-Up and Open House attendees



11

Lunch & Learn participants



5.3 What Was Done

From October 18 to November 08, 2023, Lloydminster residents, key community groups, and interested parties, were invited to provide feedback through the following activities:

- **Survey #2** was available online on the Your Voice Lloyd platform. Similar to Phase 1, paper copies were distributed throughout Lloydminster via supporting organizations and were collected at City Hall, the Operations Centre and the Lloydminster Public Library.
- **Pop-Ups and Open Houses** were held at the Pioneer Lodge, Servus Sports Centre, and Farmers’ Market, where members of the project team presented the high-level service options to the public and invited feedback on their preferred option.
- **A Lunch & Learn Workshop** took place at the Operations Centre on October 27, 2023, where conversations were facilitated with local business representatives



and City Operations Staff about the service options and the overall Public Transportation Master Plan.

5.4 What We Heard

Key Takeaways: Phase 2 Engagement

- High Level Service (i.e., Option 4) ranked the highest to meet travel needs.
- The majority of respondents feel that the options represent a good use of taxpayer money.
- Medium Level Service (i.e., Option 3) ranked the highest as providing the most value for taxpayer money spent (estimated 4% tax increase).
- \$2.00 is the most preferred one-way fare option.
- Evening (6 pm to 8 pm) and peak afternoon (4 pm to 6 pm) are when respondents are likely to access the service.
- Respondents are most likely to use the High Level or Medium Level Services and are least likely to use the On-Demand Service.
- Respondents are mostly very likely to support the implementation of a public transportation service in Lloydminster.
- **Respondents are generally supportive of public transportation, with the Medium Level Service identified to be the most valuable when considering taxpayer dollars.**

5.5 Summary: Service Options and Phase 2 Engagement

Overall fixed route service seems best suited to the City of Lloydminster's Strategic Priorities described in the Transportation Master Plan, ISL 2016, of improving mobility options of the community. From a service planning perspective, the ability to incrementally increase service from low levels to high levels with fixed route service is perhaps one of its biggest advantages relative to the four (4) options discussed above. Of the fixed route options discussed in this report, Option 3 seems to be best able to provide that balance between service effectiveness and cost efficiency desired by most communities.

Engagement results also support fixed route service in general and Option 3 specifically. Typically, On-Demand Service is very popular in most communities, given its customer



service benefits and technological advantage over regular fixed route service, however, in Lloydminster, Option 1: On-Demand Service was the least preferred option, with it scoring lowest in value for taxpayer money spent as well.



6.0 FUNDING AND GOVERNANCE CONSIDERATIONS

If the implementation of a public transportation system in Lloydminster is furthered, deciding a service option that can be implemented is the first of many decisions that will need to be made on the path to implementation. Some key strategic directions that will need to be determined are related to funding and governance.

6.1 Funding

Operations of a public transportation service adds an annual cost to the municipal budget. This is an amount that is highly variable based on inflationary pressures in the market and other factors including, but not limited to, the labour market, fuel prices, and replacements costs. In most small- to medium-sized municipalities funding a public transportation service is achieved through a combination of taxes, grants at the provincial and federal level, funding partnerships, advertising revenue, and fare revenue. These potential funding sources will need to be reviewed in detail as part of potential future implementation plans if a public transportation service is furthered. The financial impacts of operating a public transportation service contained herein, assume no additional funding other than taxes and fare revenue as the other forms of funding are only postulated at this time.

As part of this study, the Lloydminster Public School Division (LPSD), Lloydminster Catholic School Division (LCSD), Lakeland College, among others have been identified as potential funding partners. As previously mentioned, further conversations regarding partnerships or ride sharing were not initiated as the information needed to support this conversation will be prepared as part of potential future implementation plans if a public transportation service is furthered.

In addition to funding partnerships, grants at the federal and provincial levels can also be used as a source to start a public transportation option. At this time no permanent funding for operations support is available at any level of government, however, it is important to note that promising conversations are ongoing for this to become a reality at the federal level. More details regarding grant funding options are provided in **Appendix E**.

6.2 Governance

Governing and the administering of a public transportation service can be done in a variety of ways, outlined in **Appendix E**. For Lloydminster, the committee path seems to be the most aligned with the municipality's current approach for administering City run



services. The committee would be responsible for policy, financial, and administrative decision-making with regard to the service and would report to Council directly.

6.3 Service Provision

With respect to service delivery, there are traditionally two (2) options including contracted services or owner operated. **Appendix E** has details on the advantages and disadvantages between the two delivery models. At this time, no recommendation is being made in this regard. The implementation phase of this service would be the ideal stage for such decisions to be made.



7.0 SERVICE RECOMMENDATION

The primary objective of this study was to understand the transportation needs of the community and opportunities for the same in Lloydminster as well as determine how connections to key local destinations could be delivered.

In order to achieve this objective, this study explored case studies of other public transportation implementation examples; key destinations that needed to be served in Lloydminster; reached out to the community; engaged key interest groups about the need for this service; developed, evaluated and costed out feasible options that could meet the mobility needs of the community; and explored the possibility of introducing public transportation in Lloydminster in a phased manner.

From the data and information derived from public engagement phases, as well as all the work described above, it is evident that **public transportation is a service that is generally desired by the residents of Lloydminster and is accepted as a potential service the City of Lloydminster should explore.**

This study determined that the service level identified in Option 3: Medium Level Service should be considered as a baseline from which the future implementation plans be derived and should be further reviewed and optimized where possible. The service level details of Option 3: Medium Level Service are outlined below. The routing shown in this report in Section 4.2 was for information purposes and will need to be further refined through the implementation planning process.

Option 3: Medium Level Service – Service Level Details

Number of Routes:	3	Number of Buses:	2 in service & 1 spare
Service Frequency:	2 routes with 60-minute frequency, 1 route with 30-minute frequency	Estimated Tax Implication:	4% increase
Service Span:	6 AM – 8 PM, Mon – Fri	Key Destinations:	Serves all key destinations*

**Key Destinations refer to the destinations identified by the Transportation Committee and both rounds of engagement*



8.0 NEXT STEPS

The question of whether to provide public transportation in Lloydminster has been a recurring one, and does not depend entirely on quantitative facts, but rather qualitative information. Public transportation is a service that a community can opt to provide, or not provide, based on the overall goals and values of the community. Previous attempts have identified the potential scope of service, where this study confirmed two details:

3. Established a need for public transportation services and the community's acceptance of said services in Lloydminster.
4. Identified potential feasible options for introducing these public transportation services in Lloydminster to meet this need.

Depending on factors such as Council direction, Council's Strategic Plan, future Operating and Capital Budget constraints, as well as community direction, the following are potential next steps in moving this process forward would be to develop a detailed implementation plan that would achieve the following:

- Establish the scope of public transportation services in Lloydminster.
 - As part of this determination of scope, a decision regarding the implementation of a potential pilot project will be finalized. The project team recommends engaging a pilot public transportation service through a third-party transit company that would provide a fixed route, medium level of service within the City of Lloydminster for a minimum period of two (2) years to determine if the City of Lloydminster should invest in a permanent system with the following caveats:
 - Thresholds that dictate the success of the pilot are to be established and defined as part of the pilot program. These threshold metrics may be qualitative and/or quantitative in nature.
 - Data collection will continue throughout the duration of the pilot to monitor the system's performance/efficacy against the pre-defined thresholds.
 - Further details such as initial system route, stop locations, or general operation/maintenance can be established at the pilot project implementation phase.
 - Funding would need to be acquired for a pilot with consideration for appropriate fares and the operation costs for the pilot.



- Cost-sharing options will need to be explored with partners in the community, including (but not limited to) Lakeland College, LPSD, LCSD, and major employers in Lloydminster.
- Determine detailed costing and infrastructure needs based on the high-level costing and phasing information developed in this report, taking advantage of all possible grant funding opportunities available at the federal and provincial levels.
- Establish metrics against which to measure the success (or lack thereof) of this service as well as outline a reporting protocol that keeps the community and Council informed of the performance of the service.
- Develop a plan to launch the services.

Appendix A

Phase 1 Engagement - What We Heard Report #1

CITY OF LLOYDMINSTER: PUBLIC TRANSPORTATION MASTER PLAN

Round 1 Engagement – What We Heard Report



Prepared For: City of Lloydminster

Date: January 18, 2023

Our File No: 4029.T01

WATT EDMONTON

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1.0 PROJECT OVERVIEW

The City of Lloydminster is undertaking a comprehensive study to explore the feasibility of implementing public transportation services within municipal boundaries. Currently, Lloydminster does not have a public transportation system but does have some foundational transportation services that support seniors and differently abled populations in the community: the Seniors Taxi Program and Border City Connects. These programs provide a strong foundation to develop a more extensive city-wide service for improved community mobility, connectivity and to support alternate transportation choices.

Undertaken in response to the transportation goals identified in the City's Strategic Plan (2022-2025), the objective of the Public Transportation Master Plan is to understand the demand for transit in the city of Lloydminster and develop some solutions to address a need, if warranted. Recommended public transportation network must not only support future economic development and resilience of the community, but also ensure financial viability and prudence for the taxpayers of Lloydminster. For this reason, it is important that a significant planning process be undertaken such that the Public Transportation Master Plan results are informed by robust and meaningful input from residents and key stakeholders.

The first of two public engagement phases have been undertaken for this project:

- **Phase one** occurred in Fall 2022, involving stakeholder outreach and a public survey. Stakeholder consultation targeted organizations which serve seniors, youth, families and people with disabilities. In tandem, public consultation occurred within the City of Lloydminster's YourVoiceLloyd.ca engagement portal. This included interactive features of FAQs, a project-related question forum, and a survey. Paper surveys were distributed throughout the community





- via supporting organizations and were collected at City Hall, the Operations Centre and the Lloydminster Public Library
- **Phase two** will occur in Winter 2023.

1.1 Objectives of the Lloydminster Public Transportation Master Plan

The main project deliverables for the Lloydminster Public Transportation Master Plan include:

- Understand the transportation needs and opportunities for residents, major employers, and stakeholders of the City of Lloydminster.
- Determine how connections to key local and regional destinations can be delivered, coordinated, and optimized for efficiency, including potential partnerships with existing transit service providers.
- Develop and deliver a final Feasibility Study and Implementation Plan that describes the recommended service types and levels, potential route(s) map, projected operating and capital costs, proposed operating and governance models, and potential funding sources and partnerships to assist decision makers.

2.0 ENGAGEMENT SUMMARY

2.1 Engagement Tools

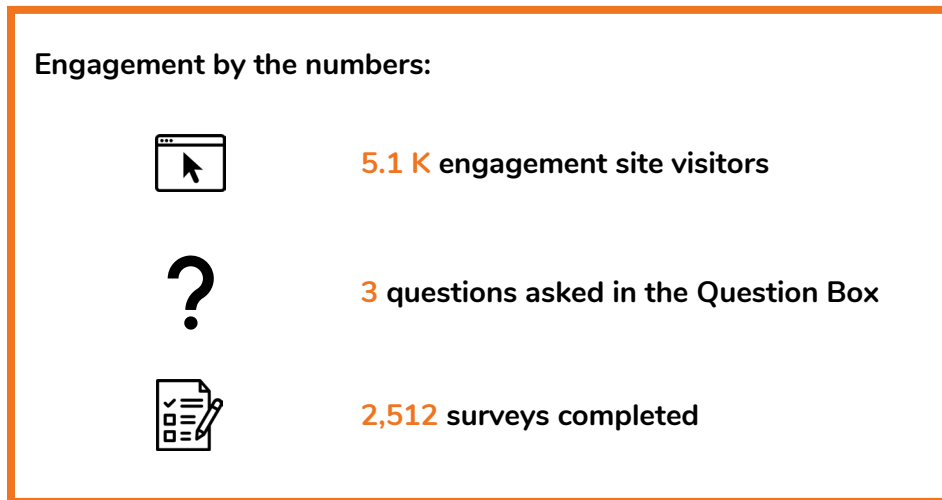
The first phase of engagement occurred between **October 26, 2022 and November 16, 2022.**

Through the use of physical and virtual surveys, feedback on travel patterns, current methods of transportation, trip purposes and general thoughts on public transportation service were gathered. The survey was made available via the





City’s “Your Voice Lloyd” website, and through paper copies distributed to locations across Lloydminster.



2.2 Community Advertising

Public consultation opportunities were advertised through the usage of website presence, social media, lobby displays, radio, newspaper, newsletters, digital billboards, media release and community support.



Promotional Tools:



City Website,
Facebook, Instagram,
Twitter



Prime Time Local
News



Meridian Source,
Morning News, Weekly
Bean



Real Country 95.9,
The Goat 106.1



Digital Billboards



Pop-up Information
Booths



Media Release
distributed to local
media sources



Information shared
with Community
Organizations

Pop-up lobby displays and information booths were held at (and/or paper surveys were distributed to) the following locations:

- Saskatchewan Health Authority Health Tradeshow
- Grace United Church – Learning Session
- Grace United Church – Seniors Outreach Coffee
- Olive Tree – Community Meals
- Residents in Recovery
- Border City Farmers Market
- Lloydminster and Vermillion for Equity (Street Team)
- Halls Holme





- Pioneer Lodge
- Lloydminster Native Friendship Centre
- Lloydminster Youth Council
- Lloydminster Community Youth Centre

3.0 KEY TAKEAWAYS

The list below outlines the key takeaways from the Phase one engagement activities:

- The survey response rate (2,512 responses, close to 10% of the City's population) indicates a high level of interest in the topic of public transportation.
- Irrespective of car ownership, a majority of respondents (84%) have expressed support for public transportation services in Lloydminster.
- The most popular destinations travelled to in Lloydminster are Walmart, Superstore and Lloyd Mall.
- Currently, the most common transportation modes among respondents are driving one's own vehicle, being a vehicle passenger with a family member and walking.
- Travel to identified top destinations occurs every day of the week (indicating school or work travel), or at least once or twice a week (indicating shopping or recreation related travel).
- The top purposes for travelling are shopping, work, and recreation / leisure, respectively.
- Public transportation is identified as being needed to support immigrants, shift workers, seniors, and differently abled citizens in the community. Discussions with stakeholders identified public transit as a basic service in a community, that is unavailable in Lloydminster.



- Alternatives to transit, such as cycling and ridesharing initiatives, are transportation areas of interest among respondents, indicating a desire to use other modes of transportation when possible.

4.0 SURVEY RESPONDENTS

The survey included several demographic questions which allowed for participant population analysis. The following results are specific to the survey only and do not reflect the demographics of the participants who took part in the stakeholder interviews or engaged with the online question forum.

4.1 Age

As shown in **Figure 1**, over half of respondents were between the age of 30 – 49 years. The largest age groups were **30-39 years (29%)**, **40-49 years (22%)** and **20-19 years (18%)**. Youth and senior representation were low, with the fewest responses coming from the Under 19 and Over 70 age categories, both at 5%.

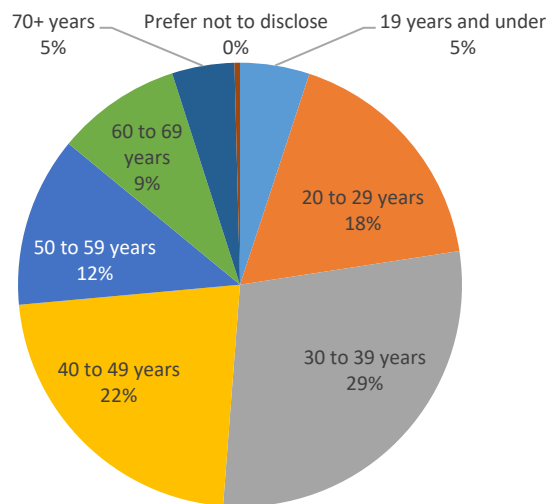


Figure 1. Survey Respondent Ages



4.2 Geographic Representation

Respondents were asked to identify which community they reside in. **Figure 2** outlines their responses. Most participants (90%) live in Lloydminster.

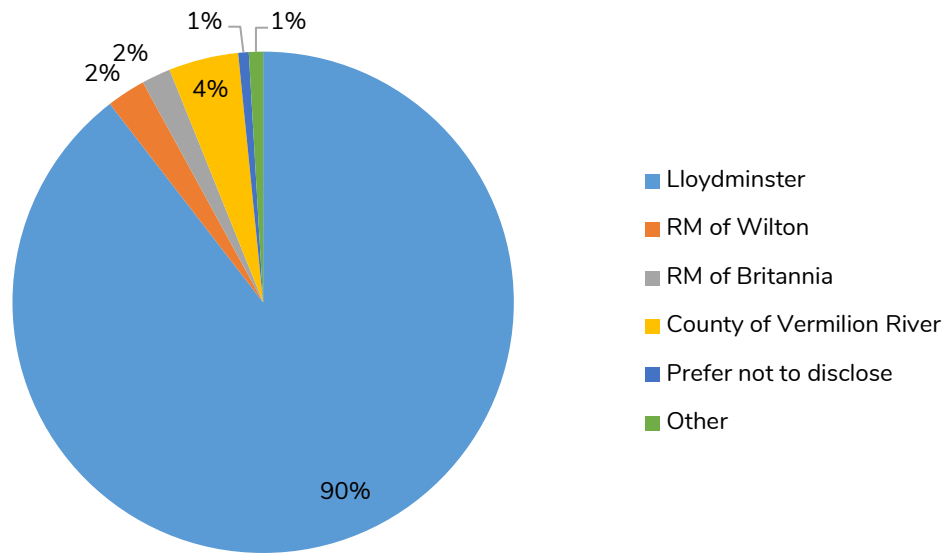


Figure 2. Survey Respondent Geographic Representation



5.0 WHAT WE HEARD

5.1 Survey

The survey received a total of **2,512 responses**, which represents close to 10% of the population of Lloydminster. Of the 2,512 responses, 135 were submitted via paper surveys and 2,377 were submitted via the “Your Voice Lloyd” engagement website. This response rate indicates that public transportation is a topic of interest within Lloydminster.

Respondents were asked about the following topics:

- Top travel destinations within Lloydminster
- Current methods of transport
- Main purposes for travel within Lloydminster
- Amenities and infrastructure expectations
- Fares
- Other ideas and comments
- General support or lack thereof for public transportation

See [Appendix A](#) for the full set of survey questions.

5.1.1 Top Travel Destinations

Respondents were asked: “What are your top three (3) destinations within the City of Lloydminster? (i.e., where do you travel to the most within the community? Please use specific location/company names or provide addresses).” As respondents provided up to three locations, there were more responses than respondents. [Figure 3](#) shows the categorization of responses, in which respondents listed **shops as their top destination, followed by schools and downtown**. Other destinations frequently listed were Bud Miller All Seasons Park, Servus Sports Centre, Lakeland College and the hospital, respectively.

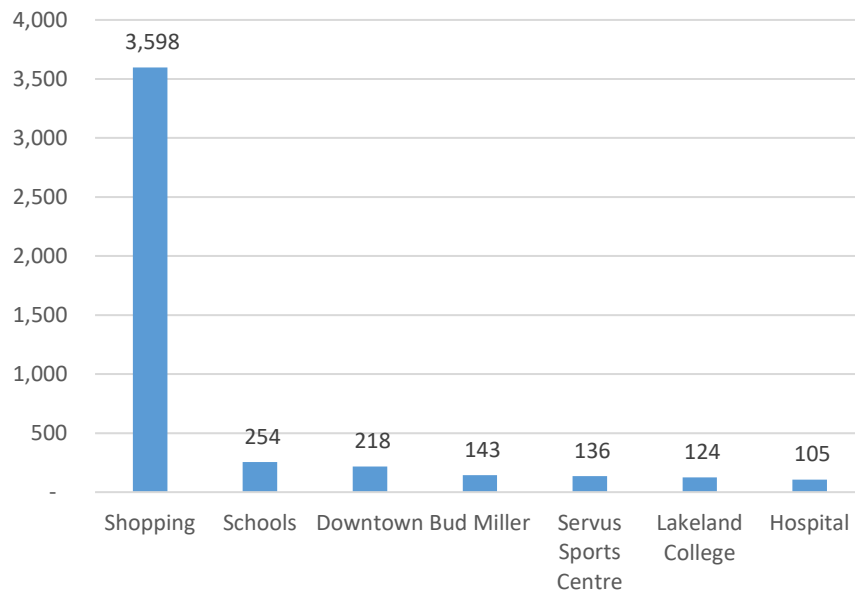


Figure 3. Top Destinations, by Category

Within the shopping category, the top three destinations identified were Walmart, Superstore, and the Mall (for the purpose of this survey, it is assumed that “Mall” refers to the Lloyd Mall). Based on the responses, it is assumed that Walmart means the specific Walmart location and not the Walmart area, as respondents also identified the Power Centre as a travel destination (which consists of the area Walmart). The top shopping destinations are presented in **Figure 4**.

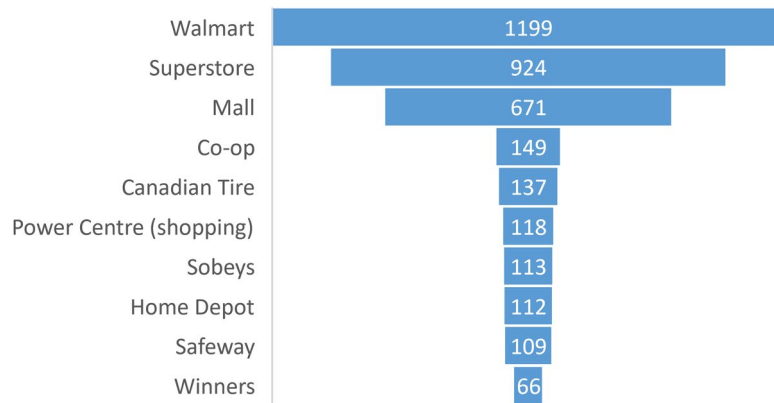


Figure 4. Top Destinations for Shopping

Schools were identified as the second-highest top destination category. For those who listed a school as one of their top destinations, the majority response was “school” in general, without a specific location. For respondents who identified specific schools, the high schools were the most common response (Lloydminster Comprehensive High School, followed by Holy Rosary). Middle schools, Bishop Lloyd and E.S. Laird, were tied for the next most common response, shown in **Figure 5**.

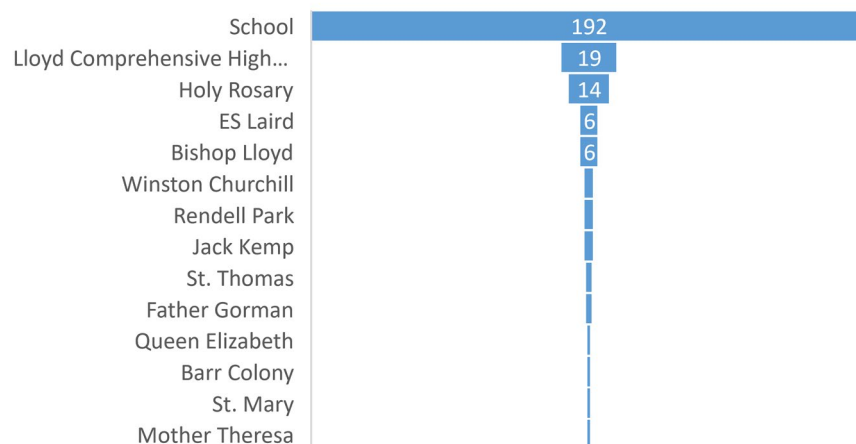


Figure 5. Top School Destinations



Respondents also indicated how often they travel to their top destination. Close to 60% travel to their top destination up to five times per week, while 35% of respondents identified once or twice a week, showing that respondents are most often travelling for work or school, followed by shopping or recreation-related travel.

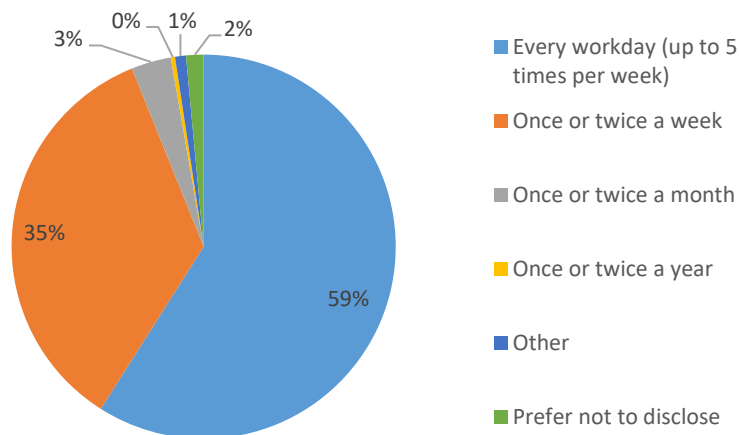


Figure 6. Travel to Top Destination, by Frequency

5.1.2 Current Methods of Travel

Respondents were asked: “What are your current methods of travel to these destinations? Select up to three (3) options.” Similar to the question regarding top destinations, there were more responses than respondents due to the option to select up to three methods of travel. As shown in **Figure 7**, **driving one’s own vehicle is the most common method of travel** with 1,895 responses. The next two most common methods of travel were identified to be a vehicle passenger with a family member and walking, with 822 and 608 responses, respectively.

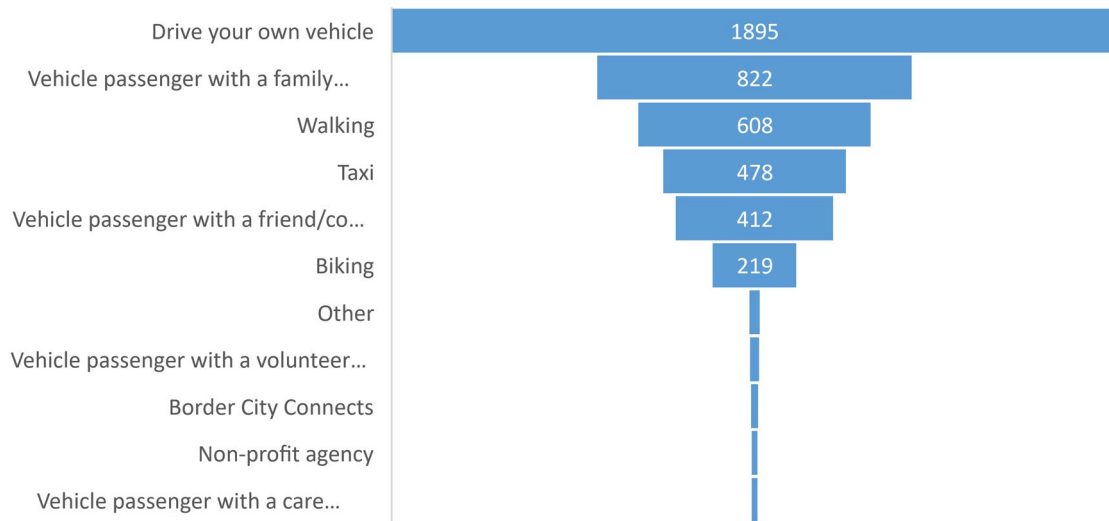


Figure 7. Current Methods of Travel

Respondents were asked if they own a vehicle or have access to one. Represented in **Figure 8**, over 80% of respondents indicated to own or have access to a vehicle, aligning with the most common method of travel to be driving one's own vehicle.

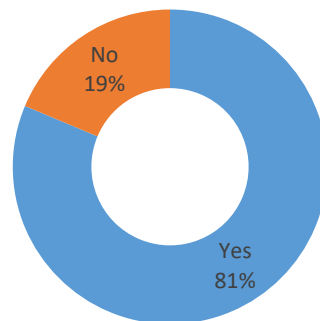


Figure 8. Respondents Who Own or Have Access to a Vehicle



5.1.3 Main Purposes for Travel

When asked for the main purpose of travelling to their top destinations, respondents indicated shopping, work and recreation/leisure to be the most common, as summarized in **Figure 9**. Once again, respondents had the opportunity to select up to three options, resulting in more responses than respondents.

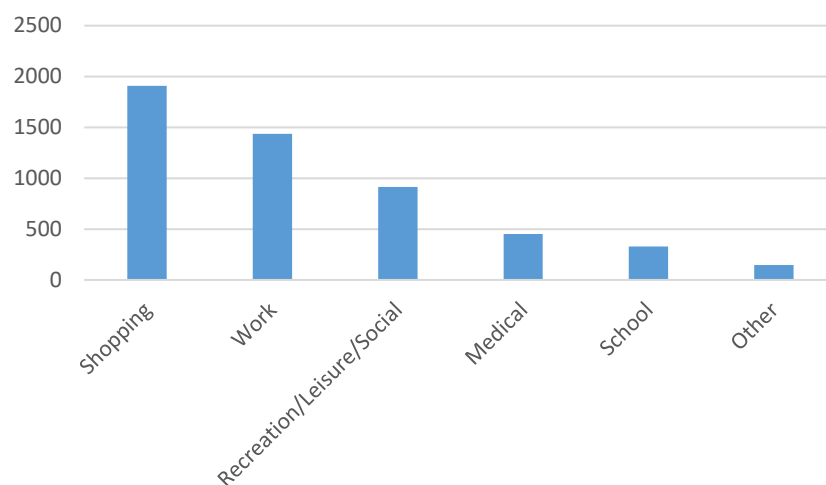


Figure 9. Top Trip Purposes

For those who indicated Walmart as a top destination, it was determined that most respondents travelling to the store are going for the purpose to shop. **About 18% of respondents who identified Walmart as a top destination also identified to be travelling for work rather than shopping, as shown in Figure 10.**

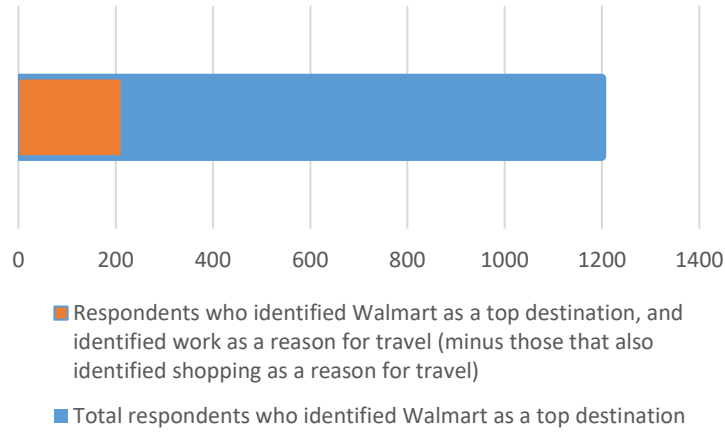


Figure 10. Respondents Who Identified Work as a Reason for Travel, by Total Respondents Who Identified Walmart as a Top Destination

5.1.4 Amenities/Infrastructure Expectations

When asked what would encourage respondents to use a public transportation system, the most important characteristics selected were **affordability and reliability**.

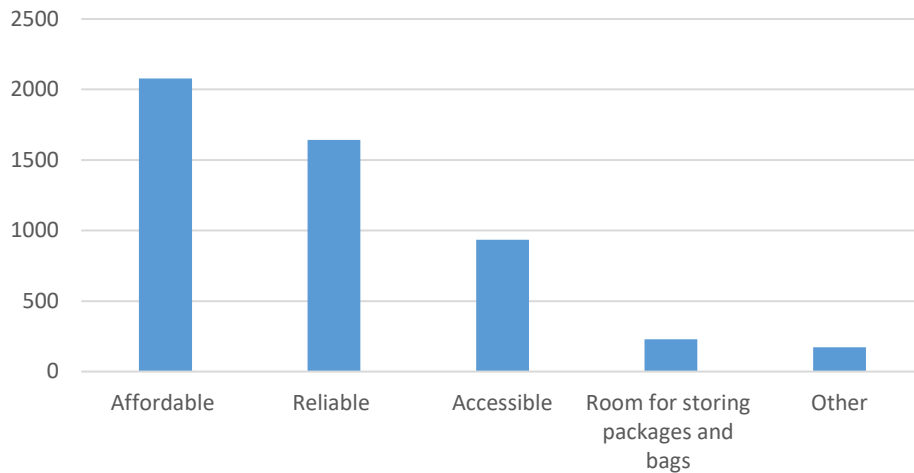


Figure 11. Most Important Characteristics of Public Transportation Services



In addition to characteristics, respondents were also asked to identify preferred amenities for a public transportation service. Having protected bus shelters was the top preferred amenity (with 1,918 responses), followed by informative/identifiable signage, bus tracking abilities, physical accessibility and heated bus shelters, respectively. The top preferred amenities are summarized in **Figure 12**.

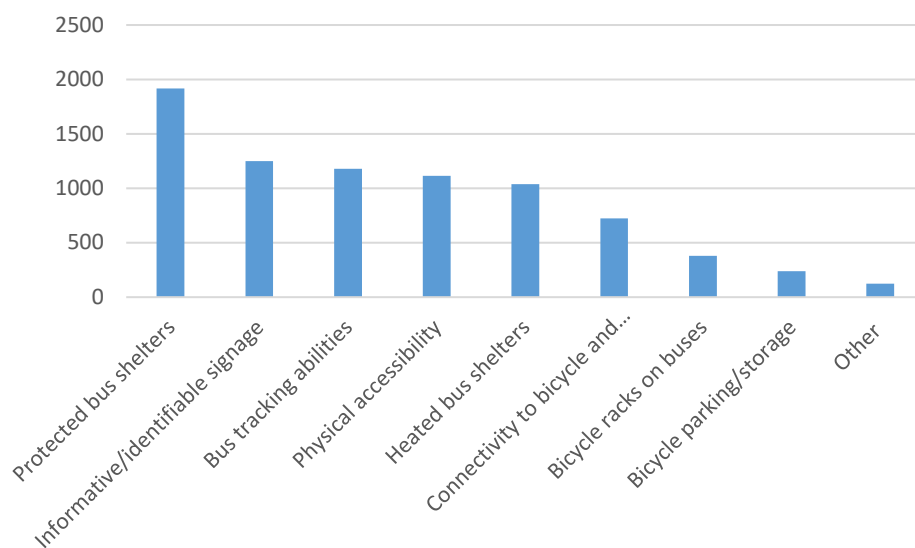


Figure 12. Preferred Amenities for a Public Transportation Service

5.1.5 Fares

When asked what fare respondents would be willing to pay for a one-way trip, **83% indicated to be willing to pay less than \$3.75**, with 45% of respondents willing to pay less than \$2.50. **Figure 13** provides a summary of the fares that respondents are willing to pay per one-way trip.

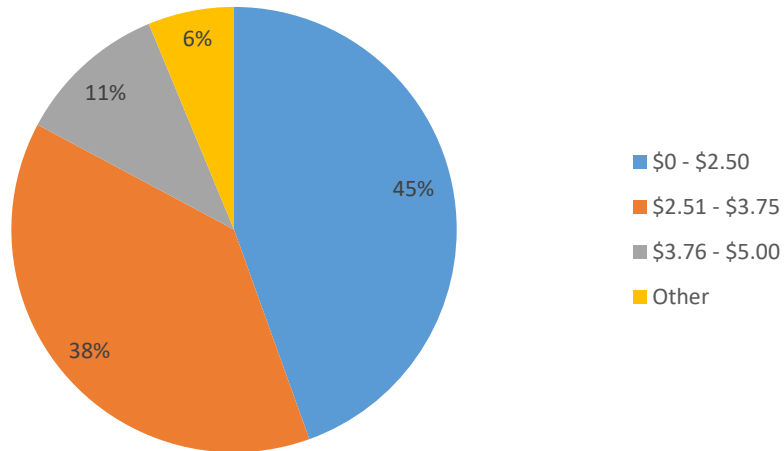


Figure 13. Preferred Fares for Public Transportation, for a One-Way Trip

5.1.6 Support for Public Transportation

Respondents were asked if there is a need for public transportation in Lloydminster, to which **84% identified “yes”**. Under 10% responded “no,” and 7% were unsure. The general support for public transportation in Lloydminster is shown in **Figure 14**.

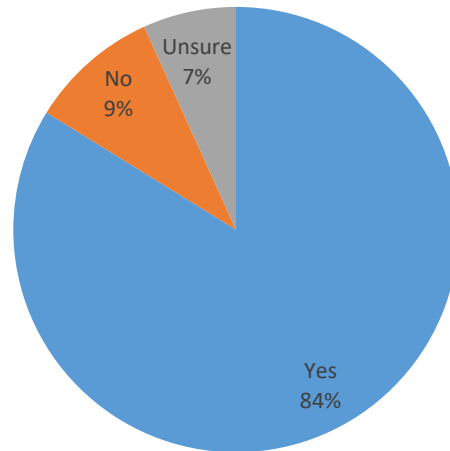


Figure 14. Indicated Need for Public Transportation in Lloydminster

For those who supported the need for public transportation, were also asked how often they would utilize a public transportation service. **The highest response was “daily,”** meaning most days of the week, at 32%, closely followed by “regularly,” meaning one to two times a week, at 29%. Less than 5% of respondents who indicated a need for public transportation reported that they would never use it. **Figure 15** provides a summary of how often respondents would use a public transportation service.

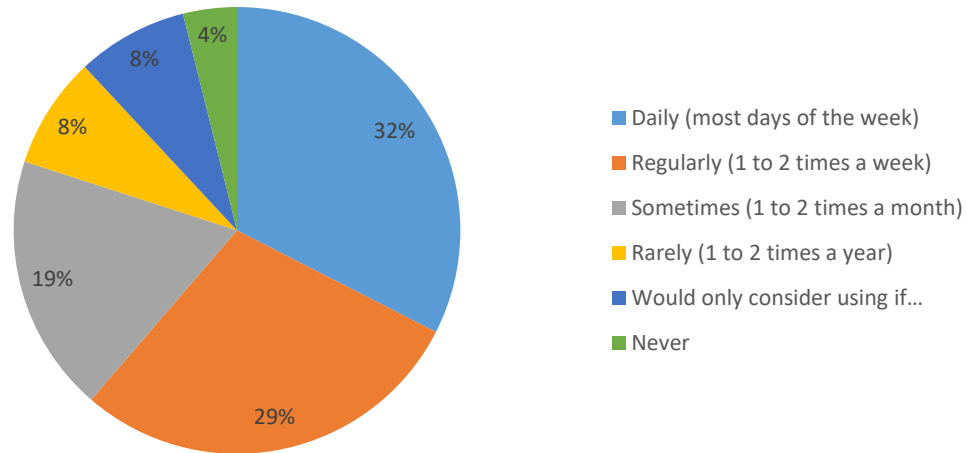


Figure 15. How Often Respondents Would Use Public Transportation

Further to being asked how often public transportation would be utilized, respondents were also asked to indicate what day(s) of the week they would use a public transportation service if it was provided. As shown in **Figure 16**, Friday received the most responses (1,633), followed next by Saturday with 1,546 responses. Monday to Thursday received similar numbers of responses, around 1,400, whereas Sunday was the least selected day of the week to use public transportation. The statutory holiday option had the lowest number of responses.

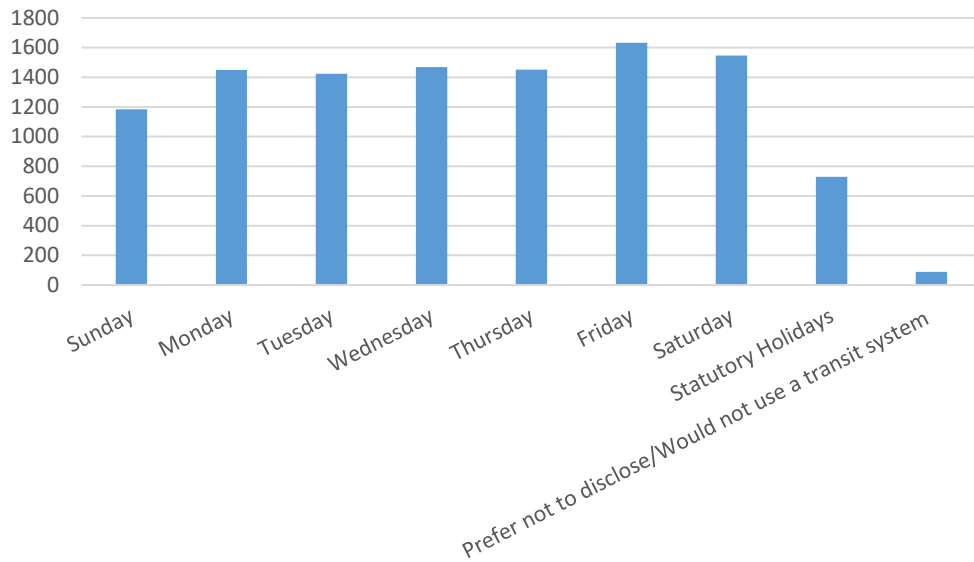


Figure 16. Identified Days of the Week that Public Transportation Would be Used

5.1.7 Other Ideas and Comments

The survey allowed for additional ideas or comments on how to improve transportation within Lloydminster. Of the approximately 2,500 respondents, about 1,200 had comments on various topics ranging from fares to taxes to service times to safety. For ease of understanding the team classified these comments into eleven (11) distinct categories. A summary of comments from each of the categories is provided below:

Category #1: Service Times

The predominant comment on service times was that service should have a regular set schedule, with the frequencies ranging from 20 to 60 minutes. Several respondents commented that even an hourly frequency would be helpful. With respect to “time of day” for the service, it was suggested that service should enable people to get to work in the morning (6:00 a.m.- 8:30 a.m.) and should also be there for “when the bar closes” (9:00 p.m. onwards). It was also noted that transit should be available on both weekdays and weekends. Several people also mentioned that an app where bus schedules and times could be tracked would be beneficial.



Category #2: Infrastructure

This category drew many general transportation infrastructure related comments and a few specific transit comments.

One of the predominant comments was the need to construct a bypass to divert large trucks from the highway driving through the city. It was suggested that the congestion issue being addressed by public transportation would be resolved by the construction of the bypass, many respondents tended to support the bypass over a public transportation system in Lloydminster.

Specific to transit, one of main concerns raised was the need for protected and heated bus shelters.

Among other comments, lack of sidewalks, road maintenance, better snow plowing and an overpass at the railway crossing were mentioned.

Category #3: Service Users

Among the respondents, the general consensus was that many sections of the community would benefit by the introduction of public transit service, prime among potential users cited were elderly seniors, low-income families, pre-teens, teenagers, university students and people with disabilities.

Category #4: Destinations to be Served

Consensus among responses is that at the very least, Lloydminster should be served by two major routes; North-South (and vice versa) and East-West (and vice versa). In terms of general areas, residents mentioned that major roads such as Highway 16, Highway 17, College Drive, 36th Street, 44th Street and 50th Street should be serviced. In keeping with the response to the destinations question, the comments reiterated that the most common destinations in Lloydminster were shopping malls (Walmart, Power Centre (west shopping district), "the mall"), recreation areas (Bud Miller All Seasons Park, Servus Sports Centre), schools (Lakeland College, high schools and elementary schools), medical areas (the hospital, doctors' offices), grocery stores, low-income neighbourhoods, residential areas and the casino.



Category #5: Disapproval

For respondents that noted disapproval of public transportation, the small size of the city, the existing taxi service and an increase in taxes were described as reasons for opposition to the service.

Category #6: Approval

Comments supporting the idea of public transportation in Lloydminster comprised the largest section of the comments. Comments expressed a strong desire for public transit to be implemented, while many were shocked that a city of the scale of Lloydminster did not already have public transit and were surprised that there was still a question as to whether public transit should be implemented.

Category #7 Fares / Cost of service

For fares, respondents highlighted affordability as being key, without getting into specifics of the range. Many respondents did note that taxis were too expensive and that the average taxi trip costs \$15 one way, resulting in a potential threshold for what is considered unaffordable. Many respondents expressed a desire for monthly passes, whereas others supported the idea of student and senior rates. As for cost, the primary cost concern is that taxes will increase and that the public transit system will not be able to support itself financially.

Category#8: Taxes

While supporting the idea of public transportation, respondents also noted concerns about the potential for a taxation increase, which they did not support, citing already high taxes. Some respondents also noted that the tax base in Lloydminster is not large enough or that there won't be enough demand for transit to justify the service.

Category #9: Miscellaneous (Cycling, Safety, Rideshare)

Safety is top of mind of the respondents, while some noted that a public transportation system would improve public safety, compared to taxis, some others felt that it was



important to ensure that public transit was safe to use, whether that was waiting or buses in the dark or being on the buses after hours.

Concurrent with safety was the thread on cycling where people emphasized that investment in cycling infrastructure could be a better use of tax dollars compared to investing in a transit system.

In addition, ridesharing platforms like Uber and Lyft were suggested as alternatives to a full-blown transit system. Respondents noted that ridesharing would give the taxi companies competition and improve availability and affordability of rides.

6.0 SURVEY SUMMARY

Overall, the majority of participants support the idea of a public transportation service in Lloydminster, irrespective of vehicle ownership. From the responses, it is clear that respondents are primarily travelling to shopping areas, work, and school and while car ownership among respondents is higher than is typically seen in communities without an existing public transportation system, the support for public transportation in Lloydminster was equally high. This could be indicative of a number of different desire lines among respondents:

- Acknowledging public transit as a basic service and recognizing the lack of this basic service in Lloydminster
- A desire to perhaps have options other than personal vehicles to get around the city
- A desire to support the residents of the community that would be most benefitted by this service.

Overall, it can be deduced that while the respondents are generally supportive of public transit services, they are also reluctant to take on additional expenditure in the form of taxes and perhaps would be supportive of incremental change.



7.0 STAKEHOLDER FEEDBACK

As part of the engagement purpose, the consultant team also conducted targeted outreach with several community organizations to determine the following:

- If these organizations could provide further insight on resident travel patterns and needs, based on their customer/client needs
- If there were specific groups in the community that needed transportation services more than others
- If there were any barriers in addressing travel needs
- Any existing resources that can be used towards improving transportation within Lloydminster
- Any organization or groups of organizations that can support these services in Lloydminster

A number of different organizations were contacted, including but not limited to:

- Lakeland College
- Lloydminster Public School Division
- Lloydminster Catholic School Division
- Lloydminster Chamber of Commerce
- Downtown Area Redevelopment Committee (DARC)
- City of Lloydminster, Planning
- City of Lloydminster, Economic Development
- City of Lloydminster, Public Safety
- City of Lloydminster, Transportation Services
- The Olive Tree Community Kitchen
- Lloydminster Local Immigration Partnership
- Inclusion Lloydminster
- Gold Horse Casino
- Jubilee Home
- Pioneer Lodge
- Border City Connects



While a number of organizations were keen to participate, a fair number of organizations did not respond to the email inviting them to participate. Originally, the outreach was meant to occur in groups of four or five, however, with varying availability, each stakeholder was contacted individually for a half hour to an hour-long virtual interview. **Appendix B** outlines the guiding questions used for each interview.

The general feedback received can be summarized as follows:

New immigrants that join the workforce cannot own a car until about two years after migrating to the country, which is approximately how long it takes to get a license. Without a car for these two years and no alternate mode of travel within the community, eventually people leave Lloydminster for communities where there are public transportation services, thereby reducing the workforce in Lloydminster.

People with disabilities, both physical and cognitive disabilities, rely on family and friends to get around in the absence of a transportation service in Lloydminster, making it challenging for them to engage in daily activities independently. A public transportation service would make their lives more accessible and independent.

Winter weather makes it very challenging to get around on foot or on bike, especially at night. For people without a car, there is no feasible alternate mode of travel.

In terms of travel patterns, stakeholder comments reflected survey results, with shopping, work and school being identified as key travel needs within the community. Other suggestions like Onion Lake, the Lloydminster Airport were mentioned.

Specific comments that support the need for public transportation in Lloydminster:

Lakeland College seemed supportive of public transportation services for its international students. COVID affected international enrollment, however, they anticipate those numbers reviving in the future.

The School Divisions see public transportation as a supplementary service that would alleviate the load off the yellow buses and support travel to school for kids not falling within the catchment area specified by the school. The School Divisions do not have fleet to spare for supporting a public transportation service.



Border City Connects, a service that currently supports seniors in Lloydminster through both, a volunteer and paid service, is keen to see everyone have the option of transportation services. As an organization, it also has the most potential to support the start-up of these services, given its existing pool of operators and dispatchers and experience providing transportation services in Lloydminster.

In summary, most organizations contacted through the stakeholder process are supportive of the public transportation services. Through the stakeholder conversations, it is clear that Border City Connects is best suited to support service implementation, while other organizations are supportive of the idea of public transportation services in Lloydminster, they lack the resources to share in the development of these services.

8.0 NEXT STEPS

Understanding the need of the community is an essential step in the development of the Public Transportation Master Plan. The next steps in this process involve:

- Developing and costing out service options (Winter 2022/2023)
- Conducting a second phase of engagement, primarily confirm that the public consultation results are adequately being represented in the draft master plan. Public engagement will seek feedback on potential service options and service levels (Winter 2022/2023)
- Refining service options based on community feedback (Spring 2023)

In developing the final Public Transportation Master Plan the above stages will be completed in collaboration with the City, the project team and valuable stakeholders.

For more information on the Public Transportation Master Plan please visit yourvoicelloyd.ca/PTM.



APPENDIX A – ONLINE SURVEY QUESTIONS

Question 1: Please select the community you currently live in:

- Lloydminster
- RM of Wilton
- RM Britannia
- County of Vermilion River
- Other:
- Prefer not to disclose

Question 2: Please select your age category:

- 19 years and under
- 20 to 29 years
- 30 to 39 years
- 40 to 49 years
- 50 to 59 years
- 60 to 69 years
- 70 years and older
- Prefer not to disclose

Question 3: Do you own a car, or have access to one?

- Yes
- No

**Question 4: What are your top three (3) destinations within the City of Lloydminster?
Please use specific location/company names, or provide addresses.**

Top Destination:

Second Destination:

Third Destination:

Question 5: How often do you travel to your top destination above?

- Every workday (Up to 5 times per week)
- Once or twice a week
- Once or twice a month
- Once or twice a year
- Other:
- Prefer not to disclose



Question 6: What is the purpose of these trips?

- Work
- School
- Shopping
- Recreation or Leisure Activities
- Medical
- Social Interactions
- Other

Question 7: What are your current methods of travel to these destinations? Select up to three (3) options.

- Drive your own vehicle
- Vehicle passenger with family member
- Vehicle passenger with friend/co-worker
- Vehicle passenger with a volunteer driver
- Vehicle passenger with a care provider
- Border City Connects
- Taxi
- Non-profit agency
- Biking
- Walking
- Other:

Question 8: Do you think there is a need for public transportation in Lloydminster?

- Yes
- No
- Unsure

Question 8 A: If yes to question number 8, how often would you utilize a public transportation service?

- Daily (most days of the week)
- Regularly (1 to 2 times a week)
- Sometimes (1 to 2 times a month)
- Rarely (1 to 2 times a year)
- Never
- Would only consider using if:



Question 8 B: If yes to question number 8, what day(s) of the week would you use a public transportation service if it was provided? Select all that apply.

- Sunday
- Monday
- Tuesday
- Wednesday
- Thursday
- Friday
- Saturday
- Sunday
- Statutory Holidays

Question 9: Select the top three (3) most important characteristics of a public transportation service, which would encourage you to use it.

- Enables travel to/from my destination in the same day
- Affordable
- Room for storing packages and bags
- Reliable
- Accessible
- Other

Question 10: What fare would you be willing to pay for a one-way trip?

- \$0 - \$2.50
- \$2.51- \$3.75
- \$3.76- \$5.00
- Other:

Question 11: What kind of amenities would you prefer for a public transportation service? Select all that apply.

- Protected bus shelters
- Heated bus shelters
- Connectivity to bicycle and pedestrian pathways
- Bicycle parking or storage
- Bicycle racks on bus
- Bus tracking abilities
- Physical accessibility
- Informative and identifiable signage
- Other:



Question 12: Are there any specific accommodations needed to enable you to travel on a public transportation service? (i.e. assistance with mobility, access or cognitive disabilities)

- Yes (please explain):
- No

Question 13: Do you have any additional comments or ideas on how to improve transportation within Lloydminster?



APPENDIX B – STAKEHOLDER INTERVIEW QUESTIONS

Existing Resident Travel Patterns

1. What is the most pressing travel need in your community (local or regional travel? Other?)
2. What groups of the community most need transportation support?
 - a. Youth and students ... what are the most important activities to serve? Where are they located, and do they have a key start and end time or days of week that are important?
 - b. Seniors or people with a disability?
 - c. Adults who are shopping? Travelling with small children to family programs? Commuting?
 - d. Adults, families or youth that are economically disadvantaged?
3. What are some barriers your clients/customers face in addressing their travel needs within Lloydminster (financial, technology, mobility?)

Destinations and Opportunities for Service

1. Where would see a route (or a network of routes) to be beneficial in Lloydminster?
2. When you think about resources that can be used to support transportation:
 - a. Does your organization have access to a vehicle or vehicles that can support potential transportation solutions?
 - b. What existing resources/capacity (e.g. staff) does your organization have to support potential transportation solutions?
3. What kinds of solutions could help reduce your/your clients' travel needs/frequency (transit service during the weekends, at night, more taxi service)?
4. What are the other community programs or events where we might link or promote transportation options?
5. Have you responded to the survey? If not, it is available at: yourvoicelloyd.ca/PTM or paper surveys are available at City Hall, Servus Sports



Centre and the Operations Centre during the survey period (October 26th to November 16th).

6. Questions for the City of Lloydminster may be directed to Warren Aguinaldo, the City's project lead, at waguinaldo@lloydminster.ca.

Appendix B

Phase 2 Engagement - Results Summary

What We Did:



Public Survey

- Available online via Your Voice Lloyd from **October 18 – November 8, 2023**
- Paper copies distributed to community organizations, City Hall, and open house locations
- 917 responses



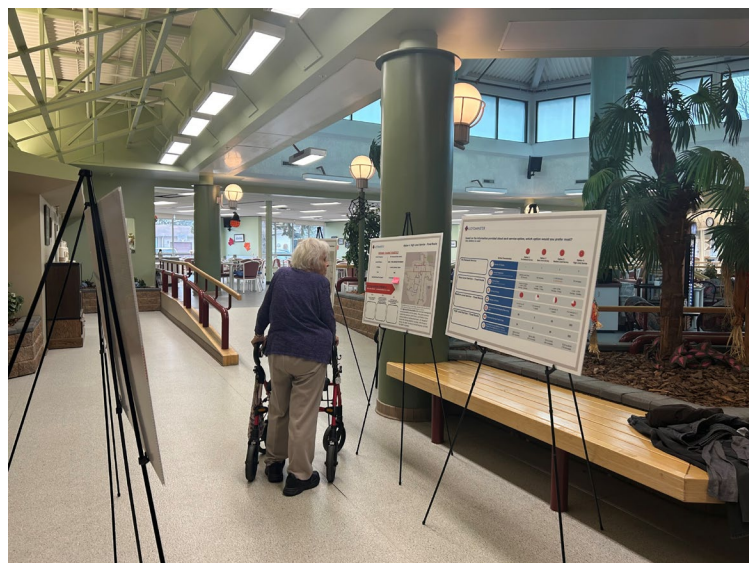
Pop-Ups & Open Houses

- **October 25 & 26, 2023**
- Pioneer Lodge: Approx. 50 attendees
- Servus Sports Centre: Approx. 76 attendees
- Farmer's Market: Approx. 50 attendees
- Approx. 176 attendees total



Lunch & Learn

- **October 27, 2023**
- Workshop with City staff and local business owners
- Approx. 11 attendees

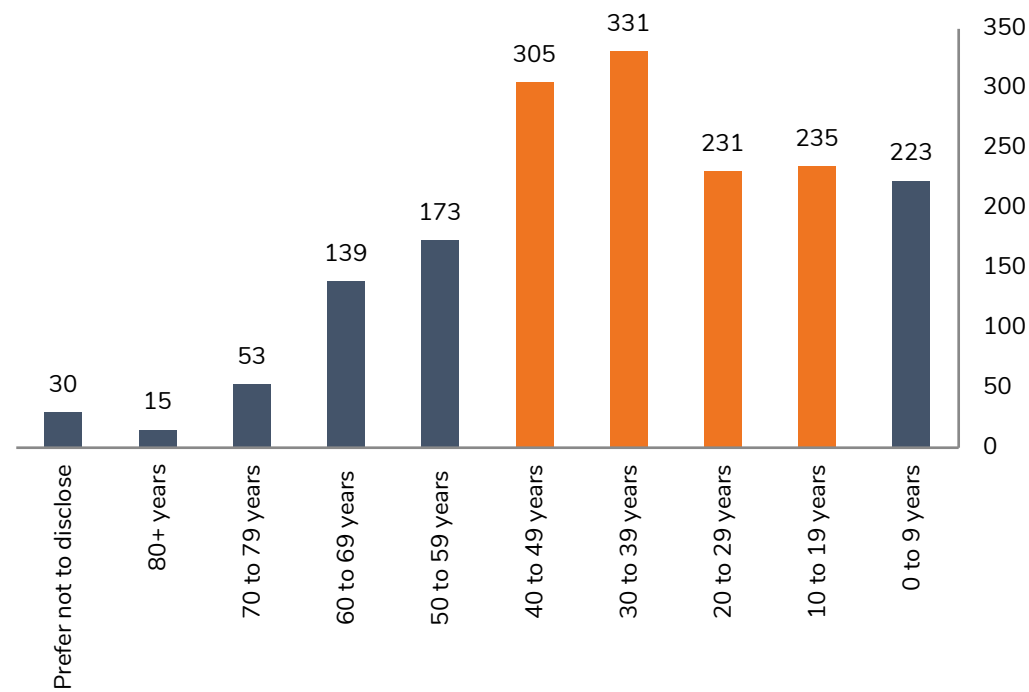


COL PTM: Phase 2 Engagement Results

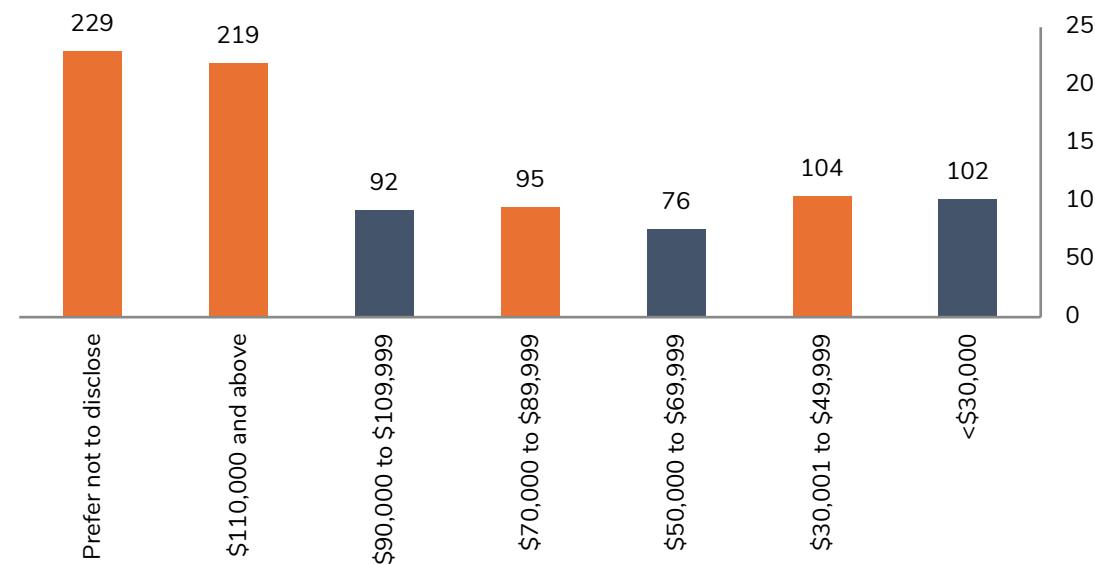
Demographics:

917 responses

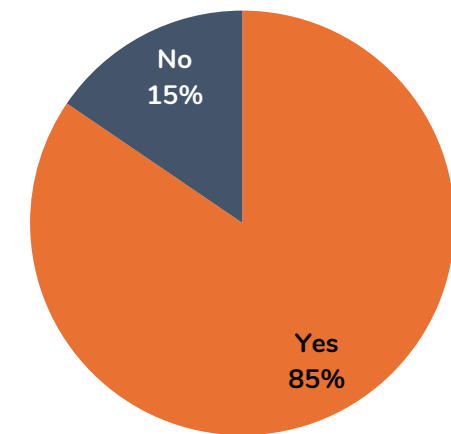
Ages in Respondents' Households



Household Income



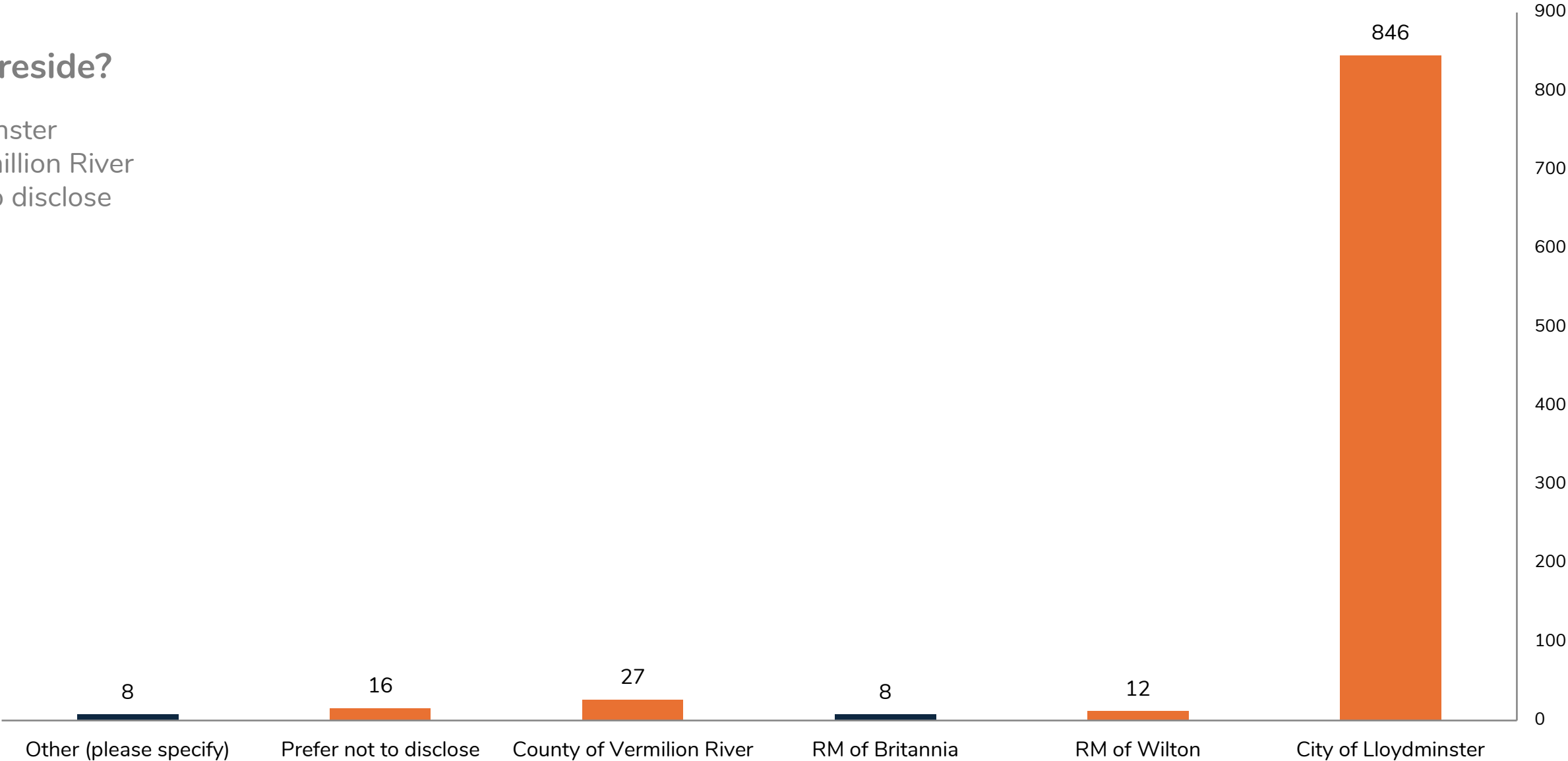
Access to Vehicle



Travel Patterns:

Where do you reside?

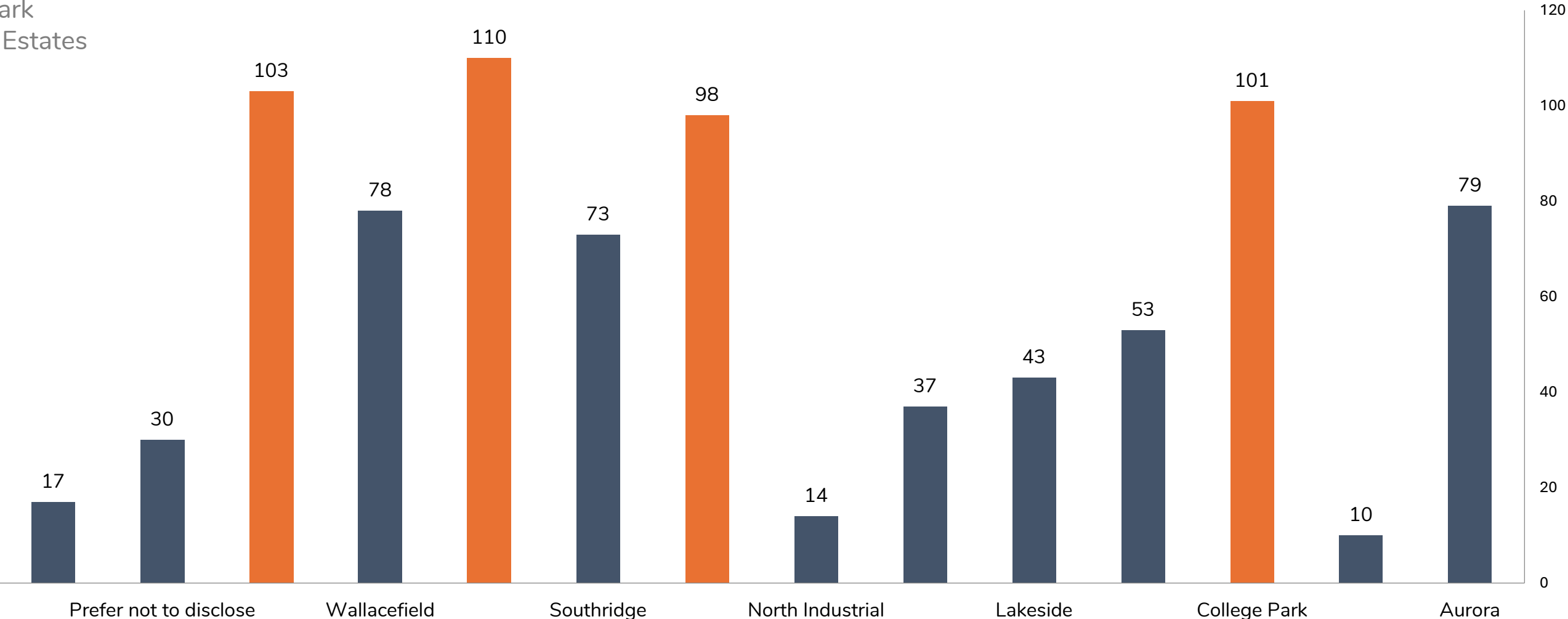
- 1. City of Lloydminster
- 2. County of Vermillion River
- 3. Preferred not to disclose
- 4. Rm of Wilton



Travel Patterns:

If you live in Lloydminster, in which neighbourhood do you reside?

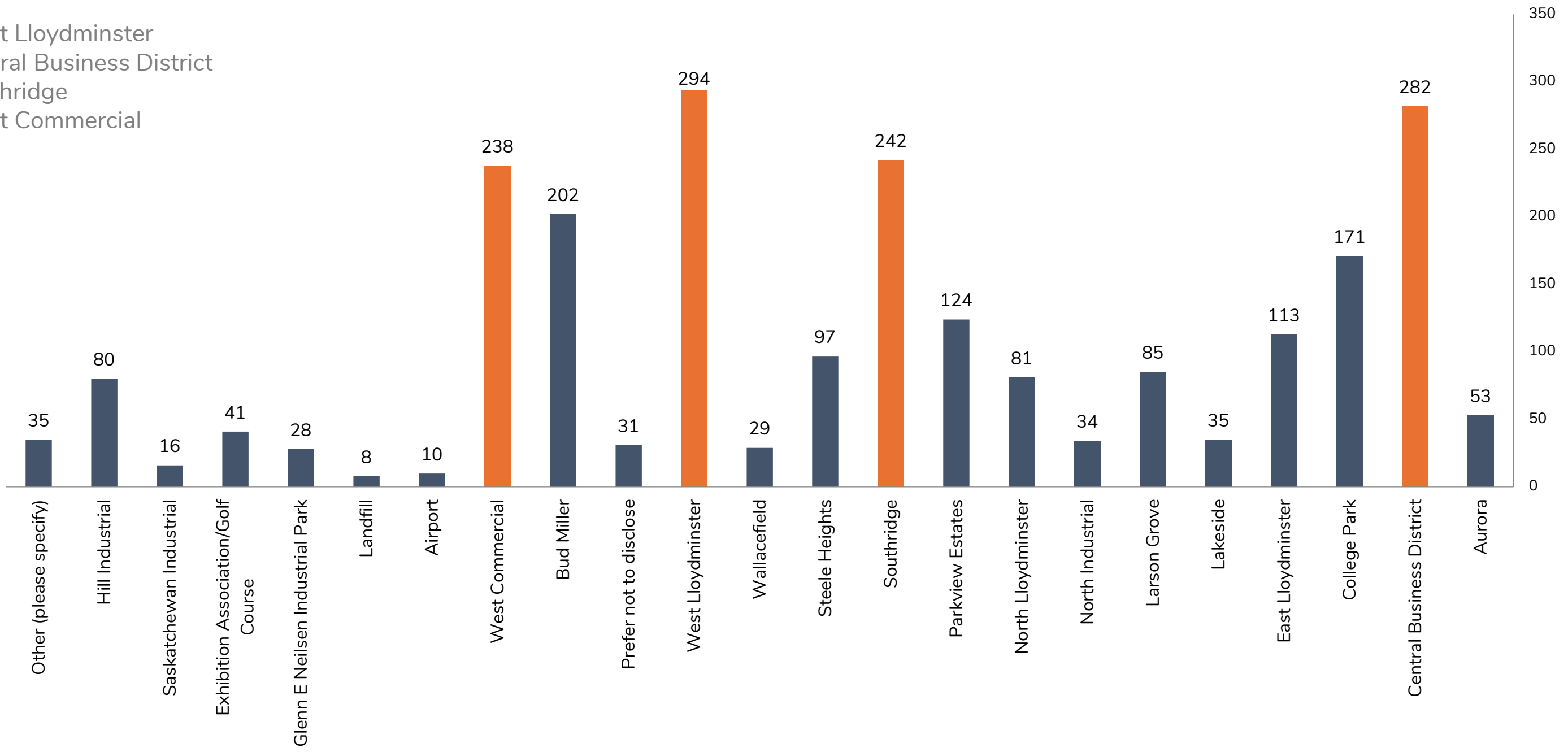
- 1. Steele Heights
- 2. West Lloydminster
- 3. College Park
- 4. Parkview Estates



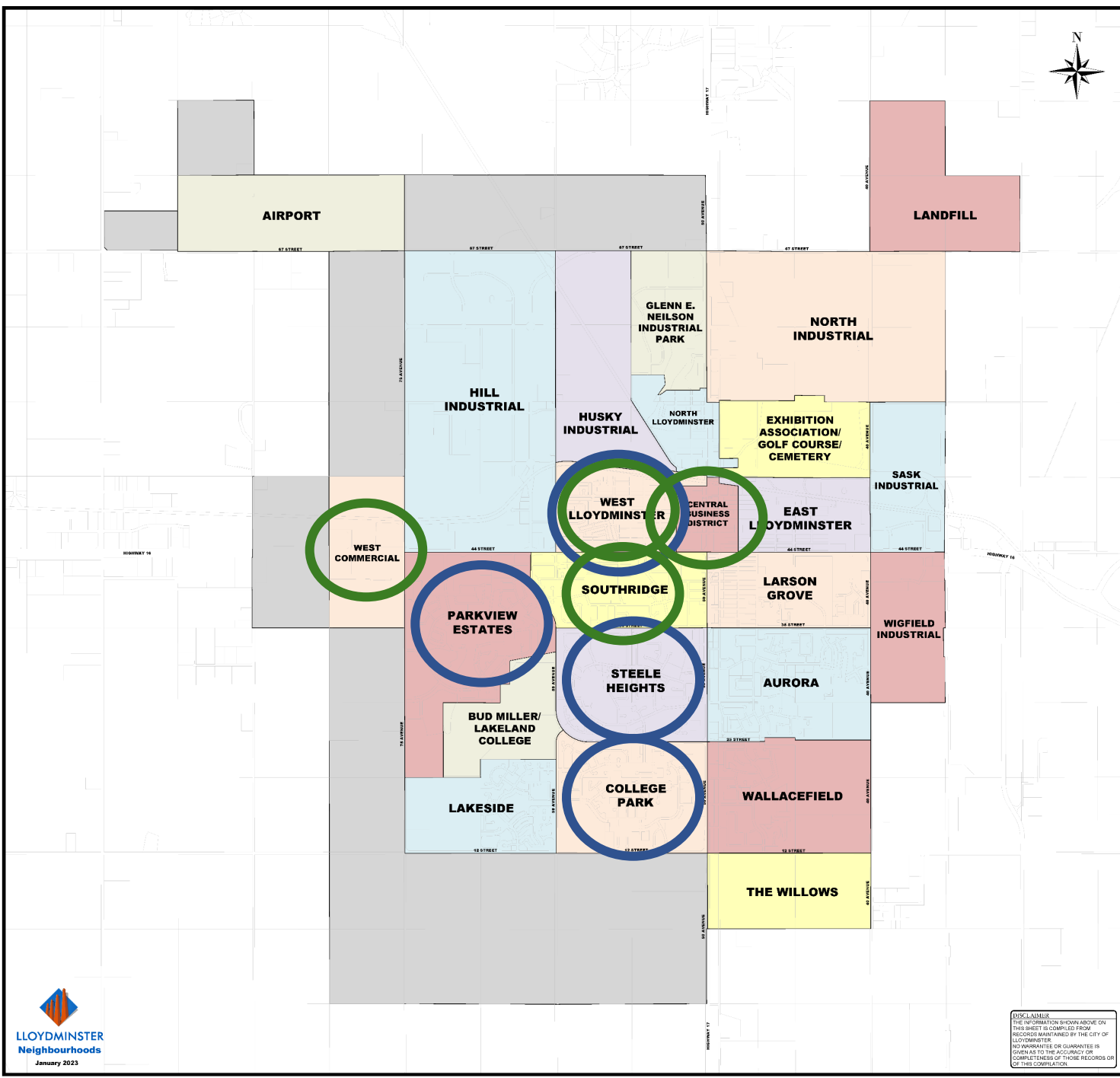
Travel Patterns:

Where do your daily travels take you?

1. West Lloydminster
2. Central Business District
3. Southridge
4. West Commercial

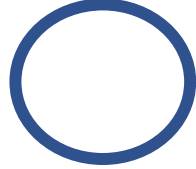


Travel Patterns:



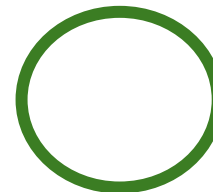
If you live in Lloydminster, in which neighbourhood do you reside?

1. Steele Heights
2. West Lloydminster
3. College Park
4. Parkview Estates



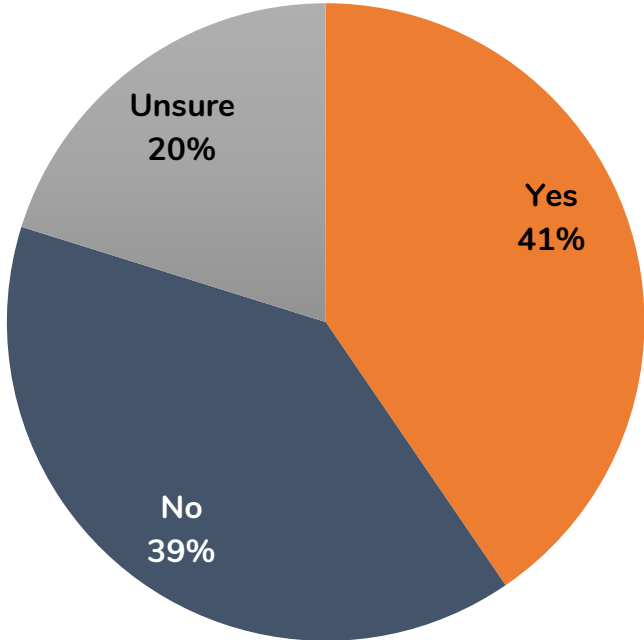
Where do your daily travels take you?

1. West Lloydminster
2. Central Business District
3. Southridge
4. West Commercial

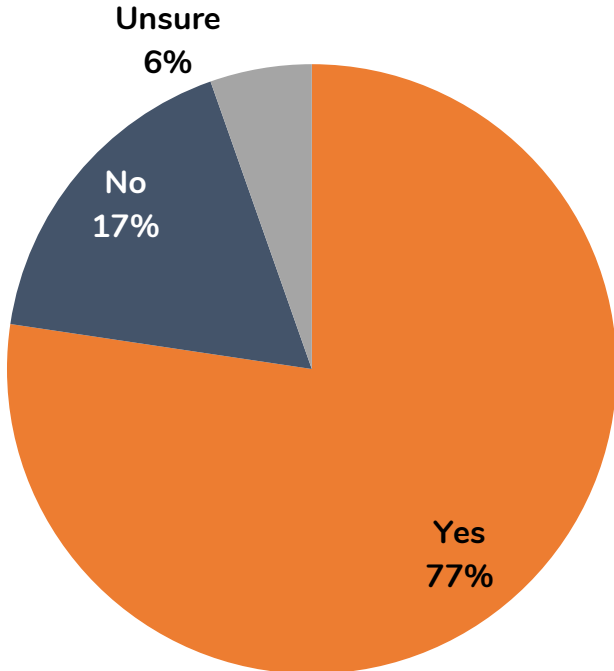


Phase 1 Participation:

Did you participate in Phase 1?

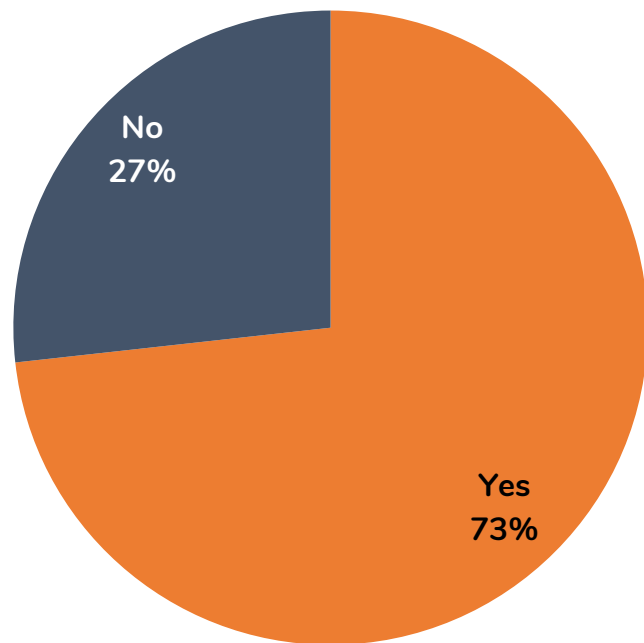


If so, were you in favor of public transportation?



Ability to Meet Travel Needs:

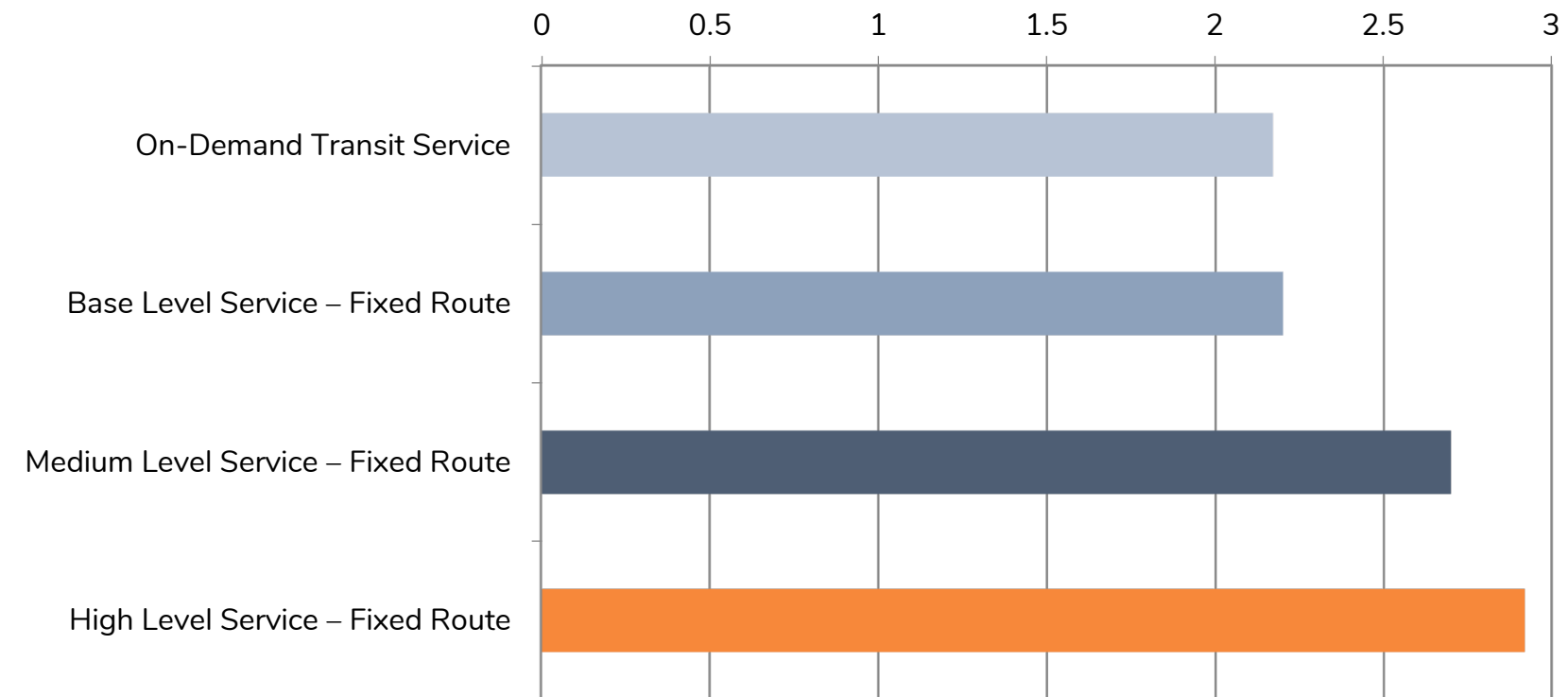
Do any travel options meet your needs?



*If respondents indicated “no,” they were not asked to rank the options.

Based on the information provided about each service option, please rank the options for their ability to meet your needs.

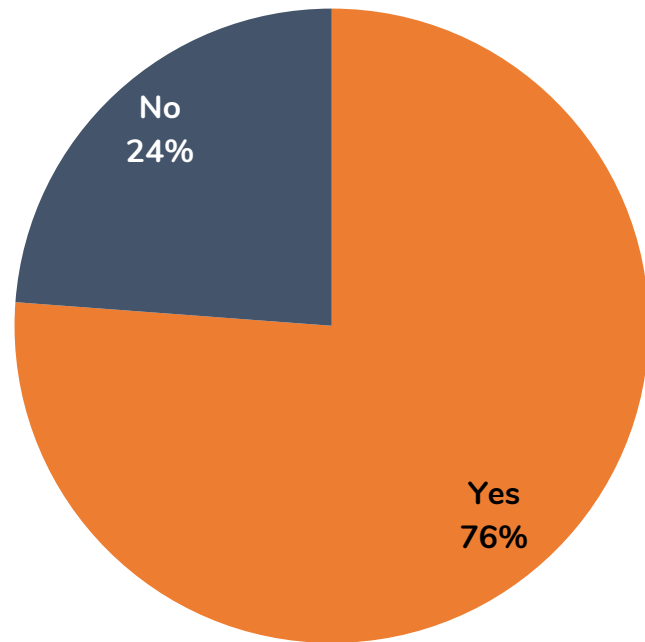
(1 being does not meet my travel needs and 4 being meets most of my travel needs)



High Level Service ranked the highest on average in terms of meeting respondents' travel needs

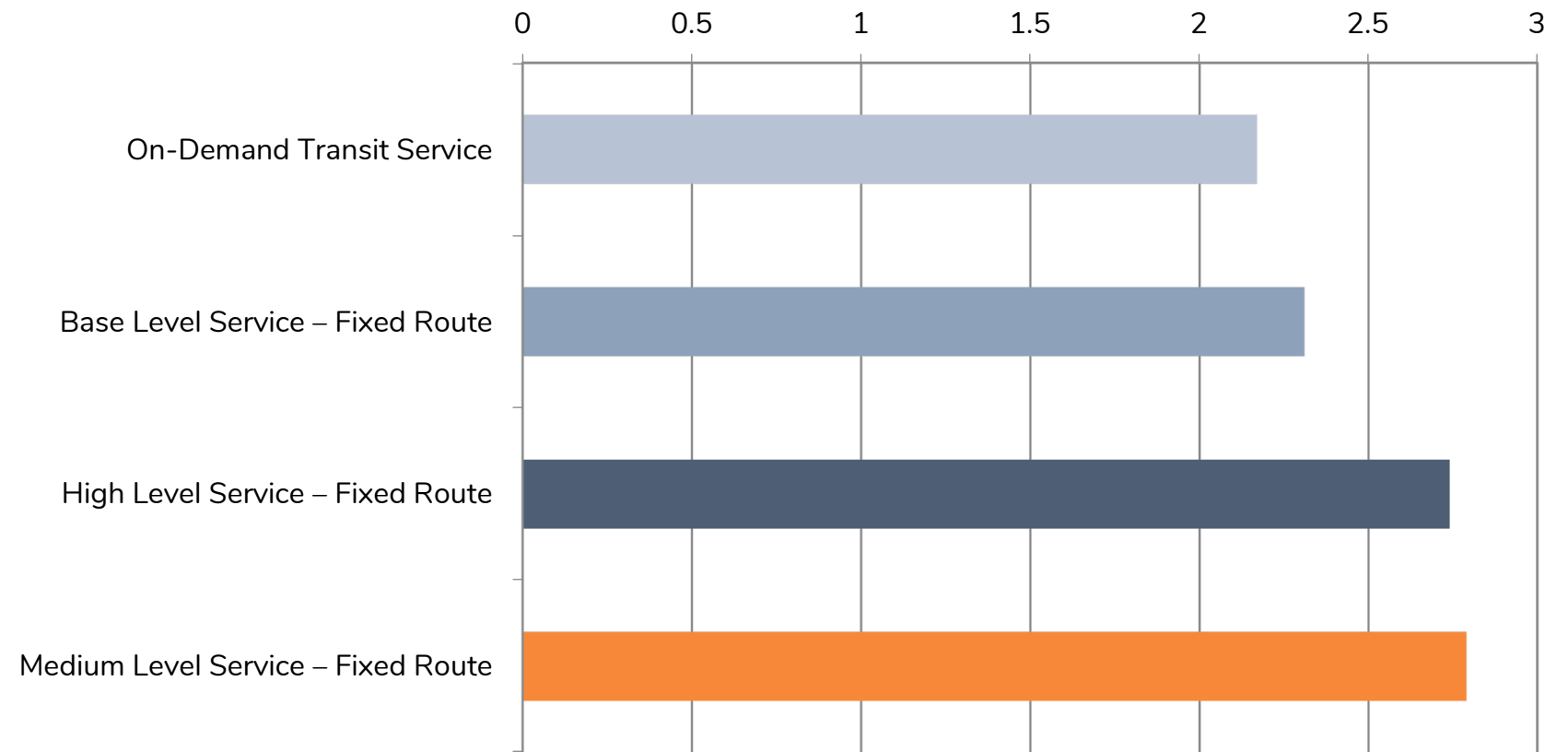
Value for Taxpayer Money Spent:

Do any options represent a good use of taxpayer money?



*If respondents indicated “no,” they were not asked to rank the options.

Based on the information provided about each service option, please rank the options for providing the most value for taxpayer money spent. (1 being least value for taxpayer money spent and 4 being most value for taxpayer money spent)



Medium Level Service ranked the highest on average in terms of being the most valuable for taxpayer money

Improving Service Options & Fares:

Thoughts, comments, suggestions to improve the service options provided:

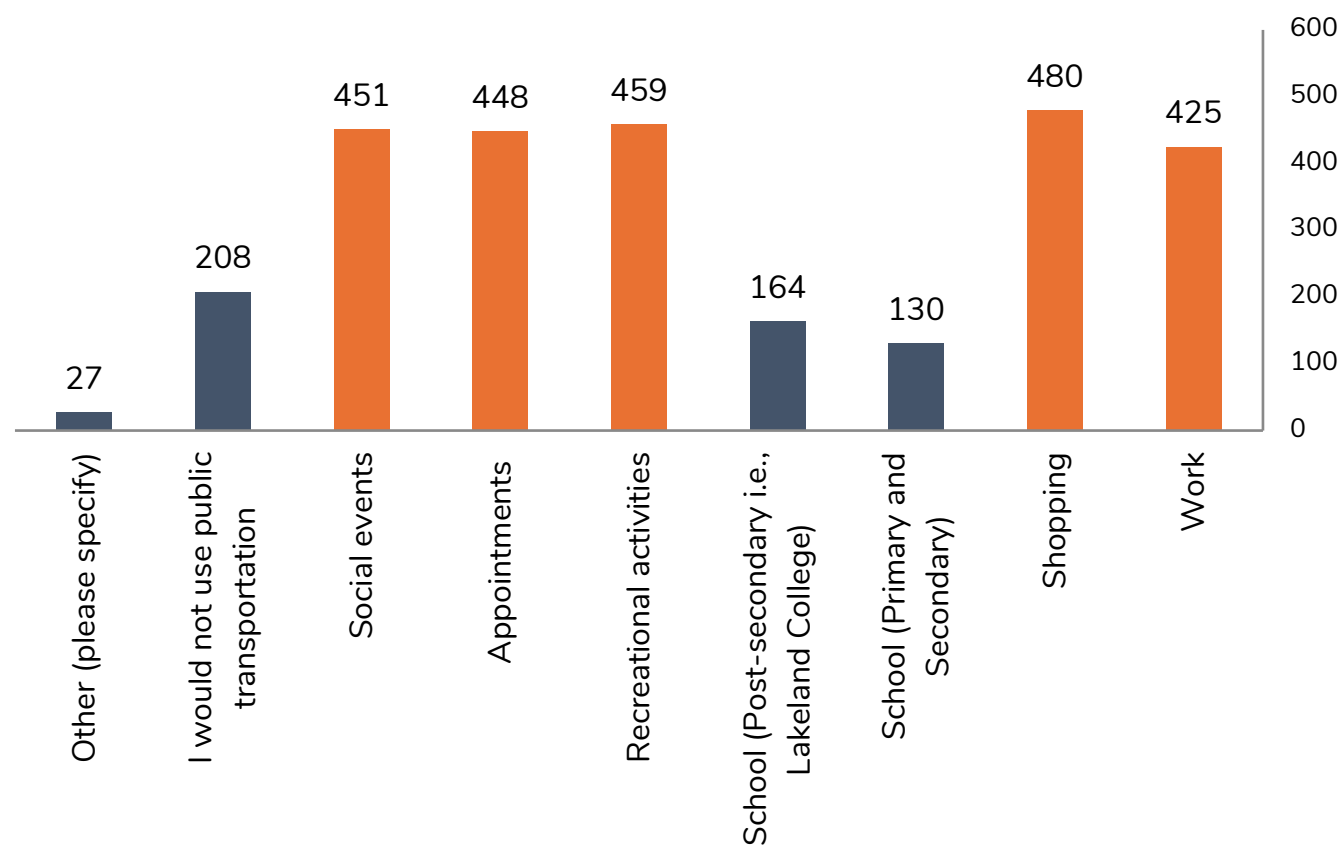
1. General support (168 comments)
2. Concerns about tax implications (73 comments)
3. Do not support (67 comments)
4. Later service (42 comments)
5. Expand service area(s) (33 comments)
 - North Lloydminster (6 comments)
 - Industrial areas (4 comments)
 - Further west (4 comments)
 - Lakeside (3 comments)
 - AB side of 47 St (Medical Imaging Centre) (3 comments)

What fare would you be willing to pay for a 1-way trip?



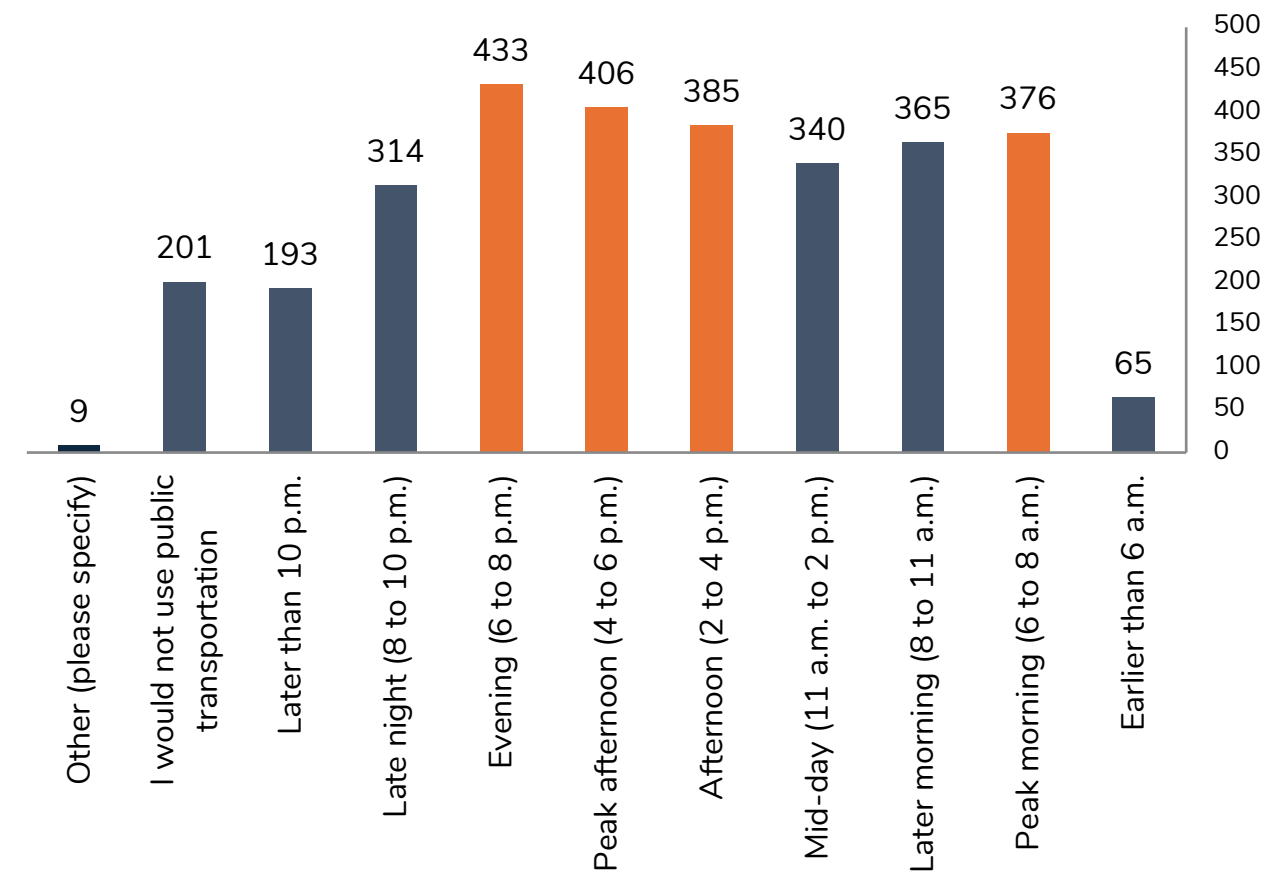
Purpose & Time of Day:

For what purpose(s) would you use the service?



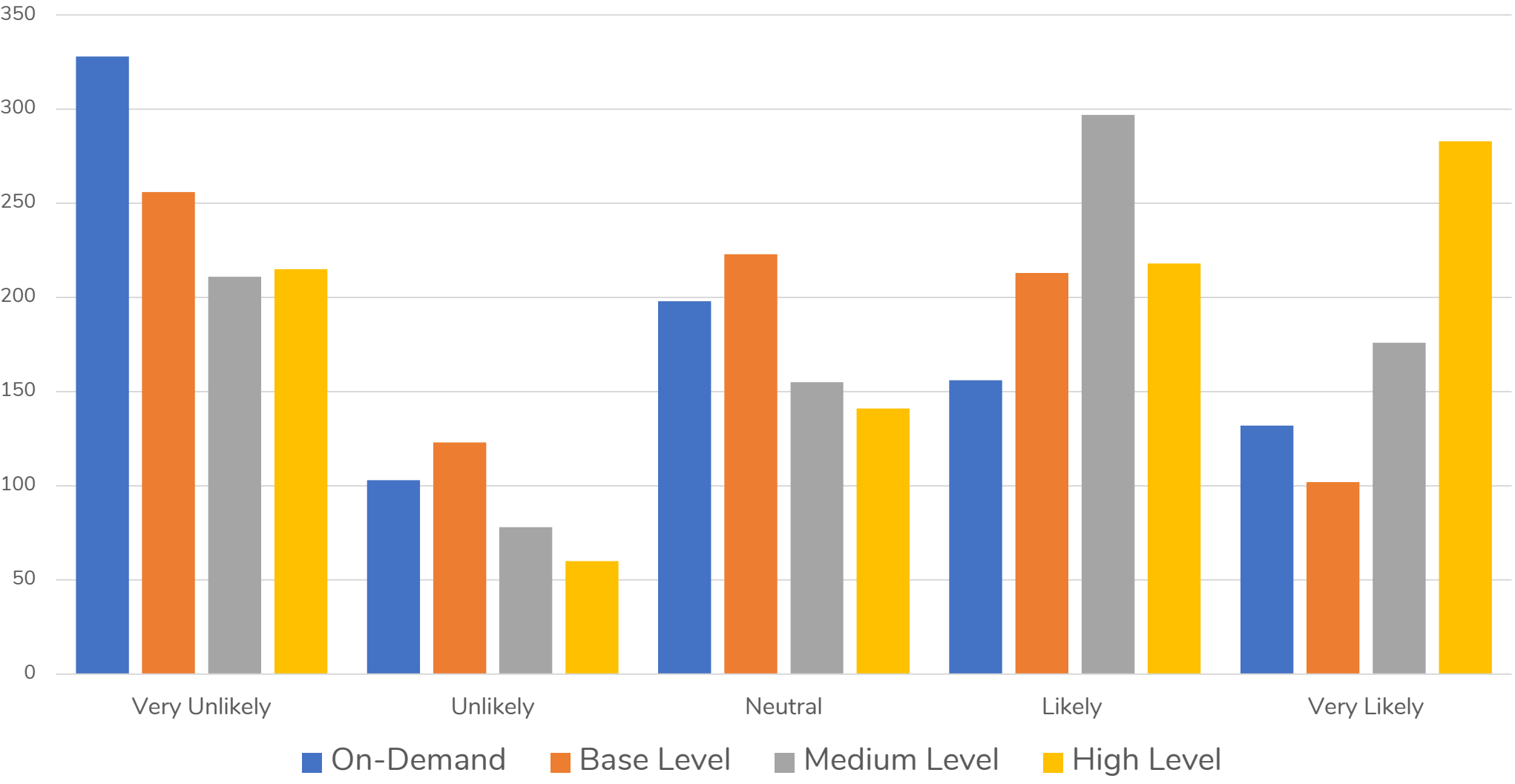
Main purposes: Shopping, recreational activities, social events, appointments, work

What time of day would you access the service?



Main times: Evening (6 – 8 pm), peak afternoon (4 – 6 pm), afternoon (2 – 4 pm), peak morning (6 – 8 am)

Likelihood to Use Each Option:

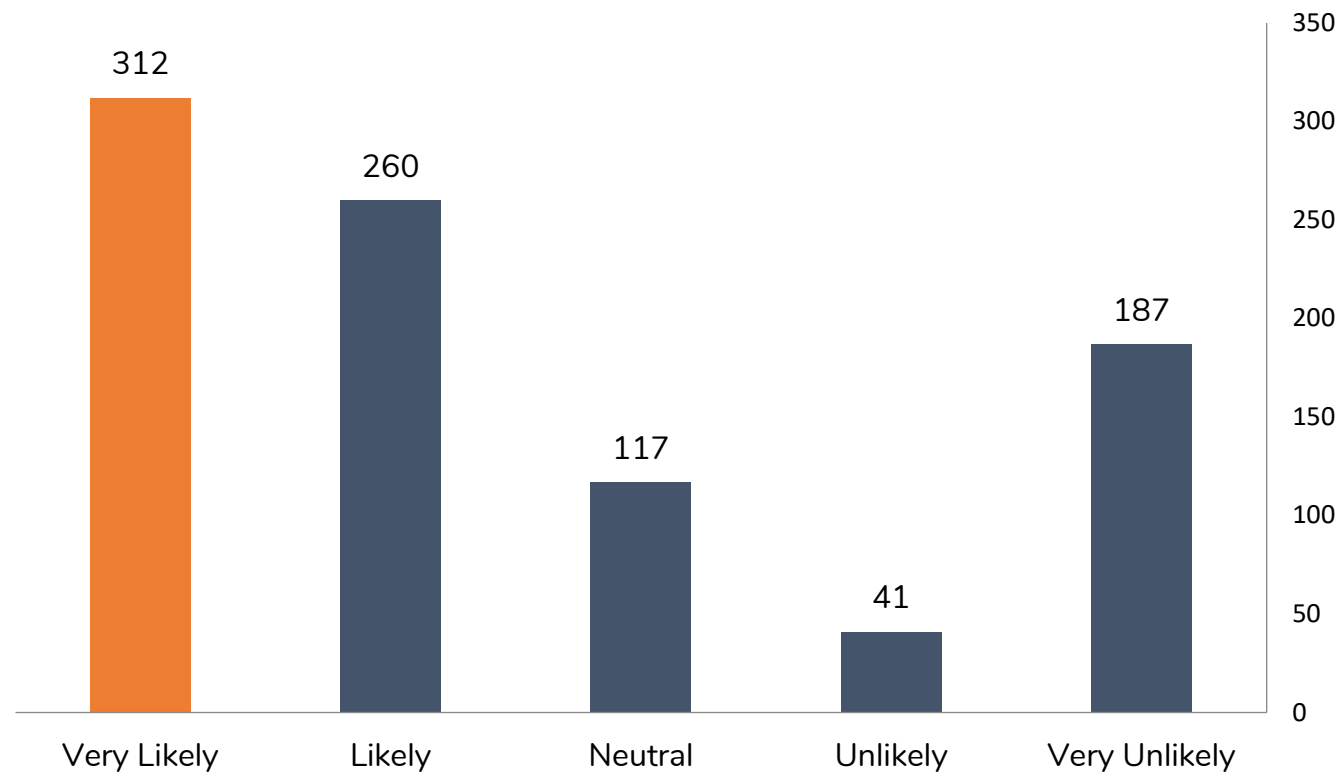


Most likely to use:
1. High Level
2. Medium Level

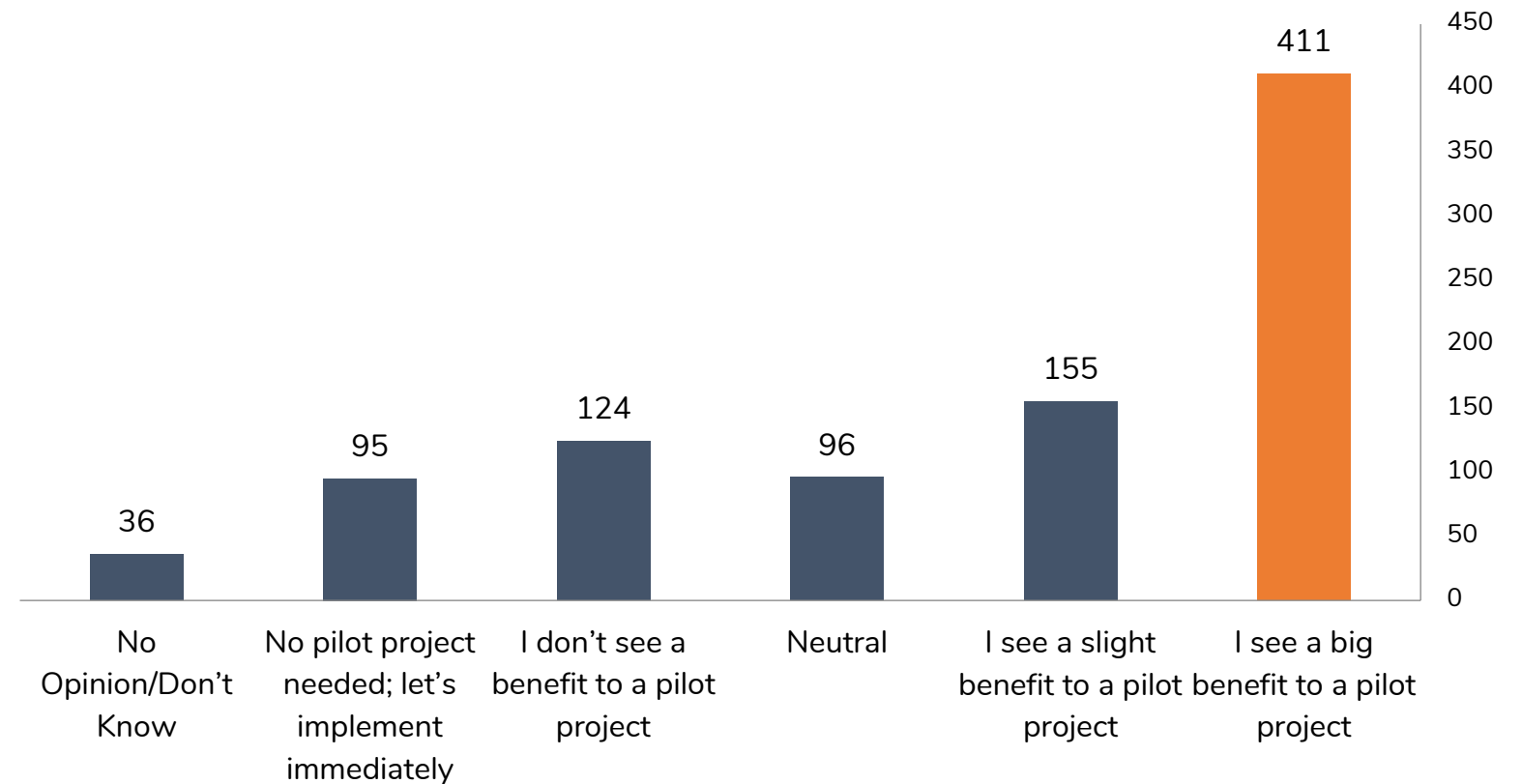
Least likely to use:
1. On-Demand
2. Base Level

Likelihood to Support a Public Transportation System & Pilot Project:

How likely are you to support the implementation of a public transportation system ?



Do you see a benefit to a pilot project?



General Comments & Ideas:

Further comments or ideas regarding the public transportation service options:

1. General support (163 comments)
2. Concerns about tax implications* (78 comments)
3. Do not support (63 comments)
4. Infrastructure comments / concerns (17 comments)
5. Improve service times (later/earlier service, service to events, enhance frequency) (13 comments)
6. Introduce ridesharing programs (Uber) instead (12 comments)
7. Supportive of a pilot program (12 comments)
8. Public safety concerns (10 comments)

*concerns about tax implications included a lack of support for increasing property taxes to provide a transit service, suggestions for the service to be user-paid, curiosity about other funding opportunities to reduce tax implications

Key Takeaways:



Respondents are mostly travelling to **West Lloydminster, Central Business District, Southridge & West Commercial** areas



High Level Service ranked the highest to meet travel needs

Medium & High Level options serve West Lloyd & Southridge; minimal service to CBD & West Commercial



Majority of respondents feel that the options represent a **good use of taxpayer money**



Medium Level Service ranked the highest as providing the **most value for taxpayer money spent** (estimated 4% tax increase)



\$2.00 is the most preferred **one-way fare option**

Note: \$3.00 - \$3.50 fares were used to calculate costs and tax implications



Evening (6pm – 8pm) and peak afternoon (4pm – 6pm) are when respondents are **likely to access the service**



Respondents are **most likely to use the High Level Service or Medium Level Service**, and are **least likely to use On-Demand service**



Respondents are **mostly very likely to support** the implementation of a public transportation service

COL PTM: Phase 2 Engagement Results

Key Takeaways:

Service Characteristics	1 Option 1: On-Demand Service	2 Option 2: Base Level Service	3 Option 3: Medium Level Service	4 Option 4: High Level Service
Number of Routes	-	1	3	4
Service Frequency <i>How often the bus arrives at a particular stop</i>	Service wait time: 30 minutes	60 minutes	2x 60 minutes 1x 30 minutes	30 minutes
Service Span <i>When service starts and ends</i>	Service window: 6 AM - 8 PM Monday - Sunday	6 AM - 8 PM Monday - Friday	6 AM - 8 PM Monday - Friday	6 AM - 8 PM Monday - Sunday
Service Coverage				
Number of Buses	2 in service & 1 spare	1 in service & 1 spare	2 in service & 1 spare	4 in service & 1 spare
Estimated Annual Ongoing Operating Cost	\$\$	\$	\$\$	\$\$\$
Estimated Startup Capital Cost	\$\$	\$	\$\$	\$\$\$
Estimated Average Additional Annual Property Tax Impact (Based on property values ranging from \$250,000 to \$500,000)	\$60 to \$120 (3% increase)	\$40 to \$80 (2% increase)	\$70 to \$140 (4% increase)	\$130 to \$260 (7% increase)

Engagement results indicate that respondents are generally supportive of public transportation, with Medium Level Service identified to be the most valuable when considering taxpayer dollars.

Appendix C

Costing and Tax Implications

COL PTM: High Level Costing of Options: Year 1

	Option 1 - On Demand Transit	Option 2 - Base Level Service	Option 3 - Medium Level Service	Option 4 - High Level Service
Service Delivery Options:	City-wide On-Demand Transit	Introductory service with a single one way loop route running at hourly frequency	Intermediate service with two one way loops running at hourly frequency and a third bi-directional route running at 30 min frequency	Ultimate service with four one way loops running at 30 min frequency
Service span	6 am to 8 pm	6 am to 8 pm	6 am to 8 pm	6 am to 8 pm
Service days	M to Sun	M to F	M to F	M to Sun
# In Service Vehicles	2	1	2	4
# Spare Vehicles	1	1	1	1
Total # of vehicles	3	2	3	5
Expected vehicle capacity	8	20	20	20
Service Days per year	350	250	250	350
Service Hours per day	28	14	28	56
Annual Service Hours (Rounded)	9,800	3,500	7,000	19,600
Estimated Average Speed	30	30	30	30
Estimated vehicle annual trips	19,600	7,000	14,000	39,200
Boardings/hour	6	12	12	20
Annual Ridership	58,800	42,000	84,000	392,000
One way cash fare	\$ 2.00	\$ 3.00	\$ 2.00	\$ 2.00
Annual Passenger Revenue (Rounded)	\$ 117,600.00	\$ 126,000.00	\$ 168,000.00	\$ 784,000.00
Estimate annual revenue	\$ 117,600.00	\$ 126,000.00	\$ 168,000.00	\$ 784,000.00
Op Cost / Hr (includes wages, fuel, maintenance, parts)	\$ 110.00	\$ 150.00	\$ 150.00	\$ 150.00
Annual Insurance per vehicle	\$ 3,000	\$ 4,000	\$ 6,000	\$ 10,000
Annual Marketing, etc.	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000
Municipal Admin Costs	8%	8%	8%	8%
GST / Contingency	5%	5%	5%	5%
Total Annual Operating Cost (Rounded)	\$ 1,226,050	\$ 602,290	\$ 1,197,800	\$ 3,338,020

COL PTM: High Level Costing of Options: Year 1

	Option 1 - On Demand Transit	Option 2 - Base Level Service	Option 3 - Medium Level Service	Option 4 - High Level Service
Net Operating Cost (Operating Cost Less Revenue)	\$ 1,108,450	\$ 476,290	\$ 1,029,800	\$ 2,554,020
Total Capital Costs (Allocated across multiple years as lease fees or equivalent in next line)	\$ 285,000	\$ 420,000	\$ 630,000	\$ 1,050,000
Ongoing Infrastructure Costs (stops, signage etc.)	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000
Total Cost of System	\$ 1,133,450	\$ 501,290	\$ 1,054,800	\$ 2,579,020
Rounded up net operating costs	\$ 1,133,450	\$ 501,290	\$ 1,054,800	\$ 2,579,020
Total cost of system in year 1 (incl capital cost)	\$ 1,418,450	\$ 921,290	\$ 1,684,800	\$ 3,629,020
Taxation Implication in % in year 1	3%	2%	4%	9%
Taxation Implication in subsequent years	3%	1%	3%	6%

Every additional \$420,000 additional spending results in an increase in 1% property tax increase for the residents

Other Assumptions:

Boardings/hour is conservative

Insurance is \$2000 per vehicle for Arbocs, assume \$1000 for Sprinters and equivalent

Capital costs assumes \$210,000 for new Arbocs, \$90,000 for new Sprinter accessible vans or used Arbocs, \$45,000 for used Sprinter vehicles, and \$15,000 for used non-accessible minivans

Costs assume \$15,000 per year for stops, signage, heating at stops etc.

COL PTM: High Level Costing of Options: Annual Ongoing Costs

	Option 1 - On Demand Transit	Option 2 - Base Level Service	Option 3 - Medium Level Service	Option 4 - High Level Service
Service Delivery Options:	City-wide On-Demand Transit	Introductory service with a single one way loop route running at hourly frequency	Intermediate service with two one way loops running at hourly frequency and a third bi-directional route running at 30 min frequency	Ultimate service with four one way loops running at 30 min frequency
Service span	6 am to 8 pm	6 am to 8 pm	6 am to 8 pm	6 am to 8 pm
Service days	M to Sun	M to F	M to F	M to Sun
# In Service Vehicles	2	1	2	4
# Spare Vehicles	1	1	1	1
Total # of vehicles	3	2	3	5
Expected vehicle capacity	8	20	20	20
Service Days per year	350	250	250	350
Service Hours per day	28	14	28	56
Annual Service Hours (Rounded)	9,800	3,500	7,000	19,600
Estimated Average Speed	30	30	30	30
Estimated vehicle annual trips	19,600	7,000	14,000	39,200
Boardings/hour	6	12	12	20
Annual Ridership	58,800	42,000	84,000	392,000
One way cash fare	\$ 2.00	\$ 2.00	\$ 2.00	\$ 2.00
Annual Passenger Revenue (Rounded)	\$ 117,600.00	\$ 84,000.00	\$ 168,000.00	\$ 784,000.00
Estimate annual revenue	\$ 117,600.00	\$ 84,000.00	\$ 168,000.00	\$ 784,000.00
Op Cost / Hr (includes wages, fuel, maintenance, parts)	\$ 110.00	\$ 150.00	\$ 150.00	\$ 150.00
Annual Insurance per vehicle	\$ 3,000	\$ 4,000	\$ 6,000	\$ 10,000
Annual Marketing, etc.	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000
Municipal Admin Costs	8%	8%	8%	8%
GST / Contingency	5%	5%	5%	5%
Total Annual Operating Cost (Rounded)	\$ 1,226,050	\$ 602,290	\$ 1,197,800	\$ 3,338,020
Net Operating Cost (Operating Cost Less Revenue)	\$ 1,108,450	\$ 518,290	\$ 1,029,800	\$ 2,554,020

COL PTM: High Level Costing of Options: Annual Ongoing Costs

	Option 1 - On Demand Transit	Option 2 - Base Level Service	Option 3 - Medium Level Service	Option 4 - High Level Service
Ongoing Infrastructure Costs (stops, signage, etc.)	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000
Total Cost of System	\$ 1,133,450	\$ 543,290	\$ 1,054,800	\$ 2,579,020
Rounded up net operating costs	\$ 1,133,450	\$ 543,290	\$ 1,054,800	\$ 2,579,020
Taxation Implication in subsequent years	3%	1%	3%	6%

Every additional \$420,000 additional spending results in an increase in 1% property tax increase for the residents

Other Assumptions:

Boardings/hour is conservative

Insurance is \$2000 per vehicle for Arbocs, assume \$1000 for Sprinters and equivalent

Capital costs assumes \$210,000 for new Arbocs, \$90,000 for new Sprinter accessible vans or used Arbocs, \$45,000 for used Sprinter vehicles, and \$15,000 for used non-accessible minivans

Costs assume \$25,000 per year for stops, signage, heating at stops etc. (not all stops will be implemented initially; as system grows, stops will need to be further developed / added to / maintained, which is accounted for in the annual \$15,000)

Vehicle replacement costs cannot be estimated at this time due to cost variability, varying lifecycles of the buses, etc. It should be expected to replace the vehicles every 8-10 years

Typically transit systems develop a fleet plan that helps them plan future capital investment

<u>Non-Residential Municipal Mill Rate</u>		Project Cost			
		Option 1: On-Demand \$1,133,450.00	Option 2: Base Level \$501,290.00	Option 3: Medium Level \$1,054,800.00	Option 4: High Level \$2,579,020.00
		Project Tax Implication			
Property values	Mill Rate Tax	1.348%	1.240%	1.277%	1.418%
\$100,000.00	\$1,292.13	\$17.41	\$16.02	\$16.50	\$18.33
\$200,000.00	\$2,584.26	\$34.82	\$32.04	\$32.99	\$36.66
\$300,000.00	\$3,876.39	\$52.24	\$48.07	\$49.49	\$54.98
\$400,000.00	\$5,168.52	\$69.65	\$64.09	\$65.98	\$73.31
\$500,000.00	\$6,460.65	\$87.06	\$80.11	\$82.48	\$91.64

<u>Residential Municipal Mill Rate</u>		Project Cost in Year 1			
		Option 1: On-Demand \$1,418,450.00	Option 2: Base Level \$921,290.00	Option 3: Medium Level \$1,684,800.00	Option 4: High Level \$3,629,020.00
		Project Tax Implication			
Property values	Mill Rate Tax	3.377%	2.194%	4.011%	8.641%
\$250,000.00	\$1,794.63	\$60.61	\$39.37	\$71.99	\$155.07
\$275,780.00	\$1,979.69	\$66.86	\$43.43	\$79.41	\$171.06
\$350,000.00	\$2,512.48	\$84.85	\$55.11	\$100.79	\$217.09
\$500,000.00	\$3,589.25	\$121.22	\$78.73	\$143.98	\$310.13

<u>Residential Municipal Mill Rate</u>		Ongoing Operating Costs			
		Option 1: On-Demand \$1,133,450.00	Option 2: Base Level \$501,290.00	Option 3: Medium Level \$1,054,800.00	Option 4: High Level \$2,579,020.00
		Project Tax Implication			
Property values	Mill Rate Tax	2.699%	1.194%	2.511%	6.141%
\$250,000.00	\$1,794.63	\$48.43	\$21.42	\$45.07	\$110.20
\$275,780.00	\$1,979.69	\$53.43	\$23.63	\$49.72	\$121.56
\$350,000.00	\$2,512.48	\$67.80	\$29.99	\$63.10	\$154.28
\$500,000.00	\$3,589.25	\$96.86	\$42.84	\$90.14	\$220.40

	2024	2025	2026	2027	2028	2029	2030	2031	2032
Arboc (New)	\$ 210,000.00	\$ 216,300.00	\$ 222,789.00	\$ 229,472.67	\$ 236,356.85	\$ 243,447.56	\$ 250,750.98	\$ 258,273.51	\$ 266,021.72
Arboc (Used)	\$ 90,000.00	\$ 92,700.00	\$ 95,481.00	\$ 98,345.43	\$ 101,295.79	\$ 104,334.67	\$ 107,464.71	\$ 110,688.65	\$ 114,009.31
Sprinter (new)	\$ 90,000.00	\$ 92,700.00	\$ 95,481.00	\$ 98,345.43	\$ 101,295.79	\$ 104,334.67	\$ 107,464.71	\$ 110,688.65	\$ 114,009.31
Sprinter (used)	\$ 45,000.00	\$ 46,350.00	\$ 47,740.50	\$ 49,172.72	\$ 50,647.90	\$ 52,167.33	\$ 53,732.35	\$ 55,344.32	\$ 57,004.65
Non-accessible Mini Vans	\$ 15,000.00	\$ 15,450.00	\$ 15,913.50	\$ 16,390.91	\$ 16,882.63	\$ 17,389.11	\$ 17,910.78	\$ 18,448.11	\$ 19,001.55
Insurance - Arboc (new)	\$ 2,000.00	\$ 2,060.00	\$ 2,121.80	\$ 2,185.45	\$ 2,251.02	\$ 2,318.55	\$ 2,388.10	\$ 2,459.75	\$ 2,533.54
Insurance - other	\$ 1,000.00	\$ 1,030.00	\$ 1,060.90	\$ 1,092.73	\$ 1,125.51	\$ 1,159.27	\$ 1,194.05	\$ 1,229.87	\$ 1,266.77

Inflation per year 3%

Vehicles typically need to be replaced every eight (8) years. The table above is a high level estimate of what different vehicle types will cost over the next eight (8) years, based on current costs and inflation.

Why are we Modelling Demand?

- The TMP estimated travel patterns and traffic flow, but is lacking in some information (walking travel, certain work types) as well as not reflecting the impact of the pandemic
- Demand Modelling presents a contextually relevant estimation of trip types and, more importantly, is a more accurate way of assessing and projecting estimates for:
 - Preliminary and future ridership numbers
 - Vehicle requirements
 - Potential costs

Trip Type	Modelled Demand	Transit Demand Estimate
Total Trips	39,200	430
Non-Work Trips	10,600	105
Work Trips	28,600	325

Appendix D

Demand Modelling

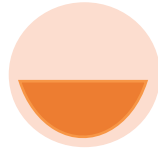
Calculating Travel Demand



Travel Behaviour Statistics

Travel Behaviour varies by household size and demographics

2016 Census data for Lloydminster was assessed population demographics and distribution

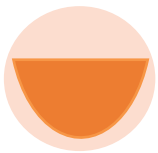


Trip Generation Rates

Industry data projects trip generation rates within Lloydminster

Example rates include:

- Grocery trips/household/month
- Medical appointments/person/year
- Shopping trips/person/month
- Employment trips/employee/day

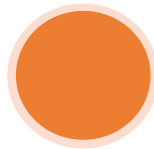


Transportation Mode Split

Canadian public transit mode share rates for established systems:

- 16.3% in CMAs
- 2.5% in CAs
- 1.1% in non-CMA/CA areas

Lloydminster is a CA. Yet, lower rates must be applied to account for lower ridership as residents get acquainted with a new system



Calculating Daily Travel Demand

The trip generation rates were applied to the specific demographic breakdown of Lloydminster

Then aggregated into a single “Daily Trips” calculation

These “Daily Trips” were multiplied by the projected mode share percentage (1.1%) to estimate daily public transit trips

Estimating Number of Trips & Future Projections

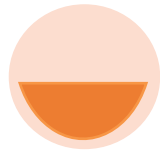


Introducing Hourly Time Bands

Total daily trips are not evenly distributed throughout the day.

Leveraged data from the 2017 National Travel Survey to estimates the timing of trips:

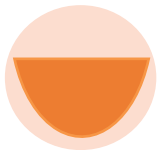
- 67.4% between 06:00-18:00
- 86.9% between 06:00-22:00
- 19.5% between 18:00-22:00
- 13.3% between 19:00-22:00



Random Trip Generation

Industry data for travel purposes was used to randomly generate trips within time bands and the potential service area to assess:

- Average trip time
- Average trip distance
- 95th percentile time
- 95th percentile duration
- Results in calculation of Average no. of trips that can be completed within an hour.

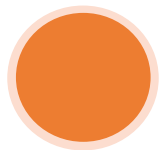


Developing 3- and 5-year Horizons

Public transit ridership is projected to increase as society recovers from the pandemic.

Current demand levels will inform the immediate future (3-year horizon)

Pre-pandemic demand informs ridership growth in the medium term (5-year Horizon)

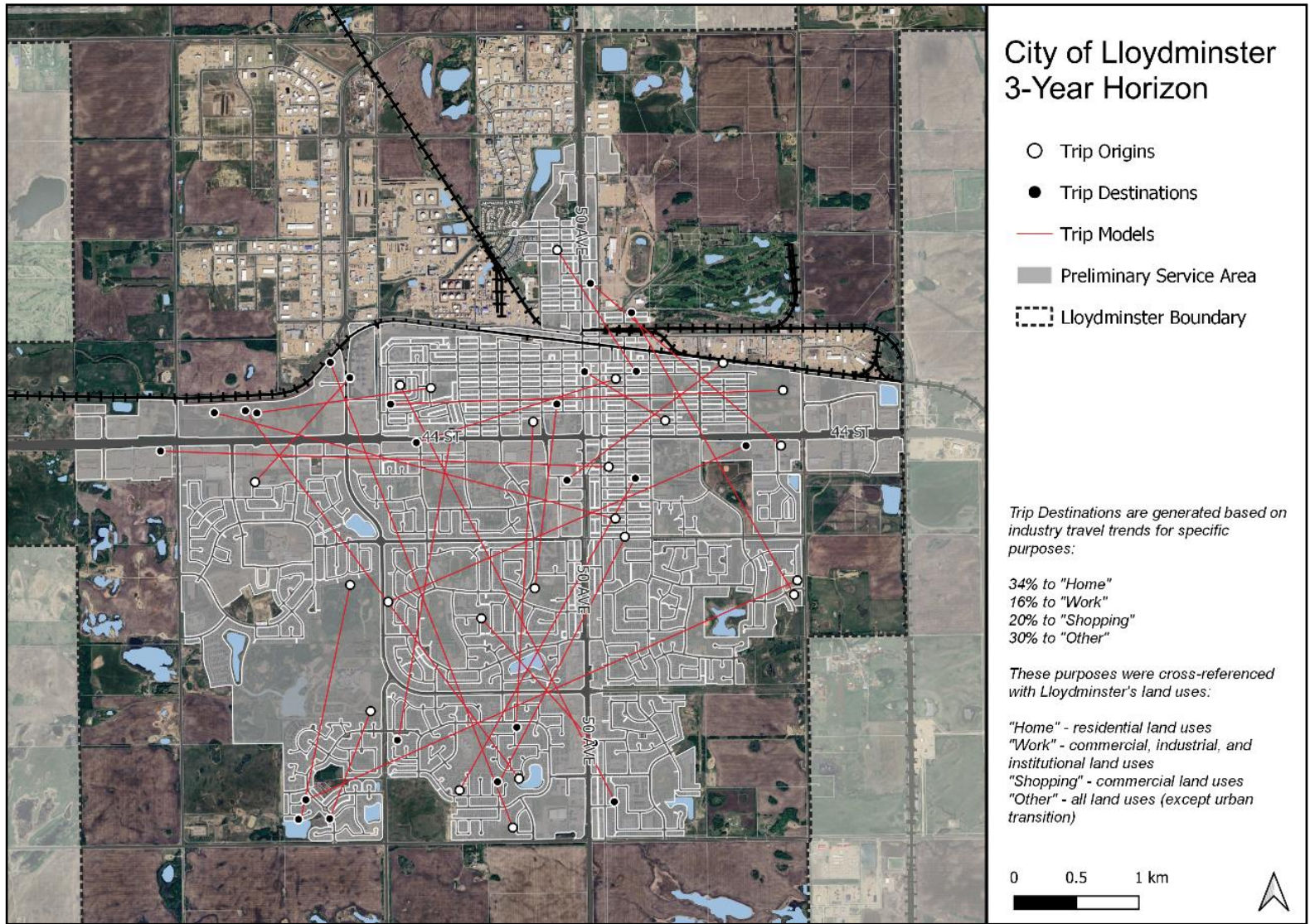


Ridership Growth Projections

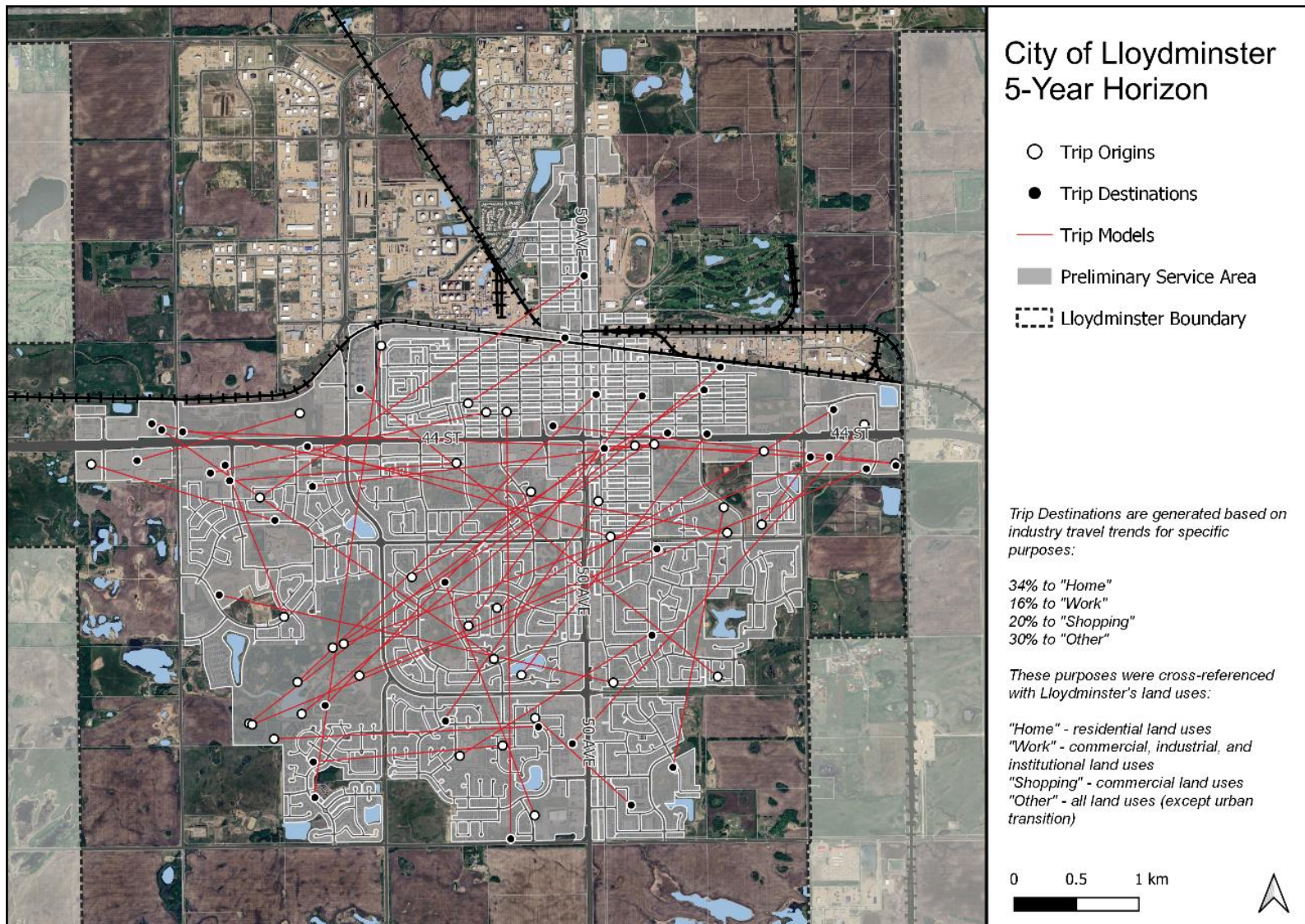
Daily ridership growth projections are calculated for 3- and 5-year horizons.

Projections are based on aggressive and relaxed scenarios across the hourly time bands.

Transit Trip Projections – 3 Year Horizon



Transit Trip Projections – 5 Year Horizon



Appendix E

Vehicles, Infrastructure, Service Delivery, Governance, and Funding Potential

Vehicles:

Option 1



- Sprinter/Promaster or similar
- 8 to 10 seater
- Low floor/ Accessible
- Internal Combustion Engine
- Good for city roads
- Fully customisable
- ~\$80,000 to 95,000

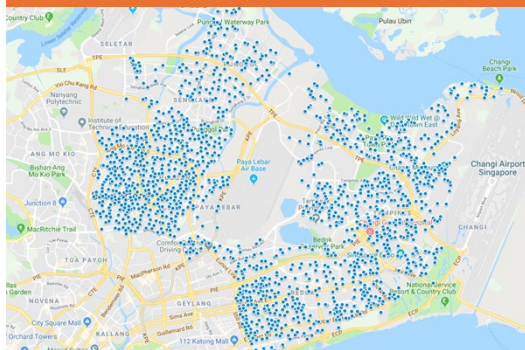
Option 2, 3 and 4



- Arboc or similar
 - 20 seater
 - Low floor/ Accessible
 - Internal Combustion Engine
 - Good for city roads
 - Fully customisable
 - ~\$200,000 to \$250,000
- Karsan or similar
 - 20 seater
 - Low floor/ Accessible
 - Battery Electric Bus
 - Good for city roads
 - Fully customisable
 - ~\$375,000

Bus Stops:

Option 1



- No physical bus stops
- Pre-designated locations show up on map / app
- No maintenance
- Easily changed / removed / transitioned

Option 2, 3 and 4



- Conventional fixed route transit can have a range of bus stops, from basic to heated, enclosed shelters:
- 1: only a bench ~ \$2,500
- 2: open shelter ~ \$15,000 to \$25,000
- 3: closed shelter ~\$25,000 to \$30,000
- 4: enclosed and heated shelter: ~\$45,000 to \$60,000

Service Delivery:

Private Operator

- Responsible for operations+ dispatch + customer service
- Needs some time to familiarize with community and customers
- More experienced at operations + dispatch + technology

City Run

- Responsible for operations + dispatch + customer service + planning + policy setting
- Could have union considerations
- Could be more expensive
- It is all new

Governance:

Transit Committee

- Appointed by Council
- Could be a committee of Councillors
Or
- Comprised of select stakeholders
- Staff coordinated
- Policy guidance, budget review, planning overview

Council & Staff

- Dedicated transit staff
- Transit Manager / Transit Supervisor + Coordinator
- Policy guidance, budget review, planning & performance overview

Council



Transit Committee



City Staff



Contractor

Potential Funding Options for a New Transit System:

Federal Grant Opportunities

Zero Emissions Transit Fund (ZETF)

- Provides funds for planning studies and for capital funding of electric vehicle procurement
- Ends in 2026
- Municipalities eligible to apply
- 80% funding provided for planning projects
- 50% funding provided for capital procurement projects

Investing in Canada Plan (ICIP)

- Provides funds for capital infrastructure improvements for public transit and includes sidewalk improvements to connect to transit as well bus shelter improvements programs.
- Ends in 2026
- Municipalities eligible to apply
- 40% funding provided for approved projects
- Provincial stream has now closed
- Both Alberta and Saskatchewan were granted funding under this program that can be accessed over 10 years

Alberta

- No current grants available for transit

Saskatchewan

- Provides funding for transit services for people with disabilities (currently supports Border City Connects)