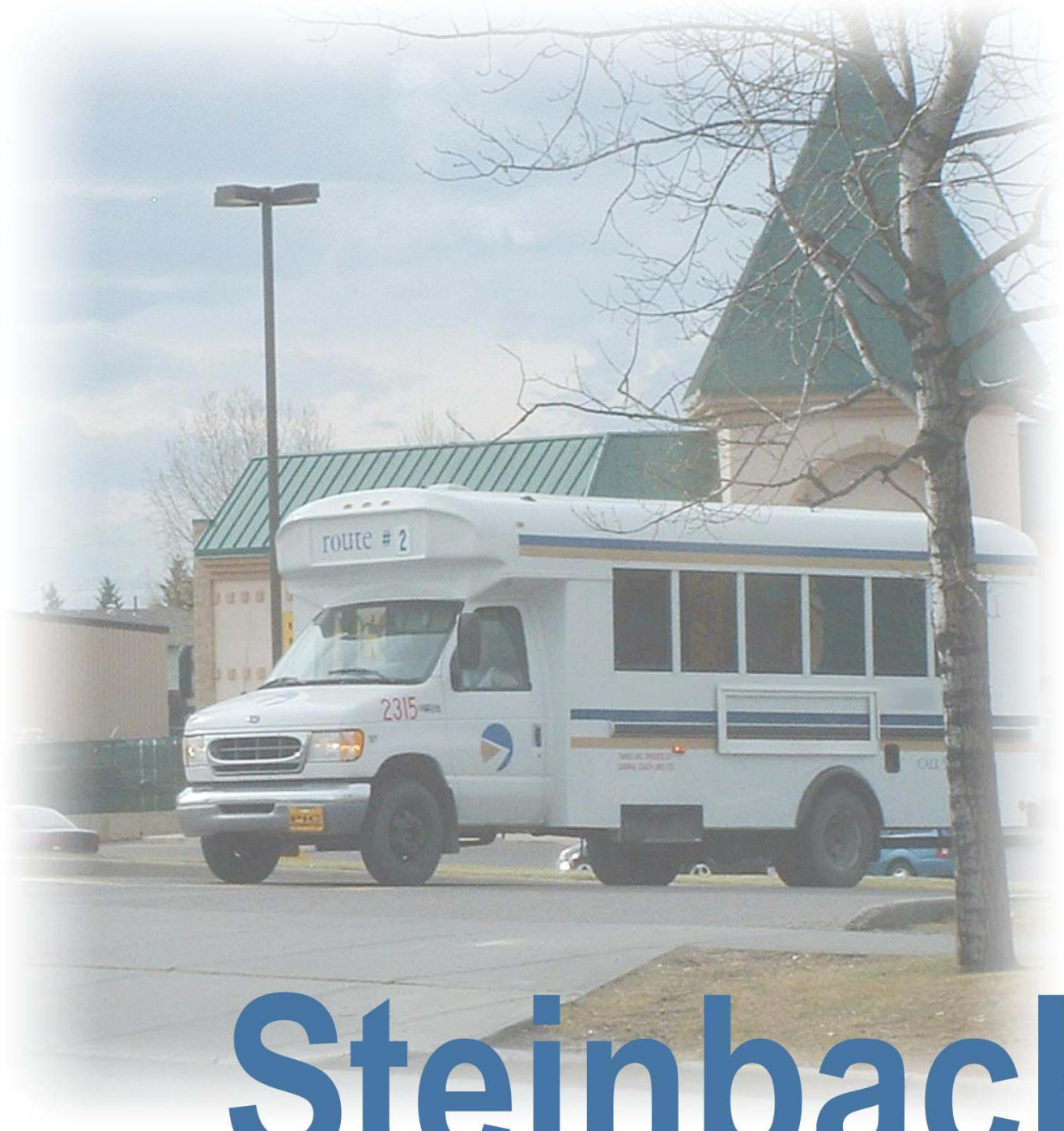

Steinbach

Public Transportation Study 2006

Principal Investigators

INSTITUTE OF URBAN STUDIES
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About the Institute of Urban Studies

Founded in 1969 by the University of Winnipeg, the Institute of Urban Studies (IUS) was created at a time when the city's "urban university" recognized a need to address the problems and concerns of the inner city. From the outset, IUS has been both an educational and an applied research centre. The Institute has remained committed to examining urban development issues in a broad, non-partisan context and has never lost sight of the demands of applied research aimed at practical, often novel, solutions to urban problems and issues.

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Executive Summary

This document constitutes the final report for the Steinbach Transportation Project Steering Committee (STPSC). This report includes a demographic profile of Steinbach; a literature review dealing with many of the relevant issues related to public transportation; several case studies of communities that that range from populations of 6,000 to 28,000; conclusions; and recommendations for pursuing future public transit initiatives for Steinbach. While this report is not a sustainable transportation strategy *per se*, it is a focused look at one aspect of it: public transportation in the context of small towns and rural areas. More small urban centers in the United States and Canada are now using, developing or considering public transportation solutions, and given its growth and considerable economic activity, Steinbach may be well-situated to be included among them.

Steinbach has long functioned as a service-based community for the south-eastern farming region of Manitoba. The service area, officially a 50 kilometre radius, contains over 50,000 people living in 10 different Rural Municipalities (R.M.'s) (Government of Manitoba, 2004). Unofficially, Steinbach serves a population greater than the 50 kilometre radius, serving residents of North Dakota and other R.M.'s outside the 50 kilometre radius (Steinbach Chamber of Commerce). As a major economic hub for southeastern Manitoba, a healthy transportation system is vital to its economic well-being and the quality of life of its residents.

A demographic analysis confirms that Steinbach is a rapidly growing city with a diverse population and economic profile. The city is currently facing important development pressures as a result of the high rates of growth. There are strong indications that the continued development will have serious implications, both positive and negative, for any potential public transportation initiative.

Both in the United States and Canada, the relative lack of availability of public transit in rural and small town areas has a serious impact on quality of life. In Canada, rural transportation is seen by some as "rural Canada's forgotten issue", this in spite of rural Canada's fundamental need for mobility (Fuller, 2004). But given the low densities and vast distances in Canada's rural areas, public transit is relatively rare: according to Statistics Canada, in 1996 only 3 percent of

rural household transportation expenditures were for public transportation (Marshall and Bollman, 1999).

One of the most important dimensions of public transportation – and one that resonates with the public and politicians alike – is economic sustainability: Is the measure cost-effective? Does it contribute to the larger economy? And, most importantly for the general public, is it affordable?

According to the Canadian Urban Transit Association (2002) transit expenditures for small to medium-sized urban areas go primarily to vehicles, for, unlike large cities, they do not need to develop right-of-ways. However, what is becoming apparent is that there is a financial gap between needs and revenues for small urban centres, and they are having trouble keeping up with demand for new public transit, and need to identify and make use of new funding sources (McCormick Rankin Corporation, 2002).

A Canadian Urban Transit Association (CUTA) report identifies six areas of impact (benefit or disadvantage) for transit operations, which are identified as: *induced impact*; *mobility and access to labour market*; *impact on property values*; and *congestion savings*.

There are two distinct differences between urban and rural transit operations. The first is the "dispersion of origins and destinations:" Rural settings often have larger service areas than urban ones, so origins and destinations of a public transit operation are more scattered throughout the region. The second is the "overall low density of demand" (Burkhardt, Hamby and McGavock 1995). Transit service models in Steinbach will be significantly different than those in Winnipeg because of the different population densities (Winnipeg has a city-wide average of 1331 people/sq. km compared to 360 people/sq. km in Steinbach (Statistics Canada, 2005)).

Transit authorities identify three basic types of transit: conventional transit, custom transit, and paratransit (BC Transit, 2005; Burkhardt, Hamby and McGavock, 1995). Taxi services should also be considered a form of public transportation. Conventional Transit is a service that regularly uses scheduled, fixed-route service, which is operated according to published route maps and timetable (see the Routing section below for a detailed description). The Transit Co-

operative Research Program (TCRP) indicates that these types of transit service are best used in a dense service area, with a high demand and that has a regular demand for one particular destination area (Burkhardt, Hamby and McGavock, 1995, p. 32). This model does not generally service regions with low population densities or variable or unpredictable transit use very well.

There are also different routing configurations depending on the service model (conventional, custom or paratransit). Conventional transit usually consists of **fixed-route** services, in which the bus travels along a defined route at regularly-timed intervals. The majority of urban transit systems operate on fixed routes, with three different options, *local service*, *limited stop service*, and *express service*. Local service is a slower service where buses stop at all designated stops when required to pick up or drop off passengers. Limited stop service usually overlies local services, but stops only at major destinations (i.e. major intersections/transfer points, and activity centres). The express services tend to be for larger centres where long trips are required. The start and end points to express services stop at local service points, but stops midpoint along the route are not frequent, resulting in a faster service for distant trips (Kittelson & Associates *et al.*, 2003, §2.5). In a small urban context, it does not appear that the limited stop and express services are the best modes of routing.

- **Demand-responsive** transportation (DRT) models are typically defined as one type of paratransit option, which is defined as forms of public transportation that are a cross of private automobile use and conventional fixed-route transit.

A combination of DRT and fixed routes is the **deviated fixed route** service. This service route operates as a traditional fixed route service, but allows for minor deviations in routing if there are requests. These deviation requests can be made in advance, from calling a dispatch office in advance for either pick-up or drop-offs, or passengers may request the driver for a deviation while using the service (Kittelson & Associates *et al*., 2003, §2.7).

Non-service oriented arrangements can be viable options to public transportation. One such are ridesharing programs, which use personal vehicles, or, at times, corporate vans. According to the Victoria Transport Policy Institute, “ridesharing is one of the most common and cost effective

alternative modes, particularly in areas that are not well served by public transit" (Victoria Transport Policy Institute, 2005). Another is *Co-ordinated Community Transportation*, which is a way of pooling of resources in order to provide the population with better, more efficient transportation options. Toted as a new way of thinking about how we move people, CCT is a grassroots collaborative program to reach and service the individuals without viable transportation options. Although not a full service transit system, CCT is designed to improve the quality of life through creating means to be independent, self-sufficient, and allows for added opportunities to participate in the community. The term *community* in this instance does not mean just within a local area, but the community can be the neighbourhood, municipality, or even region since pooling of resources from other municipalities can broaden the resource base. *Resources* include all of the human, financial, and physical components that can be used to provide services to the public within the community (including drivers, administration and support staff, hardware, software, equipment and government officials).

Given the extent of choices available to communities, it is important to be able to strategize about how to make the most effective choices.

An extensive research program completed by the U.S. Transit Cooperative Research Program has identified six basic steps required to plan an effective rural transit service. The six steps are (Burkhardt, Hamby and McGavock, 1995): Review the service types available; establish goals, objectives, and needs based on community profile; select and tailor services; estimate volume of service; evaluate resources and forecast funding and service cost; and refer to other sources for help in refining service design.

In order to decide on the service model, there are five key questions to address (Burkhardt, Hamby and McGavock, 1995). The first is to determine the service area – is the service area key sites in the city, are there needs in the surrounding area, should you look at a regional scale? The second question to ask is what are the times of greatest service demand – days, evenings, weekends, seasonal demands and peak times during the day? The third question is what level of service to provide during those times? The fourth question to address – and one that is directly linked to the previous ones – is what kind of service is desired for the community – what are the

projected user groups' needs, and what are the most likely points of interest? Finally, there is a need to address the advantages and disadvantages of the various types of services as they pertain to the community.

Beyond all these questions however, is the fundamental context of laws and statutes: what are the municipality's legal rights, opportunities and obligations when considering a public transit system? A review of Manitoba's laws demonstrates that municipalities in Manitoba such as Steinbach have the authority to implement a transit system under the *Municipal Act*, but that sundry other laws set out in more detail what a municipality's responsibilities are in this regard.

A series of case studies explore in more detail how the principles outlined in the first part of the report have played out in reality. The most detailed of these case studies is that of Airdrie, Alberta, which operates a transit service with 3 fixed unidirectional routes during the day and a demand-responsive system (DRT) at night and on weekends. The experiences of this and other cities reveal some important lessons that can be applied to future transportation planning in the small urban context.

The report concludes with recommendations.

1.0 Introduction

This document constitutes the final report for the Steinbach Transportation Project Steering Committee (STSC). This report includes a demographic profile of Steinbach; a literature review of the many facets of public transportation; several case studies of communities that that range from populations of 6,000 to 28,000; conclusions; and recommendations for pursuing future public transit initiatives for Steinbach.

With 70 to 80 percent of Canada's population now living in urban centres, and the ever-rising cost of gasoline, there is a growing need for cities to develop, provide and enhance alternates to the private automobile. Steinbach, one of Manitoba's fastest growing communities, is no exception. As shall be seen below, the literature in this field may differ as to the solutions to transportation problems, most agree that in the larger picture, multiple models of transit helps populations in general.

This paper explores some of the various public transportation options and service models that are available, and seeks to apply these to contexts and issues relevant to the Steinbach area. The overall approach is that of identifying *sustainable transportation* options.

The terms "sustainable" and "sustainability" are highly fluid and may be used to justify a wide range of policy goals and actions (Williams and Millington, 2004, 99-104). However, in terms of how they apply to transportation, we have some key definitions that can provide guidance. According to Transport Canada and the Centre for Sustainable Transportation the term "sustainable transportation" is defined by three key points: first, people have the right to access their basic needs; second, people have access to affordable and efficient transportation mode choices; and finally, the transportation options are environmentally friendly, yielding a minimal impact on the environment and the population (Transport Canada, 2001, 51; Centre for Sustainable Transportation). Sustainable transportation concepts also incorporate wider objectives: At a 1996 conference held in Vancouver, British Columbia, the Organisation for Economic and Community Development (OECD) adopted eight guiding principles for sustainable transportation using four general headings – access, people and communities, environmental quality, and economic viability. These principles address matters of social equity;

personal responsibility; community engagement and decision-making; health and safety; and the integration of transportation with other urban planning objectives, strategies and activities – in particular, recognizing the linkages between transportation and land use (Environment Canada and Transport Canada, 1997).

The above principles can play out quite differently at different geographic scales and for different transportation sectors, including air, rail and freight. Obviously our interests in this report are confined to the movement of people for daily needs at the urban and regional scale. However, it is also worth noting that from a *process* point of view, we should be aware of how these principles can also be affected by the small urban and rural context: For example, the principle of *people and community* – which requires consultation and education throughout the process of developing any transportation system (Transport Canada, 2001, 51) – may be particularly significant in the small urban and rural centre, where the public may have a relatively large influence on decision making. (as an example of public pressure in response to an apparent lack of public consultation in Steinbach and the region see Dyck, 2005; and Plett, 2005).

Strategies for increasing the sustainability of transportation include *demand management* (reducing or eliminating the need for some trips through such measures as telecommuting), *operations management* (seeking new efficiencies in existing systems), *pricing policies* (full cost accounting that reflects the true cost of private vehicle use), *vehicle technology improvements* (e.g., improved power plants and materials), *clean fuels* (fuel cells, hybrid vehicles), and *integrated land use and transportation planning* (to bring origin points and destinations close together) (Deakin, 2001).

Given the complex and multidimensional meanings of "sustainable transportation", it should be kept in mind that a "sustainable transportation strategy" would be a multifaceted and integrative suite of policies. This report is therefore not a sustainable transportation strategy *per se*, but rather a focused look at one aspect of it: public transportation. Yet even within this narrow scope, we shall see that public transportation can take a wide range of forms, from trains to buses to vans to taxis – even bicycle rickshaws are a form of public transportation. With this spectrum of possibilities, we can set about to review the literature in terms of service areas, models, vehicles

and governance with an open mind, and not proceed with a preconceived notion about what the result of this process will look like, or under what kind of timeline it will be implemented. This sort of flexible and organic approach is especially important when we consider the geographic, social and demographic considerations at play at the small urban and rural scale.

It is at this scale that we will begin the discussion: with an examination of the local demographic context of Steinbach. Following this section, the report will consider key aspects of sustainable transportation before moving into a discussion of public transit models and options, as well as the regulatory environment in which these services exist.

1.1 Limitations

The reader should be aware of several limitations. First, the Institute of Urban Studies is not a transportation engineering firm, so this report takes a broad view to transportation planning, including a demographic projection, but as such does not explore in detail the various transportation planning methodologies, technologies, vehicles or management issues which a transportation engineer could provide. Secondly, this report does not constitute policy recommendations for the City of Steinbach but rather provides background information for community groups and decision-makers; it should therefore be received for information only. Third, while reference is made in Section 5 to Manitoba's regulatory environment as it concerns public transit, this information should not be construed as legal advice, but rather a brief overview of the laws and statutes of which all parties in Steinbach interested in pursuing a public transportation system should be aware. Actual interpretation of these laws should be left to the City of Steinbach's legal department. Should the City of Steinbach decide to proceed with a public transportation system, further reporting by qualified transportation consultants is recommended. Fourth, while there are numerous case studies of interest in the United States, these have not been explored due to the fact that there is a completely different (and federal) funding scheme for rural and urban transit. Finally, the treatment of the topics and themes in this paper is fairly general in nature due to the fact that the breadth of each could be the basis for its own position paper; indeed, the STSC or the City of Steinbach may wish to study them in more detail.

2.0 Demographic Portrait of the City of Steinbach

2.1 City History

Located approximately 60 kilometres south east of Winnipeg on Provincial Trunk Highways (PTH) #12 (north/south) and #52 (east/west), the City of Steinbach was formed in 1874 by 18 Mennonite families from Russia (City of Steinbach, 2005). The name, Steinbach, comes from the German word 'stony brook,' a natural feature in the area (*ibid*.). Although the population within Steinbach had been composed primarily of Mennonite heritage, recent growth has resulted in a rich and diverse cultural mix (Government of Manitoba, 2004).

Steinbach has long functioned as a service-based community for the southeastern farming region of Manitoba. The service area, officially a 50 kilometre radius, contains over 50,000 people living in 10 different Rural Municipalities (R.M.'s) (Government of Manitoba, 2004). Unofficially, Steinbach serves a population greater than the 50 kilometre radius, and includes residents of North Dakota and other R.M.'s outside the 50 kilometre radius (Steinbach Chamber of Commerce).

Growth within the city is contained within the 25 square kilometre area of the city limits. Current trends in residential development are two major pockets of growth, east of PTH #12 on both sides of the east/west PTH #52. Commercial growth in the city is primarily along both sides of PTH #12, north of PTH #52.

2.2 Population Analysis of Steinbach and Surrounding Region

2.2.1 Data

The following analysis is based on Census of Canada information derived from the 1986, 1991, 1996 and 2001. For the purpose of this analysis, the surrounding region was generally defined as those municipalities lying east of the Red River and south of the Trans Canada Highway with the exception of those municipalities that are part of the Winnipeg Census Metropolitan Area (e.g., Tache, Richot).

2.2.2 Population Levels

According to the 2001 Census, the population of Steinbach stands at 9,300. Over the last three censuses, the town's population has increased dramatically, growing 23.5 percent between 1986 and 2001 (see Table 2 in Appendix One).

An additional 32,000 live within surrounding municipalities. Collectively, the surrounding area has experienced much the same rate of population growth as Steinbach. Individually, a few municipalities have grown at a faster pace. The RM of La Broquerie recorded the largest percentage gain at 63 percent. Other fast growing municipalities in the region are the RMs of Hanover and Ste. Anne and the Village of Niverville (see Table 1 in Appendix One).

2.2.3 Age Structure

The age structure of Steinbach in 2001 was analyzed by constructing a population pyramid based on total population found in each five year age group, or what in population analysis is referred to as a cohort.

Steinbach's population pyramid has a relatively wide base, indicating a strong presence of the younger-aged cohorts. The three largest cohorts are the 15-19, 20-24 and 24-29 year olds. Together, these three groups account for 24 percent of the town's population.

The town also has a sizeable senior population. Those 65 and over number 1,640 representing 17.8 percent of the population while provincially; seniors comprise just 14 percent of the population. Over one-third of Steinbach's senior population is 80 years of age or older (see Figures in the Appendices).

2.2.4 Changes in Population Structure: 1991-2001

Between 1991 and 2001, the town's population increased by 12 percent. The rate of growth of individual age cohorts, however, varies considerably about the town's rate of growth.

Town growth does not appear to be the result of an increase in the number of young families as the number of young adults aged 25-34 decreased by about 10 percent. This drop in what is usually considered the prime family-forming segment of the population has likely contributed to a corresponding 5 percent decrease in the number of children under the age of 10.

Increases in the town's population, rather, have originated from three other groups: maturing families, pre-retirement households and seniors. Maturing families are those with teenagers and university / college aged children that are still officially living at home. The number of adults aged 40-49 rose dramatically between 1991 and 2001, especially the 45-49 cohort whose rate of increase was five times that of town as a whole. Corresponding with these increases are slight rises in the numbers of 10-14, 15-19 and 20-24 year olds.

Pre-retirement households are those between the ages of 50 and 64. Husband-wife families in this age group are likely empty nesters. In 2001, there were, collectively, 305 more people in town between these ages than there were in 1991. Within this group, the fastest growing cohort was the 50-54 group which increased 57 percent.

The number of seniors in Steinbach also rose by 305 between 1991 and 2001. Almost all of this increase was accounted for by increased numbers of those aged 75 and over (see Tables in the Appendices).

2.2.5 Factors Influencing Shifts in the Population Age Structure

Like most communities across Manitoba and Canada, Steinbach's population age structure is being altered as the baby boom generation grows older. The historical trend in births in Manitoba beginning in 1947 pinpoints a general surge in births between 1956 and 1966 with a peak occurring between 1961 and 1966. At the time of the 1991 Census, those born during this latter five-year period had reached the age of 30-35 and by the 2001 Census, the age of 40-45 (see Figures in the Appendices).

The effect of the boom on age structure can be seen by comparing the number of people a cohort dominated by "boomers" to one that contains people ten years younger. Examples of this are evident in Table 2. For example, the 40-45 cohort in 2001 numbers 570. Those born ten years earlier would have been this age in 1991, and the size of that cohort then was only 430.

A secondary effect of the baby boom is that groups own offspring, the so-called "echo" generation. In 2001, many of the babies of the boomers were reaching the ages of 15-25. This echo generation is likely partly responsible for the percentage share increases seen in Steinbach's teenage and young adult population between 1991 and 2001.

Aside from the impact of the boomers, census data suggests that Steinbach's population structure is being affected by net in-migration. One way in which such in-migration is revealed is through cohort survival or retention analysis. Cohort survival refers to what happens to the size of given age group as it ages. As an example, in the 1996 Census, Steinbach had 650 children in the 0-4 cohort. By the time of the 2001 census, this cohort aged five years and became the 5-9 cohort. The 2001 census reports a 5-9 population of 625. Hence, over the five-year period, the 0-4 cohort experienced a net loss of 25 children. Given the young age of this cohort, it can be assumed that net out-migration was largely responsible for this decline as the death rate among very young children is extremely low.

The results of cohort survival analysis for Steinbach are shown in Table 3. One trend evident from this analysis is a significant net out-migration of people in the 20-24 and 25-29 age cohorts. From their base sizes in 1991, these cohorts collectively lost almost 300 persons by 2001. About 80 percent of this loss, however, was offset by gains made in the size of teenage population (the 10-15 and 15-19 cohorts).

Increments to the teenage cohort again can be connected to increments to the 35-39, 30-44, and 45-49 cohorts. By 2001, these three cohorts had 105 more members than what they started with in 1991. What this suggests is that there has been a net in-migration of mature families.

Table 3 also shows evidence of net in-migration of pre-retirement households. Cohorts in the 50-64 age range in 1991 all added to their numbers by 2001. The level in migration, too, was likely larger than the net change figures suggests as the mortality rates do begin to climb for those 50 years of age and over. Hence, to maintain its level, such cohorts need some net in-migration to offset deaths and even higher levels of in-migration in order to show expansion.

A possible explanation for the growth experienced by the pre-retirement cohorts since 1991 is that Steinbach is a retirement destination for people living in the countryside surrounding the town. This explanation is somewhat borne out by analysis of retention rates occurring amongst the pre-retirement cohorts in these outlying areas (see Table 4). In total, three cohorts were analyzed for each of 11 municipalities was analyzed. Of these 33 cohorts, 17 showed a net decrease in size from 1991 to 2001. When only the 60-64 cohort is considered, decreases are observed in eight of the 11 municipalities. While some this shrinkage is due to the death of cohort members, some is also likely attributable to out-migration, some of which may have entailed a move to Steinbach.

2.2.6 Ethnic origins

Ethnic origins for the region vary greatly with eight different specific ethnic backgrounds identified by the South Eastman Health Authority. These origins include Canadian (13 percent), German (20 percent), and French (5 percent) (Statistics Canada, 2005). Only 1 percent of the population of the South Eastman Health region identified themselves as aboriginal in descent. Visible minorities living in Steinbach are relatively few with 260 people reporting in the 2001 census and only 660 people in the South Eastman Health Region (Statistics Canada, 2005).

2.2.7 Education and Employment

Steinbach is typical for educational attainment rates for a rural centre, with approximately 24 percent of those aged 20 to 34 without a high school certificate (South Eastman Health region is 29 percent and the provincial average is 22 percent). Older age groups in all three statistical groups (local, regional, and provincial) have higher incidences of limited high school education. The South Eastman Health Report indicates that the number of students leaving high school with

a certificate in Steinbach is on the rise with approximately 80 percent of those entering school graduating with a high school certificate (Statistics Canada 2005). The 20 to 34 age population with post secondary education in Steinbach (26.7 percent) is slightly higher than the regional average (25.3 percent) and significantly lower than the provincial average (39.8 percent).

According to the South Eastman Health Report, approximately 70 percent of the 25 and older population in the region is employed. Statistics Canada shows that with a 68 percent participation rate, the population in Steinbach has 65 percent employment (over 15 years of age). Unemployment in the city, 4 percent, is considerably lower than the provincial rate of 6 percent (Statistics Canada, 2005).

Types of employment in the city include wholesale and retail, commercial, light industrial, and manufacturing. The largest employer in Steinbach, and possibly the South Eastman Health Region, is the window and door manufacturer Loewen, which employs over 1600 people in Steinbach. Typical employment in Steinbach is considered blue collar in nature with manufacturing and trades having the highest number of workers, with white collar jobs being one of the lowest types of employment in the city (South Eastman Health/Sante Sud-Est Inc., 2004; and Statistics Canada, 2005). Commuters from Winnipeg, an estimated 30 to 35 percent of all workers, may make up a significant portion of employees in white collar positions in Steinbach (Christopher, personal communication).

Income for the population of Steinbach is lower than provincial averages by just over 12 percent. The population over 15 in Steinbach reporting income average at $32,212 compared to the provincial average of $36,729 per year (Statistics Canada, 2005). The lower income average may be indicative of the trade and service work that is predominant in the area.

Immigration into Steinbach has contributed to the city's large annual growth rate (8.8 percent). Eighty percent of the immigrants, about 1000 people since the 2001 census, originated in the Russian Federation, Germany and other European nations (South Eastman Health/Sante Sud-Est Inc., 2004).

2.2.8 Housing Stock

The housing stock in Steinbach is primarily post 1970's construction, and from the 1991 to 1996 census year, there were 96 houses reportedly removed from the pre-1970 housing stock (Government of Manitoba, 2004). Approximately 20 percent of the houses in Steinbach were constructed between 1991 and 2001 (Statistics Canada, 2005). In 2001, the average house was valued at $111,031, which was slightly higher than Manitoba averages. Approximately two-thirds of the houses in Steinbach are owned versus rented (*ibid*.).

2.2.9 Community and Regional Health

The 2003 South Eastman Health Region's *Comprehensive Report*, indicates that within the region, hospital use cases had an average of 2,062 cases per year (study period is 1995-2003) that required travel from the region to Winnipeg. For the central district (which includes the RM of Hanover and the City of Steinbach) the average is 621 cases per year. The need to travel from the region to Winnipeg to see a physician generates an average of 57,516 visits per year, with the central district having an average of 8,637 visits per year. Although there are transportation initiatives to help the mobility disadvantaged from various private organizations in Steinbach, there is no data counting the people who need specialized transportation to travel from the Health Region to Winnipeg.

2.3 Conclusion

As the foregoing discussion illustrates, Steinbach is a rapidly growing City with a very diverse population and economic profile. The city is currently facing several important issues and development pressures as a result of the high growth. With the growth in older cohorts the pressure for transportation options servicing seniors and those with limited mobility will increase. There are strong indications that the continued development will have serious implications, both positive and negative, for any potential public transportation initiative.

3.0 Stakeholder Analysis Summary

As part of the background report on the potential for a public transportation system in Steinbach, a series of interviews with members of the Steinbach Transportation Project Steering Committee (STPSC) were completed along with a methodology report. These stakeholder interviews were conducted during July and August. This section presents an overview of the interviews and methodology report. It is important to note that none of the organizations identified alternatives to private automobile use except the desire to create a bus service in the City. There are no car-formal car-pooling initiatives within any of the stakeholders.[1]

The stakeholders have a variety of mandates and clients. With this variety of mandates and client base, the organizations came to form the steering committee as a result of dissatisfaction for current transportation options for their clients. All interested parties acknowledged that there is local and regional growth, and the expectation that growth will continue. Present transportation options in Steinbach are considered expensive and at times unavailable. For low income wage earners, there is only a taxi service which costs approximately $9.00 per trip (see Section 5.1.3 for a further discussion on the taxi services). For the organizations that provide transportation, operational costs are a significant portion of the budget.

While it was noted that the current city operated Handi-van does provide a reasonable service, there are some general concerns about it. The first is that of high cost of local transportation for individuals, and that the Handi-van is only for the mobility disadvantaged or the over 55 age group. The door-to-door service that the city offers has recently been changed to curb-side service, which can put a strain on those in assisted living communities, or create problems with persons with physical challenges. The community social services that some of the stakeholders provide are not utilised fully due to poor transportation access. Others cited problems when clients require specialists not available in Steinbach and must be driven – often by taxi – to Winnipeg, which is expensive. Even those agencies who need to shuttle clients by taxi within Steinbach find that this is expensive at a minimum of $9.00 per trip. It was indicated by a

[1] A few of the organizations that we talked to do have informal car-pooling initiatives, where the employees are making their own arrangements on an *ad hoc* basis.

number of community service providers that if there were public transit, agencies could subsidize the transportation of more clients than they are able to now.

While it's true that there are more jobs than people to fill them, employment options for those most in need of employment are also limited because of transportation issues – some of which may be due in part to salaries that don't make the long commute worthwhile. It's not uncommon for people to turn down jobs that are offered to them because they have no reliable way of getting to work. This has serious implications for those organizations that are seeking to recruit and retain employees, but are having trouble overcoming unwillingness on the part of prospective employees to drive the distances required. Those firms running 24-hour shifts are in particular need of reliable public transportation. Stakeholders are also paying significant costs to cover the mileage incurred by current employees.

A range of thoughts emerged as to defining sustainable transportation is. Many indicated that sustainable transportation needs to be affordable, accessible, and predictable. The system must also be affordable in the long-term. It should also be in line with what the public is expecting or willing to support, and with some level of community "ownership."

It should also be stressed that among those constituents who are ill-served by automobile transportation owing to age or infirmity, there are also a range of needs – some of which are currently being met and others that are not. For instance, seniors may find volunteer-run car-based transportation a satisfactory way to get to medical appointments, but don't want to trouble a volunteer to take them shopping. This prevents people from fully participating in life, and in the life of the community. It was suggested that seniors living independently would be a logical group to with whom to consult, as would be church groups.

Finally, many stakeholders, if not all, identified that the City of Steinbach is principally the largest stakeholder missing from the table.

3.1 Summary

- There is concern over the rapid growth of the city and how it will affect quality of life;
- The continuing rise in the price of gas will make automobile use more expensive, resulting on rising costs for volunteer service providers and for those community services that operate their own vehicle;
- The lack of public transit prevents some people from fully participating in life, and in the life of the community; transit would improve the quality of life for many of Steinbach's residents;
- Any future transit system must be affordable, accessible, and predictable;
- There needs to be public acceptance and 'buy-in";
- There may be strong "cultural" barriers to transit; and environmental values may not be the most effective way to promote transit in Steinbach; and
- The City government itself needs to be on board.

The Stakeholder Analysis has uncovered many compelling reasons for examining alternate modes of transportation options within the City of Steinbach and the surrounding region. However, between the 14 different stakeholders, there is as yet no set of guiding principles or a mission statement that define what specifically the group wants as a whole.

4.0 Literature Review

In order that we can be in a better position to examine the local contexts of Steinbach and evaluate the potential for public transportation there, it is important to review some of the main themes in the relevant scholarly and professional literatures.

To reiterate what "sustainable transportation" is, the Centre for Sustainable Transportation (2006) indicates that a sustainable transportation system is one that:

> • Allows the basic access needs of individuals and societies to be met safely and in a manner consistent with human and ecosystem health, and with equity within and between generations.
>
> • Is affordable, operates efficiently, offers choice of transport mode, and supports a vibrant economy.
>
> • Limits emissions and waste within the planet's ability to absorb them, minimizes consumption of non-renewable resources, limits consumption of renewable resources to the sustainable yield level, reuses and recycles its components, and minimizes the use of land and the production of noise.

These principles identified by the Centre for Sustainable Transportation have been expanded and acted on by Environment Canada and Transport Canada. The following table (Table 1) provides a solid foundation on which to develop our discussion: we shall consider in turn public transportation in a small urban context as it relates to access, people and communities, environmental quality and economic viability.

Table 1: Sustainable Transportation Principles

Theme Area	Principle	Description
Access	*Access*	People are entitled to reasonable ***access*** to other people, places, goods and services.
People and Communities	*Equity*	In meeting the basic transportation-related needs of all people, including women, the poor, the rural, the disabled, and children, Nation states and the transportation community must strive to ensure social, inter-regional and inter-generational ***equit***y.
	Individual and Community Responsibility	All individuals and communities have a ***responsibility*** to act as stewards of the natural environment, undertaking to make sustainable choices with regard to personal movement and consumption.
	Health and Safety	Transportation systems should be designed and operated in a way that protects the ***health*** (physical, mental and social well-being ***and safety*** of all people, and enhances the quality of life in communities.
	Education and Public Participation	People and communities needs to be fully engaged in the decision-making process about sustainable transportation, and to be empowered to participate.
	Integrated Planning	Transportation decision makers have responsibility to pursue more ***integrated*** approached to ***plannin***g. They must involve partners from relevant sectors such as environmental, health, energy, financial, urban design, etc.
Environmental Quality	*Land and Resource Use*	Transportation systems must make efficient ***use of land and other natural resources*** while ensuring the preservation of vital habitats and other requirements for maintaining biodiversity.
	Pollution Prevention	Transportation needs must be met without generating ***emissions*** that threaten public health, global climate, biological diversity or the integrity of essential ecological processes.
Economic Viability	*Economic Well-Being*	Taxation and economic policies should work for, and not against, sustainable transportation. Market mechanisms must account for the full social, economic and environmental costs, both present and future, in order to ensure that users pay an equitable share of costs.

Source: *Sustainable Transportation, Monograph No. 2*. Environment Canada and Transport Canada [Ottawa 1997], p. 17-19.

4.1 Defining Rural

There are conflicting definitions in the literature as to what constitutes a rural or small urban centre. There are, however, many working definitions and building blocks which we may consult for guidance (Rios, 2005), most of which refer to small densities with a small population, and relative isolation.

Working definitions of a rural community are dependent on ecological, occupational, and sociocultural attributes (Burkhardt, Hedrick, and McGavock, 1998). The historic definition of rural/small urban centres focused on whether or not a given community's economy was based primarily on agricultural activities. Today, however, the economic base of a rural or small urban centre can be expanded to include mining, and other "field" occupations (Burkhardt, Hedrick, and McGavock, 1998). Another article argues that the mining and other field occupations are still an old measure of "ruralness" and that rural communities have a "striking economic diversity" (Rosenbloom, 2002, p. 16-27). This economic shift has altered the transportation needs of many communities (Rosenbloom, 2002, p. 16-27).

The relative and loose definition provided by the Rural Intelligent Transportation System Free Press website (ITS) states that "rural areas are counties with populations of less than 50,000" and that "the small population size and relative isolation of rural areas are sufficient in their own right to produce significant social and cultural differences from life in urban areas" (Zarean *et al.*, 1998). Moving to the Canadian context, the main criteria that Statistics Canada uses to define rural areas are:

> "Persons living in sparsely populated lands laying outside urban areas (i.e., persons living outside places of 1,000 people or more, or outside places with population densities of 400 or more people per square kilometre" (Statistics Canada, 2001)).

4.2 Access

Any modern society requires equitable mobility in order to maintain the integrity of that society and to maintain the health and productivity of the economy (Fuller, 2004). While Canada is a highly urbanized country, between 22 percent and 38 percent of Canada's population lives in rural areas (Keefe *et al*., 2004a).

According to the Canadian Urban Transit Association, there are only 36 conventional transit systems serving 4.7 million people of in Canada's 300 communities with between 10,000 to 50,000 residents, or just over 20 percent of the total potential market for small town transit (Public transit and small communities). In the United States by contrast, approximately 60

percent of rural communities have various types public transportation (Brown, n.d.). This number could be considered high when compared to the Canadian context of rural transportation; bear in mind though that American States have greater access to federal funding, grants, and other subsidy programs than is the case in Canada.

The Transportation Research Board identifies that transit has two major roles in North American cities. The first is to accommodate users who choose to use transit over their private vehicle for trip making. The second major role is "to provide basic mobility for those segments of the population too young, too old, or otherwise unable to drive due to physical, mental, or financial disadvantages" (Kittelson & Associates *et al*., 2003, §2.1). Although the stigma of transit being inconvenient, high cost and time consuming exists, using transit, can in fact, be both time and cost competitive to the private vehicle (*ibid*.). A third role for transit has been established in recent years – emergency and disaster support. (Use of public transit for emergency services is discussed below in Section 4.3).

4.3 People and Communities

> "Personal mobility is an important component of independence and full participation in society at any age and, hence, influences morale and life satisfaction" (Logue, 1987, p. 178).

Both in the United States and Canada, the relative lack of availability of public transit in rural and small town areas has a serious impact on quality of life. In Canada, rural transportation is seen by some as "rural Canada's forgotten issue", this in spite of rural Canada's fundamental need for mobility (Fuller, 2004). But given the low densities and vast distances, public transit is relatively rare: according to Statistics Canada, in 1996 only 3 percent of rural household transportation expenditures were for public transportation (Marshall and Bollman, 1999).

Where public transportation is available in U.S. rural areas, "the populations using these services are among those most at risk for poverty and isolation. According to the FTA, 62 percent of riders were women; 36 percent were elderly (although the elderly account for less than 18 percent of the total rural population); and 24 percent were disabled" (in Holbrook-White, 1998).

Studies have shown in the United States that some rural populations can have difficulties in travelling in and around communities because of limited transportation options (Burkhardt, Hamby and McGavock, 1995). According to this study, those people unable to meet their needs with private vehicles become mobility disadvantaged, and thus marginalised through isolation and the lack of opportunities to participate and function within the community.

Senior Citizens and persons with disabilities are also groups encompass a broad range of users, including people with functional limitations, people with mental disorders, people with physical disabilities, and those who have both mental and physical disabilities. Many of these individuals are limited in the ability to carry out a "normal" lifestyle due to the lack of transportation options in a rural setting. These limitations include lack of access to employment opportunities, shopping, and other social activities that make up aspects of a good quality of life.

The senior and mobility-challenged population in rural Canada have faced increasing number of transportation-related difficulties, from attempts to centralize services and to de-institutionalize these "at risk" populations. De-institutionalization leads to greater dependency on family and friends, as well as a reliance, where available, on alternate modes of transportation which are limited in scope in most rural settings (Fuller, 2004). The processes of centralization and de-institutionalization have been happening for over 20 years, with limited expansion of rural transportation options. The idea of expanded transportation in rural Canada is "a forgotten issue" (*ibid*.).

> Rural households in Canada generally face several conditions that affect their mobility. These conditions are increasingly problematic for rural residents who are elderly or disabled. The conditions include: most rural households own, or have access to a personal automobile; few public transportation services exist; the rural elderly are dependant on having access to personal automobiles; and when an automobile is not available, problems arise. There are few alternatives available for meeting the transportation needs of the rural residents who are elderly or disabled" (Fuller, 2004)

Another dimension to this issue is one of gender:

> Women tend to outlive their husbands; once alone, they may find that, unless they drive, they must significantly curtail their activities, pay for transportation or rely on friends and family for transportation. Any of these options could limit their ability to lead active, independent lives (Statistics Canada. 1999).

Similarly, rural communities often are at a distance from a centre that has essential services. Distance is a good indicator of seniors' ability to gain access to needed services, particularly in a country in which distance can be intensified by severe climatic conditions. While seniors living in urban settings may take for granted essential services like a grocery store, post office, variety store, bank, doctor, drug store, beauty salon, or social club, these services may not be available or accessible to seniors living in rural communities (Hodge, 1987). In recent research on small rural communities in Canada, Halseth (2003) found that availability of essential services in one's immediate community has declined over the past five years. Given this, it is not surprising that transportation is a pervasive theme in research about rural seniors (Schoenberg & Coward, 1998; and Keefe *et al*., 2004b).

The idea that all seniors will actually use the transit system over personal vehicles is misleading. As Black points out in *An Unpopular Essay*, the historical examination of the elderly and transit does not prove that transit will increase elderly movement in the community. In recent years, as Black indicates, senior citizens are retaining their driver's licences for longer periods of time for various reasons, including being physically able to drive for longer periods, the consolidation of services into central areas, and other reasons (Black, 2001, 7-8). In other words, providing the transit option is only the first step; making that option attractive enough to use requires paying attention to social marketing (McKenzie-Mohr).

There are clearly a large number of transportation-related issues when it comes to the ageing population; at times, this group falls within multiple categories (i.e. mobility challenged *and* fixed income). "Over the next 30 years, the significant increase in the adult population aged 65 or more will place new and growing demands on transport systems" (Organisation for Economic Co-operation and Development, 2001). Within Canada, there is an estimate that by 2021 there will be 7 million senior citizens with 24 percent living in rural areas (Fuller, 2004). In 2000, there was an estimated 3.8 million seniors in Canada. By the year 2030, the last of the baby boomer population will reach the age of 65. Long before then, alternate modes of transportation will need to be addressed to accommodate the projected growth of the senior population.

Able-bodied young people, as well, are affected by a lack of transportation options. Those who are too young to drive and youth who do not have access to vehicles or to public transit are restricted in their access to activities that are considered essential for a "normal and productive life" (Fuller, 2004). Activities that youth participate in, such as social activities, sports, and employment, have an effect on individual self-esteem. In one study, of nearly 80 youth participants, 30 percent indicated that they could not get to places of employment at certain times, and that 50 percent of the participants stated that they had to turn jobs down for lack of access to transportation (Fuller, 2004).

Access to public transit increases employment opportunities for residents in a given community (Fuller, 2004, p. 19). According to Statistics Canada, 27 of the largest Census Metropolitan Areas (CMAs) saw 14.8 percent of their total populations using transit to get to work, with most of these centres reporting an increase in transit use between the 1996 and 2001 census years (Statistics Canada, 2003). Also, according to Statistics Canada, women and young adults (ages 20-24) comprise of the majority of users of public transit for work-trip purposes (*ibid.*).

Using transit can reduce accidents and injuries, resulting in economic savings in healthcare. CUTA indicates that there are 10.8 fatalities per billion passenger km for private vehicles in Canada, compared to 0.157 deaths for transit users. CUTA identifies four reasons for the low number of passenger fatalities; transit drivers are trained professionals, higher standard for driver selection, higher standards of vehicle maintenance, and design features are incorporated into transit vehicles to minimise accident involvement. Economic costs for major motor vehicle crashes are estimated at $1.67 billion each year (costs include medical, insurance, property damage, pain and suffering, and other related costs) (Metropolitan Knowledge International, 2003, p. 44).

In addition to the safety of the public using the services, many cities use public transit for emergency services for those who are mobility challenged, and for those who do not have access to transportation. Specific examples range from "minor" emergencies such as Winnipeg Transit providing buses for temporary shelter for those involved in apartment fires, to larger scale emergencies such as urban transit services in Tennessee providing emergency transportation for

citizens during ice storms in 1994 (Southworth, Vogt and Curlee, 2002, p. 50), and the most recent catastrophe in New Orleans with thousands of people being evacuated by any means possible, including private and public buses.

Use of transit services in Winnipeg is not specifically mandated in policies, but transit is a city service and can be called upon in times for emergencies in a number of ways. The first is to aid city fire services in evacuation of fire related emergencies. According to the City of Winnipeg Transit Chief Inspector, there is a need for transit callout at least once a week. Deployment to emergency scenes takes approximately 30 minutes and can provide a number of buses depending on the requirement. The second means of callout is in case of disasters. A third way that city transit can be called out for is for non-emergency service related issues. Evacuation can be provided to senior's complexes and group homes (normal charter rates would be applied to the facility) if these institutes pre-register with Winnipeg Transit. Winnipeg Transit will respond 24 hours a day seven days per week for non-emergency calls, such as burst pipes and flooding. Again, dispatch of buses would take approximately 30 minutes.

With using transit for emergency evacuations and temporary shelters, bear in mind that the case studies and literature indicates that the equipment used are full sized buses, and that smaller units may not prove to be overly useful on large scale evacuations. In Alberta, Cardinal Coach Lines have a contract with a number of municipalities for emergency preparedness plans to use the large school buses that they operate for evacuations and shelters. The contract is directly between the operator and municipality, rather than with city transit services.

For a variety of reasons, then, the importance of public transit to people and communities is considerable. Conversely, the importance of people and community to the *success* of any potential public transit initiative cannot be overstated:

> Consumer preferences are a key driver of transportation and urban development trends…while polls generally find widespread support for environmental protection and enhancement, they also suggest that many consumers are not yet ready to alter their travel behavior or consumer purchases because of congestion, air pollution, or the threat of global warming…For example, suburban utility vehicles and trucks continue to grow in popularity despite their comparatively low fuel economy, and drive-alone mode shares are increasing.

> Many analysts believe that changes in pricing policy, such as higher fuel taxes or full-cost pricing for parking, could substantially change consumer choice. However, public opposition to such measures continues to make their implementation doubtful…Changes in travel behavior resulting from changes in land use and location, modes offered and chosen, and overall activity patterns also would depend on public support for policy changes, along with individual, household, and business decisions consonant with those changes… Because public opinion and public support for action are so important to implementation, it would be highly worthwhile to devote more attention to the topic as a research element. (Deakin, 2001, p. 15-16)

For this reason, public consultation, and "community based social marketing" are needed to plan for and implement a public transit system.

In addition to the impacts on people and communities mentioned above, the general quality of life for an entire region can also be affected by transportation options, and at the largest scale this concerns the physical environment.

4.4 Environmental Quality

In small rural and urban centres, quality of the air and environmental concerns may not be of the highest priority due to the perceived notion that with small populations, there are minimal environmental impacts associated with driving. This is not true. In Canada, the highest contributor to greenhouse gas emissions is transportation (an approximate 40 percent produced by private vehicles, 1.1 percent by buses). In small communities without transit systems, the percentage of greenhouse gas emissions is higher because of the limitations on alternate modes of transportation, higher incidences of "cold starts" and short trip patterns of private vehicles which result in an increase in pollutants (Frumkin, Frank and Jackson, 2004, p. 338).

As may be seen above, buses contribute a negligible amount to emissions, even though on a per-vehicle basis, buses pollute more than a car. This is why, according to the Canadian Urban Transit Association, while improvements to bus technology will continue to be pursued (in terms of fuel efficiencies, reduced emissions and particulates and conversion to alternative fuels) the

priority in this regard must be on getting more people to travel by public transportation (McCormick Rankin Corporation, 2002).

4.5 Economic Viability

One of the most important dimensions of public transportation – and one that resonates with the public and politicians alike – is economic sustainability: Is the measure cost-effective? Does it contribute to the larger economy? And, most importantly for the general public, is it affordable?

According to the Canadian Urban Transit Association (2002) transit expenditures for small to medium-sized urban areas go primarily to vehicles, for, unlike large cities, they do not need to develop right-of-ways. However, what is becoming apparent is that there is a financial gap between needs and revenues for small urban centres, and they are having trouble keeping up with demand for new public transit, and need to identify and make use of new funding sources (McCormick Rankin Corporation, 2002).

The principal measure by which economic sustainability of public transportation is concerned relates directly to land use and population density: compact settlements with high population densities mean more potential riders per stop, and hence an appropriate economy of scale. Transit becomes much more economical in downtown cores than in low-density suburban locations. Studies show that a shift from automobile usage to transit occurs at densities of about 20-30 people per hectare (Holtzclaw, 1994) [Steinbach at its most dense averages 17.78 per hectare]. In order to encourage more transit use, these principles are informing contemporary urban design and planning, particularly in terms of Transit Oriented Development, which will be described in more detail below.

An appropriate economy of scale does not, however, mean that public transit should be expected to pay for itself, and given Steinbach's semi-rural character, this is a particularly important consideration. Public transit always requires some level of public subsidy: fare box to subsidy ratio for Canadian transit systems averaged 62 percent (of subsidy) in 1999 (Soberman). In

Winnipeg, the fare box ratio is slightly higher with approximately 50 percent of fares, 20 percent from Provincial subsidy and 30 percent from City subsidy.

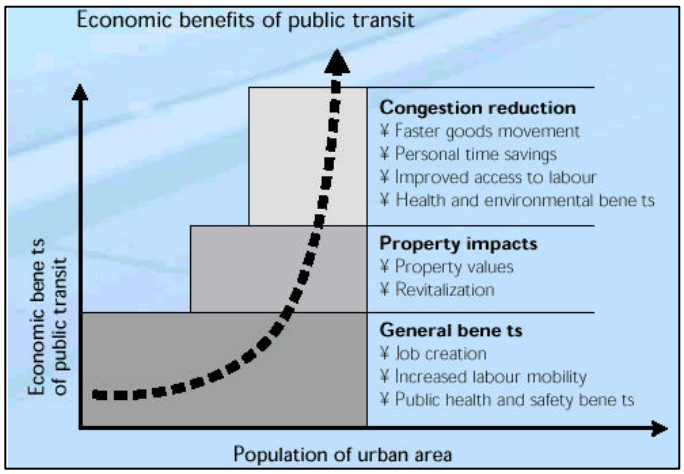
Unfortunately, a solid understanding regarding transportation economics is lacking on the part of most decision-makers and the public, and even if it were not there are conflicting paradigms concerning how and what to measure. As Litman and other sustainable transport advocates point out, the present transportation pricing policies (i.e., public subsidies for road building and maintenance and oil processing and delivery) are artificially low and depend to a great extent on failing to price externalities (such as pollution and losses to the economy owed to accidents and traffic congestion), making automobile use seem more affordable than it actually is – and conversely, public transit appear to be a substantial expense for taxpayers. Some argue that to be truly successful, alternatives to the car will need a level playing field – and that driving will need to be priced more fairly (see Litman, 2005).

However, it is also essential to bear in mind that this situation may be changing dramatically without policy interventions. During the summers of 2005 and 2006, oil has reached between $70.00 and $75.00 a barrel, with consumers paying well over $1.00 a litre for gasoline. For a city such as Steinbach, dependent as it is on highway-based transportation for employment travel and the shipping consumer goods, volatile oil markets may have an impact on the economics of transportation in the coming months and years. For those who drive to Steinbach from within the region for their employment, gas prices may begin to be a burden on their household budgets.

In any public consultation concerning transportation options, the economics of implementing options (including the costs of maintaining the status quo) need to be considered – and as such be considered in a holistic fashion that makes some effort to account for externalities and costs to homeowners and businesses.

Another important economic argument for public transit is the benefits that can accrue to the community *because* of public transit.

Figure 1: Economic Benefits of Public Transportation.



Source: Metropolitan Knowledge International 2003.

The report *Transit Means Business* states boldly that "public transit is an investment that returns a wide range of material benefits to the Canadian economy" (Canadian Urban Transit Association 2003). The report goes on to identify four areas of impact (benefit or disadvantage) for transit operations, which are:

- induced impact;
- mobility and access to labour market;
- impact on property values; and
- congestion savings

Admittedly, the CUTA report concentrates on the economic impacts within large metropolitan areas of Canada, however, there may be some parallel advantages (or disadvantages) and paybacks that transit may have within rural settings:

4.5.1 Induced Impact.

Induced impact is identified as having direct and indirect contributions to the economic market. Direct contributions include local employment within the transit system (i.e. drivers, administrators, and maintenance crews), access to social and health services, shopping, and other 'social outings' (Burkhardt, Hedrick, and McGavock, 1998, p. 27; and Metropolitan Knowledge

International, 2003, p.15). Induced impact also considers indirect benefits, such as exports of transit services (buses, technologies, suppliers, etc.) to other markets.

4.5.2 Mobility and access to labour market.

Burkhardt *et al*. identifies that access to the employment market and reliability of employees are indirect impacts to transit, however, the CUTA report places the labour market in its own category. According to a UK article (in Metropolitan Knowledge International, 2003) the labour market is improved as transit enhances access to employment opportunities, as well as shops and services, and transit gives the *perception* of access to developing areas (p.16).

A local case study identified by the CUTA is in Brandon, where the Maple Leaf Foods recently built a processing plant outside of the city. Due to the location of the plant, employees needed transportation of some type, either public (initially not available) or private, which limited who could get jobs. Those who did not have vehicles were unable to get jobs at the plant. A solution came when there was an agreement reached between the plant and the City of Brandon to operate transit services on a cost-recovery basis (including late night service). The cost recovery means that if the transit service to the plant is used by less than 25 people, Maple Leaf Foods would cover the cost to "fill" up to 25 spots (which is approximately 60 percent of the *seating capacity* of the buses used in Brandon). This maintains plant operations and the employee base (Metropolitan Knowledge International, 2003, p. 25).

4.5.3 Impact on property values.

This impact is primarily centred on "higher order transit systems" (i.e. light rail, or rapid transit). In most of the studies and literature indicated in the CUTA document *Transit Means Business*, property values (residential and commercial) increased. This could have both positive and negative impacts to society in general. Higher land values are positive in the eyes of landowners, but a negative aspect is that housing may not be affordable to first-time buyers, or some immigrants. From the commercial side of property values, property development may increase around transit nodes, thus increasing the economic activity for the community.

It should be noted that investing in transit may not necessarily result in economic development. Although his article examines transportation infrastructure (which could include transit), Black (2001) argues that there could be a negative economic impact on the community. The increase in funding for transportation could remove funding from other sectors, (an example Black gives is education), or may lead to premature industries developing to serve "future growth" that takes longer to develop, or does not materialise (Black, 2001, 1 p. 2).

4.5.4 Congestion savings.

Reducing the amount of congestion on the streets can help the economy and the environment. As an indirect result of poor transit options, congestion in urban areas can increase delivery costs of goods and services, delay shipping, and add more pollutants to the air. The *Transit Means Business* report estimates that the cost transportation of goods is increased by in excess of $3.0 billion annually in BC, Montreal, Toronto, and Ottawa combined as a result of high congestion (Metropolitan Knowledge International, 2003, p. 35). This increase in transportation costs results in higher prices for the consumer. Lowering congestion through an effective transit system can result in decreased shipping costs, potentially increasing economic activity in large and small urban centres. In the setting of Steinbach, congestion in the relatively small size of the community may not have an effect on the local economy, but an increase of traffic may have an impact on the shipping of agricultural products and services.

4.6 Literature Review Conclusion

The themes in the literature presented in this report include samplings of Canadian and US components to rural and urban transportation systems. Sustainable transportation principles (Table 1) and are practical in both urban and rural settings. *Access* to services, goods places and social outings are important factors in determining the need for public transportation. *People and Communities* include a variety of principles including social, inter-regional and intergenerational equity, community responsibility towards the environment, increased health and safety of the community, and community empowerment to maintain the system. *Environmental Quality* identifies that any form of transportation system must make efficient use of land and natural

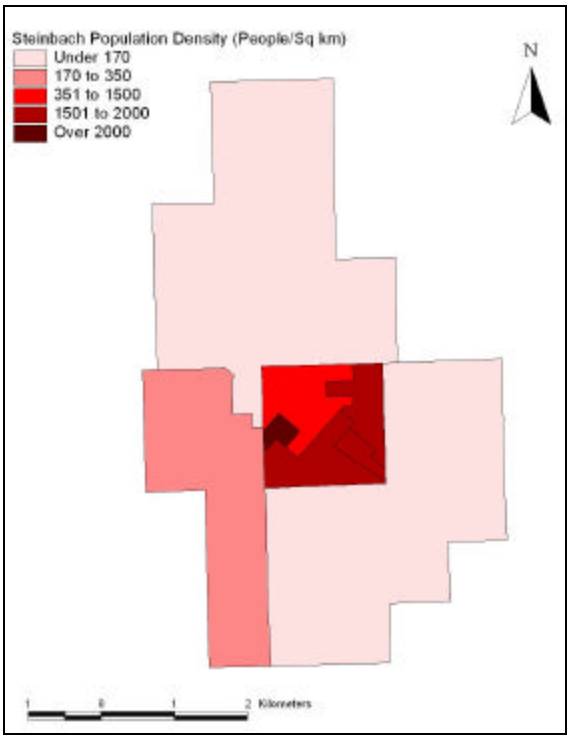
resources, and that there are pollution prevention initiatives in place to ensure that the system does not inadvertently damage the environment.

Finally, *economic viability* of the system is intended to ensure that taxation does not overburden the community and user fees pay an equitable share of the operating costs. One key point to note is that while transit is a publicly-supported service, its economic benefits are more systemic rather than through direct revenue generation, and may be seen in the form of higher retail revenues from easier access to the market, better employment access, and general social returns such as better access to community programs and services.

5.0 Rural Public Transit Services

There are two distinct differences between urban and rural transit operations. The first is the **dispersion of origins and destinations:** Rural settings often have larger service areas than urban ones, so origins and destinations of a public transit operation are more scattered throughout the region. The second is the "overall low density of demand" (Burkhardt, Hamby and McGavock 1995). Transit service models in Steinbach will be significantly different than those in Winnipeg because of the different population densities; Winnipeg has a city-wide average of 1331 people/sq. km compared to 360 people/sq. km in Steinbach (Statistics Canada, 2005). Although there is a low overall population density in Steinbach, it is important to note that there are pockets of higher densities. Figure 2 shows the population density for Steinbach. Note that the town centre, approximately two square kilometres in size, has the highest population concentration, resulting in an average nearly of 1700 people per square kilometre. In this section, we will be examining the various service options, including conventional, paratransit and taxi service.

Figure 2: Population Density in Steinbach



Source: Manitoba Land Initiative, 2006.

5.1 Introduction to Service Options

Transit authorities identify three basic types of transit: conventional transit, custom transit, and paratransit (BC Transit, 2005; and Burkhardt, Hamby and McGavock, 1995). Conventional Transit is a service that regularly uses scheduled, fixed-route service, which is operated according to published route maps and timetable (see the Routing section below for a detailed description). The Transit Co-operative Research Program (TCRP) indicates that these types of transit service are best used in a dense service area, with a high demand and that has a regular demand for one particular destination area (Burkhardt, Hamby and McGavock, 1995, p. 32). This model does not generally service well regions with low population densities or variable or unpredictable transit use.

Custom transit services, as identified by the TCRP and BC Transit, are *demand responsive*, or door-to-door/curb-to-curb; they are services for a largely mobility reduced/disabled population. Custom services are generally for passengers who cannot use conventional transit due to a disability. A commonly used name for custom transit services is DART, or handyDART, which stands for Dial-a-Ride-Transit. If a transit system is used only for traditional paratransit systems (for a description of paratransit systems, see below), the riders usually are required to be registered with the handyDART office prior to use of the service (British Columbia Minister of Transport, 2005). Further discussion of custom transit services will be integrated within either conventional or paratransit services.

5.1.1 Paratransit

Commercial services of paratransit consist of shared-ride taxi,[2] dial-a-ride,[3] shuttle services (an example would be hotel shuttles) and commuter vans (business owned vans for employees to use). Depending on the type of service, paratransit operation may consist of on-demand service with many-to-many, few-to-one, or many-to-one service routing (Grava 2003, p.245).

[2] Shared-Ride Taxi is defined as a "demand-responsive group riding where the riders may be traveling between different origins and destinations. A rider does not have exclusive use of the vehicle and fares are lower than conventional taxi service because of the economics associated with joint use of the vehicle" (LSC Transportation Consultants, Inc.).

BC Transit defines paratransit as a "bus or van service in towns and rural areas where the population density does not warrant conventional bus service" (British Columbia Minister of Transport, 2005). Paratransit operations, in larger urban centres usually operate parallel to conventional systems initially to service users with mobility challenges, and are often considered custom services. Paratransit may also consist of airport/hotel shuttles, downtown shuttles and university shuttles (Grava 2003, p. 233-244). As a result of the nature of the system, paratransit is more flexible than conventional fixed route transit, often operating as both door-to-door and fixed route services, with a flexible timetable to accommodate route deviation.

Usually, a paratransit system in rural locations operates on a mix of conventional and custom services in order to service the needs of the general population and the mobility challenged. This service model allows for the structure of a fixed route operation and the flexibility of demand responsive transit (BC Transit, 2005; and Grava, 2003).

Like all modes of transportation, there are advantages and disadvantages to paratransit operations. According to Grava (2003; p. 248-250), there are many reasons to support and implement a paratransit system in a community. Using a paratransit system increases mobility for all residents (physically challenged, ageing population, youth, and the general population). There is usually a higher level of quality to the service due to smaller, more comfortable vehicles, and convenience of service. The nature of paratransit results in a flexible service, meaning that a dial-a-ride service could become a fixed route at certain times of the day, and a charter service on weekends. Paratransit service could result in a higher level of community spirit by offering modes of transit to a higher need population, or through regular use, paratransit could increase the social dimension of the community through regular contact of the users. Initiating paratransit services could increase, or create jobs within the community. Finally, paratransit services are generally considered easy to implement.

[3] Dial-a-Ride Transit, or Demand Responsive Transit, is similar to the Shared-Ride Taxi except a bus operates on a semi-fixed route. A further discussion on the DRT follows in section 5.2

On the other hand, paratransit operations should be approached cautiously because of a higher cost-per-rider of operation. Smaller vehicles still need drivers and support staff to maintain service, and the size of vehicle restricts rider numbers, resulting in a high cost per rider compared to larger vehicles. Although a benefit of paratransit is job creation, there could be a negative impact through labour issues, such as speciality training, and minimum wage jobs created by the transit service which could produce problems with employee retention (Grava 2003).

5.1.2 Conventional Bus Service

Conventional buses are the more recognisable mode of public transit in North America due to the visibility of the service in urban centres. In 2000, buses represented 61 percent of all transit trips in Canada's five largest transit systems (Kittelson & Associates *et al*., 2003, §2.5). Although conventional transit often refers to buses, light rail/mono rail, trolley buses and heavy rail, within this study, only buses will be examined. There are a number of different classes of buses in operation throughout the world, ranging from small passenger vans to famous double-decker buses seen until recently in England[4]. Leaving aside the extreme ends of vehicle classes, three different buses will be examined here: mini-buses, mid-sized buses and standard buses. Table 3 shows a quick comparison of the three types of buses examined below.

Table 3: Bus Size Comparisons

Bus Size	Seated Passengers	Standing Passengers	Fuel Type
Minibus	Up to 20 Usually can accommodate up to 3 wheelchairs, reducing the total number of passengers if there is a rear side door	Limited amount of passengers can be accommodated	Usually is a regular gasoline fuel
Mid-sized bus	Up to 30 passengers, low-floor buses can accommodate wheelchairs	Up to 15 passengers comfortably	Primarily diesel fuels, bus some can use regular gasoline
Standard	Up to 50 passengers, and are primarily becoming low floor vehicles to accommodate wheelchairs	Up to 40 passengers comfortably	Primarily diesel fuels, but some bio-diesel fuels are being tested in certain markets

Source: Grava, 2003.

[4] The "double deckers" are being replaced by articulated, or jointed, buses for a number of reasons, including safety, less "roadwheel pressure" and for universal access.

In accordance with industry standards, the minibus can accommodate up to 20 seated people along with some standees. The minibus could have a single front door, or a second door in the back of the bus to make offloading easier. If this type uses ramps or other universal accessible features, the seating capacity is reduced. These buses can operate with regular or diesel fuels (Grava, 2003, p. 320).

The mid-sized buses in operation can accommodate 25 to 30 seated passengers, along with 10 to 15 standees comfortably. The bus design can be either a "regular" bus, or a "low floor" vehicle, which can accommodate universal accessible features for individuals with mobility issues. If the bus is a low floor type of vehicle (which is becoming more popular in use), then there sometimes is only one door rather than two. The service routes for mid-sized buses are more suitable for lower demand routes. These buses run primarily on diesel fuel (*ibid*., p. 320). (These buses are used in Winnipeg for the "Downtown Flyer" routes).

Standard (40-foot long) buses are the most common types of buses in operation being able to carry 41 to 45 seated passengers with up to 40 people standing. Universal access is common among new buses with the design of "low floor" and "kneeling" vehicles. Front and back doors allow for easy entrance and exit of the buses at times of congestion. Additionally, there is usually advertising space on the inside and outside of the bus, which may help offset some operating costs of the service. The standard size of bus almost always uses diesel fuels (*ibid*., p. 321).

There are a number of advantages identified in operating a bus system. A conventional bus system has readily available vehicles with a number of manufacturers ready to provide buses to a transit system. The manufacturers also have a range of vehicle types ready to ship or build. The technology that buses use is relatively simple and safe, resulting in limited "technological breakthroughs" keeping the cost of upgrading low to the service provider. Excluding bus mechanics, other than some minor speciality training that bus operators and support staff need for a safe and comfortable ride, there is no special workforce or skills required to operate a system (Grava, 2003, p. 338-344). Environmentally, studies show that the British thermal unit (Btu) per passenger mile for buses is 1420, compared to 8360 Btu's per passenger mile for single

occupancy automobiles.[5] This results in lower energy consumption and lower impact on non-renewable resources to power the vehicles. Additionally, bus services are flexible in routes and scheduling, unlike fixed rail transit.

Potential disadvantages of operating a bus service identified by Grava (p. 344-349) are that bus services are labour intensive. To operate a bus, there needs to be the driver and any number of support and administrative staff, resulting in an increase in funding requirements. Although a bus may use less energy to operate, buses still give off pollutants from running diesel fuels. Alternate fuels, such as biodiesel and natural gas, can reduce harmful emissions, but the number of buses using these alternates is few in numbers.

Buses also can add to street congestion by the regular stops made along a bus route. This can add to the environmental impact and lower fuel economies of other, idling vehicles. Also as a result in added congestion, there is a potential to slow the service, creating delays from the regular stops (which in turn can add to complaints and an argument of not taking transit because it is not reliable). Finally, while the emissions from one bus are higher than one small vehicle, if that bus operates with passengers, the relative impact on the environment would be lessened considerably.

Finally, Grava identifies that the public image of buses needs to be addressed. The "utilitarian" attitude towards transit services may hinder ridership through the stereotypical attitude that bus riders have a lower social status.

5.1.3 Taxi Service

The final public transit mode, taxi service, is worth noting, since it plays a major role in transportation options in Steinbach. Grava (p. 286) explains although the affluent population may use taxi services regularly, those who are lower income may need to use a taxi for emergency purposes; in the case of Steinbach, taxi service may be the only alternate method of travel available.

[5] The British Thermal Unit, or BTU, is a standard to measure the amount of heat required to raise the temperature of one pound of water by one degree Fahrenheit. This is important environmentally because the output of a bus full of passengers is less than a four passenger car, resulting in lower emissions and a reduction of greenhouse gases.

There are three basic operational models of taxi services, the independent ownership, fleet, and associations of cooperatives. The independents are owner operators of the service, possibly operating with one other to work alternating shifts. Fleets are multiple vehicle operations with central dispatching where drivers are considered independent contractors. Associations are basically independents who combine their efforts to provide radio links, additional buying power for bulk purchasing, pooling of maintenance services, and protection of participants' interests.

Taxi services provide a fully personalised service for the user. Users do not need to consider who is driving or where to park; service is usually fast and efficient; and a taxi can service the majority of the population. Repair and maintenance of a taxi can be completed by most mechanics due to the fact that taxis are usually standard cars or vans.

Drawbacks of taxi services include high user costs (in Winnipeg, MB, 2005 rates are $3.05 for the first 81 metres, $.10 per additional 81 metres, and $.10 per 13.81 seconds waiting time (a 5 km trip would cost a minimum of $9.22, barring any wait time at stop lights (Government of Manitoba, n.d.)).[6] Inadequate vehicle types can also limit taxi service usefulness. Some smaller operational services do not provide for easy access, or wheelchair access to the vehicles due to high cost of purchase, operating, and maintenance. Finally, a potential drawback of a taxi service could be that economic return for drivers could be below standards, and job security is limited for the drivers.

Service type and vehicle type are not the only considerations a municipality needs to take into account when planning for public transit. Indeed, what can make the greatest difference in terms of functionality, popularity and hence economic viability is the routing model used.

5.2 Routing Service Models

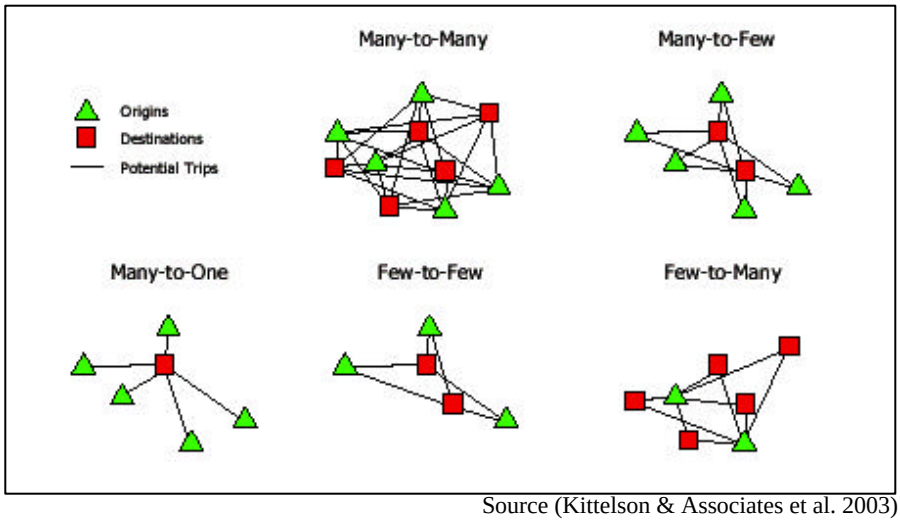
There are different routing configurations depending on the service model (conventional, custom or paratransit). Conventional transit usually consists of **fixed-route** services, in which the bus travels along a defined route at regularly timed intervals. The majority of urban transit systems

operate on fixed routes, with three different options, *local service*, *limited stop service*, and *express service*. Local service is a slower service where buses stop at all designated stops when required to pick up or drop off passengers. Limited stop service usually overlies local services, but stops only at major destinations (i.e. major intersections/transfer points, and activity centres). The express services tend to be for larger centres where long trips are required. The start and end points to express services stop at local service points, but stops midpoint along the route are not frequent, resulting in a faster service for distant trips (Kittelson & Associates *et al*., 2003, §2.5). In a small urban context, it does not appear that the limited stop and express services are the best modes of routing.

Demand-responsive transportation (DRT) models are typically defined as one type of paratransit option, which is again a form of public transportation that is a cross of private automobile use and conventional fixed-route transit. There are variations to demand responsive services, including:

- Route deviation (slight deviation from a pre-determined route, or variable stops along the route);
- ***Many-to-few*** routing (pick-up points are anywhere in the service area with a few key drop-off points); or
- ***Many-to-many*** routing (true door-to-door models, where pick-up and drop-off points are anywhere in the service area).

Figure 3 (Routing Options for Various DRT Systems)



Source (Kittelson & Associates et al. 2003)

[6] The fare schedules are governed by the Provincial body Manitoba Taxi Board, so individual operators do not create rates.

Demand responsive services are generally best suited for lower density areas that are not time restricted, meaning that there are lower demands for service, and irregular trip patterns. These models are also generally more expensive in terms of resources, capital and labour, resulting in a higher cost to the users. This model also does not accommodate high densities with specific transportation needs (Burkhardt, Hamby and McGavock 1995, Kittelson & Associates et al. 2003).

A combination of DRT and fixed routes is the **deviated fixed route** service. This service route operates as a traditional fixed route service, but allows for minor deviations in routing if there are requests. These deviation requests can be made in advance, from calling a dispatch office in advance for either pick-up or drop-offs, or passengers may request the driver for a deviation while using the service (Kittelson & Associates *et al*., 2003, § 2.7).

Rural transit services can generally be any combination of services, including peak time fixed route services, with DRT, or deviation services during off peak times. This provides for an optimal use of services when there are peak demands with infrequent, or unpredictable trip patterns during non-peak times (Burkhardt, Hedrick, and McGavock, 1998; and Kittelson & Associates *et al*., 2003).

In addition to these, there is also the hybrid service model, which uses the elements from the above as needed (Burkhardt, Hamby and McGavock, 1995):

> Nothing says that rural transportation systems have to be either fixed-route or demand-responsive, and, in fact, the most successful systems are hybrids of these two extreme patterns. For example, a system called "scheduled demand-activated service" is one that typically runs a fixed-route but only stops at certain places if called in advance by the passenger desiring the trip. Another possibility is the point deviation system — such as that in Merrill, Wisconsin — where the vehicle arrives at certain "checkpoints" at scheduled times, but the route in between those points may include deviations for door-to-door pickups and deliveries. The key point to understand is that **there are many possible options for service (p. 24).**

5.3 Alternative to Public Transit: Co-ordinated Community Transportation

In addition to the various forms of routing types of buses, there is a transportation initiative that is gaining use in the rural context (including some cases in urban centres). Co-ordinated community transportation (CCT) is an organized way of pooling of resources in order to provide the population with better, more efficient transportation options. The CCT is a community initiative to co-ordinate the existing resources available in the region. Toted as a new way of thinking about how we move people, CCT is a grassroots collaborative program to reach and service the individuals without viable transportation options. Although not a full service transit system, CCT is designed to improve the quality of life through creating means to be independent, self-sufficient, and allows for added opportunities to participate in the community. In areas that find it difficult to justify a fixed route service due to various reasons (including lack of demand, population density, funding, etc.), CCT may be the solution to relieving some of the rural transportation problems of seniors, persons with disabilities and low-income groups.

The Transit Cooperative Research Program and the Ontario Ministries of Citizenship and Transportation have outlined how CCT services can be implemented in communities that need better transportation options. CCT is a "best solution for the limited resources" program, and may be a stepping stone for a future transit operation if needs become too high. The primary goal for CCT is to "increase the number of people serve and the number of rides provided" (Burkhardt *et al*., 2004).

The term *community* in this instance does not mean just within a local area, but can be the neighbourhood, municipality, or even region since pooling of resources from other municipalities can broaden the resource base. *Resources* include all of the human, financial, and physical components that can be used to provide services to the public within the community (including drivers, administration and support staff, hardware, software, equipment and government officials).

Ontario's *Co-ordinated Community Transportation Resource Manual* identifies eight stages required to implement the CCT program, three of which are pre-co-ordination groundwork (which are detailed below). All eight stages are:

1. Information exchange (pre-co-ordination groundwork);
2. Needs and resource assessment (pre-co-ordination groundwork);
3. Implementation planning (pre-co-ordination groundwork);
4. Public information and referral services;
5. Acquisition/sharing supplies and services;
6. Sharing excess capacity
7. Joint use of resources; and
8. Centralized co-ordination

5.3.1 Information Exchange

The information stage is one of the most important aspects in co-ordinating efforts as it brings together the organizations within the community that provide and or use transportation services. The end result for the organizations is to gain an understanding of the other groups' needs, operations and challenges, along with the potential opportunities for co-ordination. This stage of co-ordination can take some time to complete to effectively communicate the organizations' details to their counterparts. This stage represents "the launching pad from which successful co-ordination begins" (Ontario Ministry of Citizenship and Ministry of Transportation, n.d.).

It is important to realize that this exercise is designed to form working relationships between the organizations that are not entirely satisfied with current transportation options; it is *not* designed to threaten existing services or stand in the way of existing obligations to organizations' clients. Rather, this is a "good faith" initial contact to gain a better understanding of the "bigger picture."

The information exchange has also been a proven way for agencies and transportation providers to pre-assess the feasibility of co-ordination initiatives, and to discover co-ordination opportunities with a limited financial burden. In Ontario, there have been some instances where

during the information exchange, co-ordination opportunities just "fall into place" when a simple, readily workable solution presents itself to the parties involved. This is not the norm though when trying to implement a CCT program.

5.3.2 Needs and Resource Assessment

Knowing what resources are available is key in co-ordinated transport initiatives. In order to gain a full idea of what is available, a formal inventory assessment of all available community resources is necessary. This assessment is a tool to find out what is available, what the services are and provided by whom, what the shortfalls are, and other less obvious elements of the co-ordination strategy.

This assessment usually is conducted through *primary* and *secondary research methods*. Primary research includes surveys of transportation providers and stakeholders. Secondary research can streamline the co-ordination process through reviewing previous studies, reports and case studies. In many situations, communities that want to implement CCT initiatives do not have to re-invent the wheel, just modify the program to fit within the needs of the individual community.

Needs assessments can be conducted through telephone surveys (for quick results, may need follow-up information) or mail surveys (for more detailed information, although the response rate could be low and time consuming) and information gathering meetings (most effective ways to assess the needs and resources). Assessments do not need to be time consuming or high in cost, but do need to be balanced to ensure the goal of creating a viable co-ordinated transportation system. As this process goes on, ensure that the group energy and goodwill is not lost to ensure that the other stages of the co-ordination can be completed.

5.3.3 Implementation Planning

Details and decisions about the co-ordination opportunities need to be addressed in this stage of the process.

- Examine operational matters
- Create Governance structures

- Identify financial considerations
- Develop protocols for evaluation

Guiding Thoughts

- Keep expectations realistic
- Approach the initiative as a new business
- Build in sustainability
- Keep the planning process short

5.3.4 Benefits of Co-ordinated Community Transportation

Economic benefits include reducing costs, program overlap and resource allocation. In reducing the duplication of money spent, individual organizations may be able to reallocate funds to other program initiatives, or put into the co-ordinated transit program to increase ridership. Like other forms of public transit, it also offers the sorts of economic benefits discussed earlier in the report (section 4.5).

5.3.5 Reasons for Caution Using CCT

As with all programs and initiatives, there are many reasons why organizations should use caution when implementing a CCT program. The ***cost of start-up*** may initially be high, resulting in either a loss of capital for the organizations involved, or a *temporary* spike in transportation costs to the users. Cost of start-up could also be longer, and more time consuming than anticipated, for both operators and users, therefore patience is required from all parties involved with CCT programs. Economic returns to the various program administrators seldom occur because excess money is returned to improve service programs, or returned to the CCT to improve unmet demands for transportation.

There is also the possibility for CCT programs to "unravel" over time with changing program needs, changing administrators, or changes in user demands. With the changing of administrators, there is a need to constantly attend to the CCT program so that all organizations involved are kept apprised of changes and to keep working together for the betterment of the transportation initiative for ***all*** groups involved.

Barriers to implementing CCT initiatives can be actual or perceived. ***Actual barriers*** include ***regulations*** pertaining to local transportation that may need reworking to allow for a co-ordinated transportation program. For example, if taxis were used in part of this co-ordinated effort, changes in the Manitoba Taxicab Act may need to be considered to reduce fare prices for qualified riders. ***Insurance Premiums*** and policies may also need to be examined in order for the volunteer-based portion of the program to ensure coverage is maintained in all situations.

Actual barriers may also exist from ***funding issues***. In the United States, the federal and state governments provide many grants and transit initiative funding opportunities. In Canada, unfortunately, there is limited funding provided from the two levels of government, resulting in individual organizations putting much of their budget into transportation solutions. Funding issues are relieved in Ontario through the co-ordination efforts of the organization, and many see an increase in users to the programs offered. A recent development of a source for funding could be through the federal governments "New Deal" gas tax incentives for the use of sustainable transportation initiatives.

Perceived barriers include the "turfism" or inter-organizational relationships of the various organizations involved in the co-ordination. This barrier usually is explained as a resistance to change and fear of the unknown. There is also the fear that the organization's purpose will no longer be needed. To combat this turfism, agencies must understand that co-ordination is a *growth and development strategy*.

The use of ***volunteers*** in the CCT programs fall within both perceived and actual barriers to implementation of CCT's. Actual barriers to using volunteers include the issue of insurance coverage (as mentioned above), and completing criminal reference checks, and the perception of losing the volunteer pool base of the individual organization. Putting volunteers into the spotlight of criminal reference checks can reduce the desire to help the community through the sheer fact that many people do not like "being put under the microscope." There is also a cost to completing the reference check; in Ontario, "true volunteers" do not need to pay, but "paid" volunteers are required to pay to have the reference check completed.

The perception of losing the volunteer base from the various organizations come from a number of fears, including loss of control of the volunteers, volunteer loyalty to one organization, and fear that fundraising efforts would be diminished by the lack of control of the volunteers. Again, the organizations should return to the concept that co-ordinated efforts are a *growth and development strategy* to improve the mandate of the organization, and to help the users find better transportation options.

5.3.6 Alternatives to Transit: Conclusion

Clearly, the co-ordinated approach has some advantages, but is also saddled with some procedural difficulties, many of them related to the complexities of personal and organizational relationships. Strong governance structures are needed, as are strong, committed leaders within organizations themselves.

With the foregoing models and principles now established, it remains to learn how best to proceed to select from these elements in the most appropriate and effective way – and to manage them.

5.4 Transit Service Delivery Models

Few topic areas within the field of public transportation are as contentious as that of service delivery models: that is, should a city's public transit be owned and operated by the city, or should it be contracted out (privatized)? Given the highly controversial nature of this debate, our intention here is not to champion one viewpoint or the other, but rather to highlight some of the arguments for each. A more detailed, focused study on this topic would be required to determine if any future public transportation system in Steinbach should be publicly or privately operated.

The reader should be aware that there are generally three governance models for public transit: public, private (and the degree of privatization can be quite minimal or extensive, as we shall see) or community-owned (a not-for-profit organization). While cities experience varying degrees of success with all these models, it should be noted that shifting from one system to

another is generally fraught with bitter controversy, particularly if it involves Unions, the loss of jobs, and the downgrading of formerly well-paying jobs to lower-paying ones. Table 4 outlines the three governance models with a specific example of operation.

Table 4: Three Transit Governance Models

Model	Defined	Example
Public	City owned, operated and maintenance	City of Winnipeg
Private	Contracted out transit service. City may have some input or regulatory control with the system.	Prince Albert, Saskatchewan (operated by *FirstBus Canada*; Airdrie, Alberta (operated by Cardinal Coach Lines in partnership with the city)
Community-owned	Not-for-profit or a society is responsible for the operation and maintenance.	South Okanagan Transit Society; Manitoba Cancer Society

Regardless of one's view on this, the reader should also be aware that – as one would expect – the discourse on the topic is highly ideological, exemplifying as it does the premises of both liberalism (the State needs to provide for the well-being of the public) and free-market conservatism (the State should not be engaged in any business that could be provided by the private sector); as such many of the studies and reports that claim authority on the topic must be regarded with caution. For example,

> [i]n Colorado in the late 1980s, the state legislature mandated, without any hard analysis, that 20 percent of Denver's bus services be privately contracted. Nobody really knows whether the initial privatization experiment saved money, because the pro-privatization Denver Regional Transportation District and the anti-privatization union each commissioned studies that "proved" their opposing beliefs (Richmond).

The result in the United States at least has been an impediment to innovations in public transit:

> Democrats have been too unwilling to detach themselves from their union sponsors to consider the needs for mobility of low-income constituents, which demand organizational change…Meanwhile, uncritical belief in the private sector and contempt for anything publicly-run have prevented Republicans from considering ways the public sector could be made more responsive and efficient (Richmond).

With this caution in mind, then, we can set out to explain the central arguments in this debate. Essentially, publicly-owned and operated public transit accepts the premise that the City must be

responsible for owning, maintaining and operating the public transit system, including all human resources costs now and into the future (i.e., retirement). The most obvious benefit to the City in this scheme is that the City maintains control over the planning function required for improving and expanding the service as the community grows, and the service is easily integrated with all other City functions. Privatized public transit, on the other hand, is contracted out to a privately-owned company in an open and competitive bidding process. Services provided can range from human resources only to all aspects of service provision.

For many Canadian municipalities, there is a growing recognition that public transportation is an *essential* service requiring continued public support. As well, there is also some pride in overall efficiencies that public operators have achieved: "In Canada, operating ratios have averaged between 53 and 55 percent for every year from 1987 to 1995 (compared to averages in the U.S of about 35 to 41 percent), rising to about 62 percent in 1999" (Soberman, p. 27).

> To be clear, the economic performance of the publicly operated transit services in Canada is remarkable when compared to U.S. and even many European jurisdictions. Thus there is some doubt as to whether alternative approaches increasingly being explored in Europe and elsewhere, such as contracting out, deregulation, or privatization, would achieve significant cost savings, without causing significant reductions in transit levels of service, probably for those who need it most (ibid., p. 32-33).

According to Karlaftis and McCarthy (1999), however, a review of the relevant literature over several decades demonstrates that privatized (contracted-out) public transit services deliver higher-quality, more efficient services than do wholly-public systems, resulting in more output per dollar, and greater revenue generation. As well, the need to respond to market forces and engage in highly competitive bidding processes encourages innovation and cost reductions, mostly in terms of wages and benefits. As well, private firms can be far more flexible as they are not bound by union rules (Karlaftis and McCarthy, 1999, p. 27-43).

One of the best-known private transit services is FirstTransit, which is a subsidiary of FirstGroup, which provides public transit, paratransit and school bus services across the United States and in the United Kingdom. Its Canadian subsidiary FirstBus Canada offers paratransit in Ottawa, Regina and Saskatoon, and full transit in Prince Albert Saskatchewan. Its subsidiaries, FarWest and Cardinal operate in B.C. and Alberta: FarWest provides full transit services in Kelowna and

paratransit in the B.C. communities of Kitimat, Terrace, Prince Rupert, Port Edward, and Victoria, while Cardinal Coach Lines offers transit in Grande Prairie and Airdrie Alberta (for a fuller description of the Airdrie case, see Section 6.2) (Heather Kolody, personal communication). The services offered by FirstBus include "turnkey, tailored service approach that supplies all or most components of the operations including equipment, facilities, staffing, management, maintenance and so forth. Such operational experience encompasses demand-response, elderly and disabled services" (FirstBus Canada Ltd.).

Given the contentious nature of this issue, and the fact that some Canadian communities do experience positive results with contracted-out services, it stands to reason that there should be some middle ground between public and private that best serves the interests of the public and according to Litman,

> [e]ffective privatization and contracting…requires that public agencies retain control over key planning decisions, and that service quality be a primary performance feature. For example, if transit services are privatized or contracted out to private firms, it is important that such services be integrated and comprehensive, rather than allowing private service providers to only provide services where it is most profitable. It is helpful to arrange bidding so private service providers compete on service quality and ridership goals, not simply on minimum cost (Litman).

In other words, as long as the City reserves for itself control over planning, and ensures that service quality – not lowest costs – are the driving force behind public transportation, then contracting out might have some advantages.

The other model of interest here is that of community-owned transit: a not-for profit transit "society" that owns and operates a bus service. This may be an option for very small communities or a way to provide services for a wide range of travel needs between communities: for instance, the South Okanagan Transit Society runs a fully licensed and insured door-to-door service between Oliver, O.K. Falls, Penticton, Summerland, Peachland and Kelowna. The origins of this service were explained to the research team this way:

> After spending 1½ years gathering data we constructed a model to fit the needs and people we wish to serve. We zeroed in on a specific group and expanded to others as we progressed. Our project was unique as this was the first in the province with BC Transit. A Society with 5 Directors, bought, with the help of the Communities, a retired Bus, had a plan as to how it could be done and were willing to try. We surrounded ourselves with

> people who believed in us and that our plan could be done. Hard work gathering data, creating a budget and doing our own feasibility study (based on the BC Transit one) was the beginning. Since our success BC Transit has used us to show other communities how to get transit when needed. When everything (data, budget) were in place is when we started to "pressure" the power to be, Government, municipal, agencies, anyone we felt could help bring our project about (Marlene Lipps, personal communication).

As is described in the case study of Cranbrook BC, the governance of transit operations in that province are quite different, and are overseen and funded by a provincial body that has no equivalent in Manitoba; therefore a 'community owned' service such as this would probably not be legally possible under existing statutes and regulations. Nonetheless, the model is of interest and it may be something Steinbach stakeholders will wish to pursue.

5.5 Deciding on Appropriate Services

An extensive research program completed by the U.S. Transit Cooperative Research Program identified six basic steps required to plan an effective rural transit service. The six steps are:

1. Review the service types available;
2. Establish goals, objectives, and needs based on community profile;
3. Select and tailor services;
4. Estimate volume of service;
5. Evaluate resources and forecast funding and service cost; and
6. Refer to other sources for help in refining service design (Burkhardt, Hamby and McGavock, 1995).

In order to decide on a service model, five key questions must be addressed (Burkhardt, Hamby and McGavock, 1995). The first is to determine the service area – is the service area key sites in the city, are there needs in the surrounding area, should you look at a regional scale? The second question is what are the times of greatest service demand – days, evenings, weekends, seasonal demands and peak times during the day? The third question is what level of service to provide during those times? The fourth question to address – and one that is directly linked to the previous ones – is what kind of service is desired for the community – what are the projected user groups' needs, and what are the most likely points of interest? Finally, there is a need to

address the advantages and disadvantages of the various types of services as it pertains to the community.

Beyond these five questions however, is the fundamental context of laws and statutes: what are the municipality's legal rights, opportunities and obligations when considering a public transit system?

5.6 Operating Authority and Laws

The City of Steinbach has authority to implement a transit system under the *Municipal Act*, Part 7 section 232, (1), (m). This Act states that a municipality "may pass a by-law for municipal purposes on matters of local transportation systems." Furthermore, under section 235 of the same Act, the City of Steinbach may collect "a rate, toll, fare or other charge established by a council in respect of a local transportation system" (Government of Manitoba, 1996).

The ability for the City of Steinbach to create and operate a transportation system is additionally supported by the *Municipal Act*, Part 8, 250 (2), (c) that states a Municipality can "acquire, establish, maintain and operate services, facilities and utilities" (*ibid.*).

Manitoba's *Highway Traffic Act* (HTA) is more detailed for the requirements of operating and maintaining a system, specifically Part 8, *Public Service and Commercial Vehicles*. Since the City of Steinbach currently operates a paratransit service, the City should be aware of these regulations. The following is a list of Sections in the Act that may have a bearing on potential transportation systems in the City of Steinbach (Government of Manitoba, 1985):

- Section 301 states the requirement to report annual statement of earnings to the transportation board;
- Section 302 of the HTA provides the Municipality the right and authority to designate routes within the municipality through the creation of by-laws, with the transportation boards approval;

- Section 304 identifies the requirement for maintenance, and condition of the vehicles, and that the transportation board may inspect the vehicles;
- Section 306 identifies the requirements of the drivers to be at least 18, be of good moral character and hold a valid licence for the class of vehicle;
- Section 307 identifies the rights of paying passengers that the operator cannot refuse service unless space does not permit, or if the passenger is intoxicated, rowdy or is acting is a disorderly manner; and
- Section 318 is a detailed list of safety requirements for the operation of public service vehicles on highways and roads.

The *Public Utilities Board Act* provides additional jurisdictional powers to the *Municipal Act* in respect to public utilities. This act, specifically section 63 (1) and section 63 (2) outlines the "jurisdiction as to carriers." As stated by this act, the Public Utilities Board has

> "jurisdiction in all questions relating to the transportation of goods or passengers by any corporation, municipal or otherwise, on any part of any tram-line, or street railway line, or steam railway line or motor bus line under the jurisdiction of the Legislature, and may authorize or require any such corporation to carry goods or passengers on its lines or any part thereof for any period of time and at such prices as it may fix" (Government of Manitoba, 1994).

As mentioned in Section 1.1, the foregoing should be received as information only, but actual interpretation of these and laws and statutes pertaining to highways, public boards and municipalities is best left to the legal department of the City of Steinbach. These laws identified are only also only starting points, as Federal laws for transportation may contain supplementary regulations or possibly provisions superseding certain Manitoba laws. One such example is *The Canada Transport Act* pertaining to public transportation of disabled persons (Part 5 Sections 170 to 172). There is an obvious need for further research into the legal aspects prior to implementing any form of public transit in Steinbach.

5.7 Conclusions

The foregoing sets out some of the essential components of a municipal public transportation system in the rural context: service types, routing options and legal contexts, as well as alternatives to public transit. What should be of more use still is to see how these principles function in actual case studies; therefore in Section 6 we examine several key examples of how small urban centres make public transportation systems work, by utilizing different combinations of routes, service models and vehicles.

6.0 Case Studies

The following case studies identify best practices and identify areas that might be improved upon should their methods be adopted elsewhere. Case studies were completed through desk audits using publicly available information, and in the case of Airdrie Alberta, through a site visit. What follows is a brief examination of public transportation in Cranbrook, British Columbia; Airdrie, Alberta; the various transit operations in Manitoba; and Ontario's Co-ordinated Community Transportation initiatives.

6.1 Airdrie, AB

Airdrie, Alberta's fastest-growing city, has increased its population over 27 percent between census periods (1996-2001). The city is growing so quickly that it is expected to have a population of 60,000 people by 2030. It is 20 kms from Calgary, and considered a bedroom community, but like Steinbach, is also home to some major employers. The biggest is ProPak Systems (http://www.propaksystems.com/) which provides equipment and services to the international energy sector, specifically gas plants, and employs approximately 700 people, many of whom commute from Calgary or from nearby towns.

The present Airdrie transit service started in July 2005, having grown out of its pre-existing dial-a-bus service. Transit services in Airdrie are entirely privatized, and contracted to Cardinal Coach Lines – the exceptions being transportation planning and administration, which remain with the City of Airdrie. The city's primary advocate for transit is the multi-sectoral and volunteer-run Social Planning Board, which works with the City's Social Planning Department.[7]

As noted, the city operated a DRT (Dial-a-Ride Transit) system primarily for the elderly and mobility challenged through contract work with a local bus operator. Bi-weekly specialty trips to Calgary (for people with mobility challenges to get to medical appointments) and dial-a-ride

[7] The Social Planning Board's function is to "facilitate community development and the effective and efficient delivery of human service programs that enhance the quality of life and social well being for the Airdrie community." Source: http://www.airdrie.ca/com-serv/social/index.cfm

within Airdrie, was in operation between 1991 until 2005 when the city reintroduced a fixed route system.

Given Airdrie's rapid growth, its proximity to Calgary, and the presence of major manufacturing, the fact that is had recently implemented a fixed-route public transit service in the city, makes it, in our opinion, an ideal case study for our report that illustrates useful possibilities for Steinbach.

6.1.1 The Major Stakeholders

In Airdrie, the major stakeholders in public transit are the City of Airdrie (including city councillors, the social planning council, and support workers), Cardinal Coach Lines (the contractor who operated the DRT system), and the public. According to the Mayor of Airdrie, there was generally positive support from all of the city councillors in the transit initiative and there has been a positive partnership with Cardinal Coach Lines and the city for the past 7 years (Cardinal operated the DRT system). According to the Mayor and Deputy Mayor of Airdrie, one group that seemed to behave been missing from the initial planning process was the business/large employers of the area. When asked about this missing component, the answer was that the large businesses did not see a benefit of transit to their bottom dollar. Some of the smaller businesses may have seen an economic advantage of transit for low wage earners, but this was not mentioned in the interviews.

6.1.2 History of Transit in Airdrie

The city operated a fixed route service with a fleet of full-sized buses in the 1980's but ceased in 1991 when costs of operating the system was too big. During this time, Airdrie was smaller in population and the buses usually ran without passengers. In 1991, the fixed route service went to a Demand Responsive Transit (DRT) operation, with one small bus (18 passengers) that was universally accessible. The DRT service provided transportation for people with disabilities and seniors within the city, and to the City of Calgary for speciality medical appointments. With the population growing from 15,946 to 20,382 between Census periods, there was sufficient demand to improve the operation to include a fixed route service during the week to supplement the DRT.

On July 1, 2005, the City of Airdrie implemented the change by adding three fixed route services for weekday trips. The DRT is still in operation and runs parallel to the fixed route service.

The City of Airdrie is an unusual city in that its development must account for the impact of the 8-lane Queen Elizabeth Highway (Hwy#2) which effectively cuts the city in half. Access between the east and west sides of the city are through 2 points, one on each of the north and south ends of the city. Examining transit holistically at a municipal and regional scale is an integral part of the transit plan, as is the realization that "an effective transportation plan can help a municipality manage and reduce the frequency of repairs to road infrastructure" (Karpat 2005 p. 4). Working towards this approach to transit planning, the *Airdrie City Plan* emphasises the necessity for creating destination oriented transit (DOT) plans and initiatives. Specifically, Section 3 of the *Airdrie City Plan* addresses guidelines and recommendations for DOT initiatives.

6.1.3 The Fixed Route Service and the Processes

In 2001, a study recommended a move to a fixed route transit system, and to increase the specialized service to Calgary. The initiative that began the 2005 re-introduction to the city was a result of listening to the 2001 recommendations, pressure from the population during the recent election campaigns, calls to city hall, and comments to the Social Planning Council that the DRT system was inadequate to meet the needs of the growing population. There were many reasons why the DRT was inadequate, including that the DRT was being booked a month prior to use, and that multiple stops delayed local employees getting to work on time and delayed passengers from getting to appointments.

In 2004, the *Annual Citizen Satisfaction Survey* listed a question specific to transit; which was "would you take public transit?" As a result of the survey and the calls to city hall, the Social Planning Council was given the mandate to examine the feasibility of re-introducing public transit. Two public consultations were conducted in 2004 and 2005 in order to identify specific needs of the community in regards to transit (discussed below).

6.1.4 The Result

6.1.4.1 Fixed Route Service

Through consultation with the contract operator and Calgary Transit, Airdrie Transit now operates three fixed, uni-directional routes with expectations for growth to 5 buses by the end of "full build out" of the current land supply allocated to Airdrie. Two of the routes service the west side of the city every 25 minutes with the third route servicing the east side every 35 minutes. All three buses currently converge in a central location, the local mall. This central exchange point may change in the near future with the development of two major retailers on either end of the city. The system operates from 6:00 am to 6:00 pm (last bus leaves the mall at 5:40 pm), then reverts to the DRT system until 10:00 pm. The DRT operates on Saturdays (8:30 am to 10:00 pm), and there is no service on Sundays as of yet. As a result of the consultation process, the intended start time for transit service was changed from 7:00 am to 6:00 am in order to service employees that start shifts at 7:00 am.

Fares for the use of the transit system are as follows:

Cash	Tickets	Monthly Pass	Senior (65+) Yearly Pass
Adult: $2.10	Punch Pass (11 for 10): $21.00	Adult Pass: $60.00	Regular Rate: $120.00
		Youth and Senior Pass: $45.00	
Transit Rider Support Program (TRSP): $1.50	Punch Pass Subsidy (11 for 10) $15.00	Adult Pass (TRSP): $45.00	Subsidy Rate: $90.00
Children Under 6: Free		Youth and Senior Pass (TRSP): $33.75	

Routing of the Airdrie transit system was completed with consultations with the department of the City of Calgary Transportation Planner, Cardinal Coach Lines, and using Geographical Information Software (GIS) ensured that the most efficient routing was taking place. Considerations for the routing sometimes need to incorporate concerns from members of the public that both wanted, and opposed buses and stops along their streets. Additionally, left turns along the route were minimized in order to maintain a regular flow of traffic.

6.1.4.2 Special Needs Transit

One of the concerns raised by personal care home staff and residents was that a fixed route system would limit the mobility challenged population in the city. Through the consultation process of the 2001 report and subsequent reports, it was identified that a fixed route system would not be suitable for this population demographic, thus the special needs transit in Airdrie has not changed because of the implementation of the fixed route system. The DRT service is still a door-to-door operation with a pre-booking requirement (before 5:00 pm the previous day). Special needs users are required to apply to the city for use, and can be registered for a long term (permanent disability) or short term users (e.g. with a broken leg). Regular fare collection is required for the special needs service within Airdrie.

6.1.4.3 Regional Special Needs

In Airdrie, there are limited resources for primary care and specialty services, such as dialysis. As a result there is a need for a transportation link into the City of Calgary to access the needed services. Although the service is not perfect because of potential time to wait in Calgary for pickup, Cardinal Coach Lines, in conjunction with the City of Airdrie, operates a bi-weekly trip into Calgary for medical and educational purposes, with medical trips having priority. Again, from the consultation process and studies, there was a recommendation to add buses to the system, which is in the process of being resolved from a different program being piloted from the Calgary Regional Partnership.

The Calgary Regional Partnership "provides the opportunity for regional municipalities and jurisdictions to discuss and work on issues that cross their respective boundaries. It supports a flexible approach, recognizing that different issues may involve different stakeholders and different regional processes" (Calgary Regional Partnership, 2005). Specific to transportation initiatives, the CRP has examined the requirement of special needs transportation (for the aging and the physically or intellectually challenged population) from surrounding municipalities and municipal districts into Calgary for medical trips. The CRP estimates that 33,500 to 35,000 people are in need of specialty transportation services in the Region to travel to Calgary during the year (*ibid.*).

As a result, the CRP Specialized Transportation Committee has developed a pilot program that will operate one day per week out of 5 cities and towns in the region to transport clients into Calgary for medical trips. The program, funded through provincial capital projects, will operate for 18 months with the hope for municipalities or a private organization to take over operations and expand into other communities that are in need. This system, as stressed by the Special Transportation Administrator, is not a replacement of current municipal transportation initiatives and resources, rather it is an expansion of a service to improve upon what is currently available.

6.1.5 Airdrie's Recommendations to others

The first recommendation from the City of Airdrie is that keep open lines of communication between all parties involved, especially in the early planning stages. This helps in coordinating resources to operate a successful transit operation. In the initial stages, include city departments in an "internal" focus group to determine how each department would be affected, how they can help each other, and how to resolve some problems. For instance, Airdrie implemented their transit service – and calculated service schedules for winter months – without consulting with the City's snow-clearing staff that would be called upon to ensure the routes and bus stops were adequately ploughed. Also, such consultation can help build internal support within the city, which can contribute to gaining "buy-in" on the part of the public. Finally, with keeping the departments in the loop, when it comes time for implementation, the departments would not need too much in ways of catching up on the requirements, and there would be no "surprise" projects that need working on.

Second, to market public transportation, focus on the cost savings benefits that would be derived from using transit, rather than appealing to peoples' environmental values. Lower household fuel costs and lower costs for road repair (resulting in lower taxes) appeal to people on a tighter budget, and those who feel that they are "taxed to death." As well, work on destination oriented transit initiatives to induce the public into taking transit for shopping, medical, or social needs.

Third, find out what the demand for transit actually is. If the demand is high, examine who will use the system. If there is a large population that falls in the special needs category, then a door-to-door system is required, and regular transit is not needed. If the demand is high, but from a mobile population, then there could be a need for fixed route services or at the very least, a dial-a-ride system that could accommodate the public better than community shuttles.

6.1.6 Airdrie: Conclusion

The implementation of a fixed route transit service in Airdrie was not a simple process where the population was given a bus service overnight. Consultation and time were important factors in trying to ensure maximum use of the service would be required. In order to implement a system that would serve the population, Airdrie transit integrates the fixed routing service during peak demands (Monday through Friday from 6 am to 6 pm) and the dial-a-ride system during evenings and weekends. It was also noted during the site visit, the Transit department works with a formal Social Planning Council to identify and meet changing needs of the community.

The following points highlight unique aspects of the Airdrie Transit system

- Public/Private partnership transportation model
- System operates on a fixed route system weekdays and reverts to a DRT system on evenings and weekends
- Three buses travel in a counter-clockwise direction in order to limit left hand turns off of major roadways
- Routes were based on destination oriented routing, with the central stop for all three buses at the local mall
- The city realised that there are special needs users that would not be serviced by regular transit, and therefore kept the Paratransit in operation.

6.2 Cranbrook, BC

Given it size and relative isolation, Cranbrook also represents a good comparative case study for Steinbach. The City of Cranbrook, with a 2001 population of 18,476, is located in the Southeast corner of British Columbia. The city, at 17.8 square kilometres, is a slow growth community, having only a 0.86 percent growth between the 1996 and 2001 census years (Statistics Canada, 2001). Prior to the implementation of the fixed route service in 2000, Cranbrook had a paratransit/DRT in operation for the mobility challenged and senior population. The market for paratransit riders is geared more towards seniors and people with mobility challenges, but does offer services to mobile individuals. As we have seen, paratransit systems may operate on reduced schedules or on a Demand-Responsive Transit system.

In order to understand how Cranbrook's public transit system works, a brief overview of BC Transit is required. Since its inception in 1979, the Provincial BC Transit Municipal Systems Program (MSP) provides for planning, marketing, fleet, and funding support for those transit services in which are outside of the Greater Vancouver and Victoria regions. The MSP has evolved with the growth of the BC communities from 13 municipal systems in 1979 to 72 systems in 2005. In 2004, BC Transit operated 24 conventional, 14 custom and 32 paratransit systems outside of Vancouver and Victoria. BC transit carries over 39 million passengers annually by providing 1.4 million BC residents with public transit. The fleet consists of 700 buses, minibuses and vans, which operates on a budget of over $133 million per year, ($47.8 million is provided by provincial operating grants). The MSP has been responsible for initiating and developing transit systems to increase mobility and accessibility in BC communities. Door-to-door services (handyDART) for persons with disabilities began in 1981. With the recent development of low floor buses, all new and future buses purchased in BC are fully accessible. These services provide mobility to seniors and persons with a disability (BC Transit, 2005).

BC Transit operates under the authority of the BC Transit Act, and while it has direct authority over the transit systems in BC (excluding *Trans Link* in Vancouver daily operations are the responsibility of the municipalities (4 municipalities) or the contractors (the remaining 67 systems). Funding for the systems come from provincial operating grants, local government

funding, private advertising, and daily fare collection. Through sustainable transportation initiatives, BC Transit also qualifies for the Federal Government "New Deal" gas tax rebates, which will relieve some pressures from the current volatile oil and gas market.

As populations increase in BC communities, the MSP responds to the expected increase in transit needs. Linking transit and land use planning is of utmost importance to the various levels of the BC government, as are the links between partners in transit initiatives so that transit operations fulfil the needs of the communities, and ensures that funding is wisely spent (BC Transit, 2005).

The feasibility report completed by BC Transit in 2000 identified four general characteristics that could potentially influence transit in the city (BC Transit, 2005). These include the

- large population concentration within the municipal boundaries;
- relatively short travel distances between major trip generators;
- high ridership potential from the Hospital, College of the Rockies, Cranbrook Multi-Purpose Recreation Complex and Mt. Baker High School; and
- moderate population of seniors within the community.

These considerations are largely similar to those in Steinbach, with its larger core population, smaller trip distances, and medical, educational, and recreational/social land uses. A few differences between Cranbrook and Steinbach are that the population of seniors is higher in Steinbach, and that the overall population density in Cranbrook is much higher than is the case in Steinbach.

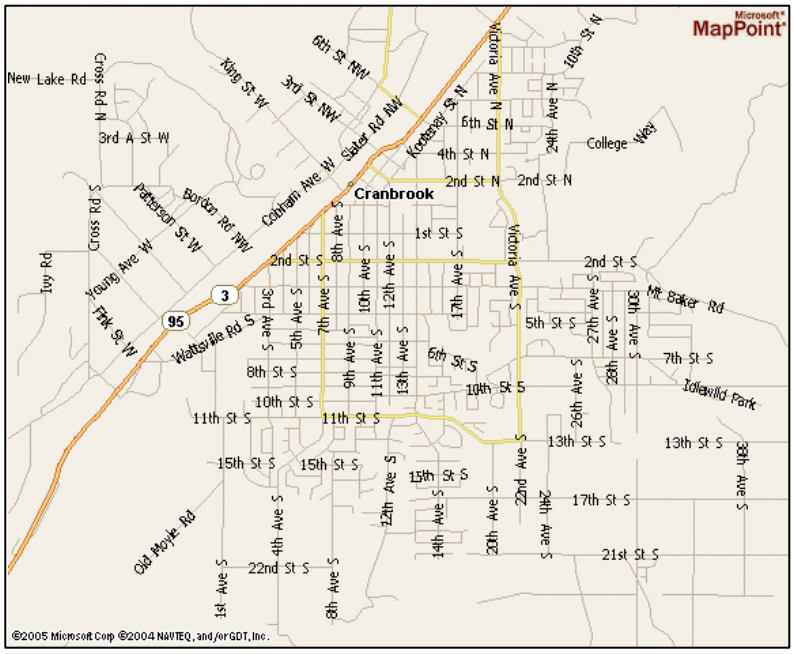
One advantage that Cranbrook has over Steinbach is having a well-defined commercial core area that is surrounded by compact medium-density residential neighbourhoods.[8] This form in the urban context is generally supportive of transit services, creating ideal trip patterns and easy access to routes and destination points.

[8] Although Steinbach has a central business district, the majority of the developments are along the north section PTH #12 that are stand alone businesses and services. At present, the residential component is limited along this section of road.

The multiple educational centres in Cranbrook with all levels of grade schools, and a community college with an enrolment close to 5,000 full and part-time students, represent an important market for the transit system.

Development of transit in Cranbrook was also greatly enhanced by the grid street pattern (see Figure 4). Within the street patterns, Cranbrook also has a number of major roads that connect with each other, creating natural hubs and transfer points. Walking distance to these major artery roads is common throughout the city. Additionally, located at some of the hubs are primary destination points for the population.

Figure 4: Map of Cranbrook BC.



Source: (Microsoft, 2005).

Initiatives that Cranbrook uses to increase ridership include partnerships with the College of the Rockies. A mandatory transit fee attached to the students' tuition and ancillary fees will allow students to ride the transit system without needing to pay additional bus fares during anytime of the daily operations. Other universities and campuses indicate that semester transit costs are greatly reduced for the students through the universal pass, or "U-Pass", program (ranging from a low of $62 per term at the University of Calgary, to $110 per term at St. Mary's University in

Halifax, to a high of $22 per month at the University of BC). According to CUTA, the U-Pass program usually results in an increase of 50 percent in ridership.

Another transit initiative to increase ridership is through the support and marketing of a bike and ride program. This is where bike racks are fitted to the front of the bus and passengers are able to commute both by bicycle and by bus. Marketing, as indicated by the *Cranbrook Service Plan*, is to get outdoor businesses to contribute to the cost of the bike rack (which increases the marketing and advertisement area of the business).

A final initiative that Cranbrook suggests using to increase ridership is defining "landmark stops." Landmark stops are stops that provide high level of customer appeal and showcase "exciting and progressive endeavours going beyond the safety and operation standards of a standard public transit stop" (BC Transit, 2004). In creating these landmark stops, advanced, and environmentally friendly items (i.e. solar lighting and shelter heating) could be used. Additionally, using local artisans to create murals or sculptures could improve the aesthetics of the site, and show support of the local artisans. Cranbrook Transit identifies the potential to create partnerships with local groups or institutions to design and fund these stops. Finally, in creating these landmark stops, Cranbrook transit would like public involvement and consultation in order to get public awareness and create a sense of community spirit.

There is a regional transportation program that operates between Kimberly and Cranbrook on the first and third Monday of each month. This system is used for shopping, not for medical or specialist appointments. The bus leaves Kimberly at 9:00 am, stops at various shopping destinations in Cranbrook, and makes a final pick up at the Wal-Mart at 1:30 pm in order to get the bus back to Kimberly for 2:30 so the bus can be used as a school bus. Owing to extensive retail opportunities in Steinbach, this type of service may not be needed, but there may be the opportunity to provide a similar service for the surrounding communities.

Cranbrook transit operates a fixed route system Monday through Thursday 7:15 am to 6:30 pm and extended hours on Friday until 9:30. Transit on Saturdays and Sunday does operate on a reduced service following demand periods for shopping and social markets (i.e. Sunday church

services). In the 2003/04 fiscal year, Cranbrook transit carried 138,500 passengers over approximately 11,900 hours of service. Transit demand follows a seasonal pattern with higher demands during winter/school periods and lower demands during the summer/vacation periods. Below are the daily averages for transit demand.

Table 5: Cranbrook System Daily Demands

	Weekday	**Saturday**	**Sunday**
AM Peak (7:00 - 9:00 AM)	142 (24 percent)	12 (4 percent)	No Service
Midday (9:00 – 3:00 PM)	249 (42.5 percent)	169 (56 percent)	95 (64.5 percent)
PM Peak (3:00 – 6:00 PM)	176 (30 percent)	92 (31 percent)	52 (35.5 percent)
Evening (6:00 – 9:00PM)	22 (3.5 percent)	27 (9 percent)	No Service
Total	**589 (100 percent)**	**299 (100 percent)**	**146 (100 percent)**

Source: BC Transit.

Cranbrook transit covers the majority of the city, with most of the routes within 300m walking distance, with the exception of one area to the west of the rail line. The transit authority recognizes that this area is currently being developed and infilled, and the transit system may need alterations to accommodate this growth.

6.3 Manitoba Transit Systems

Within Manitoba, there are currently four public transit operations; Winnipeg, Brandon, Thompson, and Flin Flon. Winnipeg, being the largest operator in Manitoba, offers service to almost 620,000 city residents and potentially millions of visitors each year. Flin Flon offers transit to the smallest community in scale with 6,000 residents and a small number of tourists. There are no regional transportation initiatives in Manitoba outside the private operators offering daily inter-city bus services (i.e. Greyhound Bus Lines).

There are two grants available from the Province of Manitoba, Department of Intergovernmental Affairs, one of which is currently used to subsidize Brandon, Thompson, and Flin Flon transit operations. The other grant is for mobility disadvantaged transportation programs, of which 63

Manitoba municipalities are currently enrolled in, including Steinbach. The mobility disadvantaged program needs to be sponsored by the municipality, so no private organization qualifies for these grants.

6.3.1 Winnipeg

Winnipeg transit operates conventional, demand-responsive transit (DRT) and handi-transit systems. Winnipeg conventional transit consists of a number of routes that service all parts of the city seven days per week. Almost all routes are serviced by easy access buses (kneeling, low floor) during the week and Saturday's and every route on Sunday's has easy access service. The fare structure ranges from adult to senior to students (children under 4 are free); with cash, tickets, passes and special identification to take advantage of lower fares.

Winnipeg handi-transit started in 1977, and has increased services 14 times throughout the years. In 2004, the handi-transit service provided over 545,000 trips. In order to use the handi-transit, users must be legally blind or have a physical disability. Additionally, the user must be registered with Winnipeg Transit and book their tip before 11:00 am the previous day, and up to one week before. Similar to other bus services, the Winnipeg Handi-Transit has a priority booking policy, with wheelchair patrons holding the highest level of priority, which constitutes approximately 32 percent of the users. Fares for the handi-transit are the same as the adult fare structure for the conventional transit; there are no reduced fee programs for seniors or youths using handi-transit.

The DRT system operates along four routes connecting to feeder fixed transit routes during non-peak hour services 7 days per week. One route operates during the afternoon non-peak times during the weekday, where the other three operate on evenings and weekends. The fare structure is the same as the conventional transit routes, including reduced fares for seniors and youth. For more information about the operation of the DRT system in general, see Section 4.2 in the literature review.

6.3.2 Brandon

The City of Brandon (225 km west of Winnipeg), population 39,716, operates 10 conventional transit routes six days per week with no Sunday or holiday service. Service times are approximately every half-hour during the day and hourly service during the evening both during the weekday and Saturday services. Routes cover the entire city, including the commercial strip along the Trans Canada Highway, and out of the city to the Maple Leaf Meats processing plant.

Table 6: The fare schedule for conventional transit in Brandon:

	Cash	10 - Tickets	Passes
Adults	$2.00	$14.50	$58.00
Senior Citizens (65+)	$1.50	$12.00	$47.00
Children (5 years & older) & Students	$1.50	$12.00	$47.00
University Students	$2.00	$14.50	$50.00
A.C.C. Students	$2.00	$14.00	$50.00
Off Peak Pass 9:30 am - 3:00pm & 6:00 pm - Midnight - MON – FRI. All Day Saturday (Add $1.00 During peak hours)			$35.00

Source: http://www.brandon.ca/main.nsf/pages+by+id/260

The Brandon handi-transit operates from 7:00 am to 11:00 pm Monday through Saturday. This service provides door-to-door service for individuals with disabilities that are unable to use the conventional transit system. Like many handi-transit systems, fares are slightly higher with $2.50 per trip; 10 ticket cost $25.00, so no savings are available for this system. One advantage that Brandon residents see over Winnipeg users is a **Taxi-Saver** program. This program, again for those who are unable to use conventional transit, is designed to accommodate *spontaneous* trips by users to any destination. Taxi-saver programs use the local taxi companies to transport users for a reduced cost, which is *subsidised* by the City of Brandon. Customers can purchase up to 5 "books" per month of taxi scrip for $5.00. Each book is worth $10.00 in taxi fares, resulting in users saving 50 percent of the cost to take a taxi. This program only is valid with participating taxi companies in Brandon Monday through Saturday during "normal operating hours" of the regular handi-transit system.

6.3.3 Thompson

Thompson, Manitoba, population 13,256 (Statistics Canada, 2001) is located 740 kilometres north of Winnipeg. The city has 17.2 square kilometres of land resulting in a population density average of 772 people per square kilometre, which is higher than Steinbach's average population density. Unlike Steinbach, Thompson had a 7.8 percent decline in population between the 1996 and 2001 census years. The transit system is chartered to the Grey Goose Bus Lines, with operating grants from the province and through city subsidies.

There are two buses operating on conventional fixed routes carrying a daily annual average of 166 passengers (summer months have significantly reduced passenger counts due to school breaks). In 2004, Thompson transit carried 50,728 passengers over 311 operating days. There is no Sunday transit service with a reduced Saturday service. The routes cover the majority of the city (missing the industrial area), with a central point at the local mall to enable passengers to transfer from one route to the next.

6.3.4 Flin Flon

The town of Flin Flon, Manitoba, population 6,000, is located 850 kilometres north west of Winnipeg. The town has 13.88 square kilometres of land resulting in a population density of 432 people per square kilometre. The town, like that of Thompson, has had a decline in population between the 1996 and 2001 census years.

Through a contract with Northern Bus Lines, the city of Flin Flon operates a one-bus transit system on a conventional fixed route throughout the town of 6,000 people. According to the Chief Administration Officer, this system has been operating for at least 30 years, changing with the needs of the community. This is shown through the flexibility of reducing the service during the summer months due to holidays for the schools.

The system operates approximately 100 days per year (101 days in 2004). Flin Flon transit carried 18,510 passengers in 2004 with a daily average of 183 passengers. Passengers with monthly passes accounted for 6,678 rides. Fare box collections and transit pass sales result in an

income of over $49,000 per year, supplemented by $49,000 in annual provincial operating grants (Larry Fancy, personal communication). Like many transit system, these sources of revenues fall short of the required annual expenses to operate the system ($232,914.00 [2004]).

6.3.5 Manitoba Summary

The four transit models in Manitoba are range in size and in operation protocols. Winnipeg, servicing the largest city in Manitoba is obviously the most comprehensive system of the four. Using multiple models of routing (fixed, express, regular, etc), Winnipeg Transit services the entire city and population with easy access buses on every route seven days a week. There are main routes that are connected by feeder routes and that many of the bus routes converge at popular destinations (i.e. shopping malls, medical centres).

Similar to Winnipeg, Brandon Transit includes multiple fixed routes within the community to service the population with easy access buses, but as a result of defining user needs, only operates six days per week. One advantage that the Brandon population sees over the Winnipeg residents is from the cooperation between the city, taxi services and transit on order to accommodate spontaneous trip purposes for the special needs population with the *taxi-saver* scrip program.

Thompson, again only operating six days per week, provides 2 bus routes that converge at a central location, the local mall. This service is not universally accessible; however the Handi-van operation does accommodate the mobility challenged population. The bus route does not cover the industrial area or the airport as there are limited users in the area. Flin Flon operates on a limited basis and ceases operation during the school break. Both of these systems are contracted out to a private bus company, and works within a partnership with the city for administration.

Like every other transit system in Canada, these four systems are not self sustaining for funding and operational costs. Along with city subsidization programs, the provincial government provides additional grants for the operation of these transit systems. At present, there is limited

Federal involvement in grants and subsidization programs in place; however, there could be a change with the New Deal for Canadian Cities and the Federal Gas Tax Rebates.

6.4 Case Study Conclusion

The varieties of Canadian transit initiatives are diverse and often feature elements that are unique to that setting. The use of regional daytime shuttles between communities, the transition from full transit to paratransit in off-peak hours, integrating the taxi service into public transit, and the use of innovative alternatives to public transit systems entirely: all may be potentially of interest to Steinbach.

There are limitations as well. Clearly, to make regional transit work, the Provincial government needs to have a greater involvement in transit operations; but exploring this is beyond the scope of this report. However, a further examination of BC transit may provide a greater understanding of a regional approach to transit as there are a number of communities that are linked with intercity shuttles and buses.

In summary, the case studies identified in this report operate under a variety of governance structures, ranging from City owned and operated (Winnipeg) to partnerships between city and private contractor (Airdrie). Both of these governance models work, but for smaller communities, a partnership with a contractor providing equipment and drivers and city providing administration may be more advantageous and cost effective for the start up of a system.

Routing and operations of these services vary with the required needs of the communities that they are operated in. Routing types can be flexible, incorporating the different demands throughout the day and week, thus reducing operational costs. In order to identify routing types, the user needs and travel times for the community must be known, and flexibility of service also must be considered. Cranbrook and Airdrie transit systems are relatively new, and each have short and long term evaluations in place to identify shortfalls and where service can be increased. The bus types within the smaller case studies are generally smaller easy access buses to reduce costs and empty trips.

Historically, all of the bus services identified in this report grew out of demand-responsive systems and that population needs dictated the growth into fixed route/hybrid systems. In determining the needs, each case study in this report included a consultation process and involvement from the community. In Airdrie's case, community pressure started the process in order to satisfy the city's population needs.

Finally, it is important to note that population growth have a direct impact on transportation planning in the case studies presented. Airdrie and Cranbrook both have experienced a high rate of growth, which meant a change in community transportation needs. In contrast, Flin Flon and Thompson have both seen recent reduction in population in their communities. This reduction has not removed the transit systems in the communities; however it has had an effect on the service provided.

7.0 Conclusions and Recommendations

As we have seen, the three key points of sustainable transportation stipulate that first, people have the right to access their basic needs; second, people should have access to affordable and efficient transportation mode choices; and finally, that these transportation options should be environmentally friendly. In Steinbach, a growing community with an increasingly diverse population faces challenges in terms of satisfying some of these basic needs. Through the stakeholder analysis, it was identified that the transportation needs of a number of constituents – primarily seniors and low wage earners – were not being met. The public transportation options presently available (taxis, private shuttles or volunteer drivers) are expensive and at times inconvenient, or not available for use by the majority of the stakeholder constituents.

However, this research shows that Steinbach is well-positioned to be able to address these shortcomings through some form of public transportation initiative. It was also demonstrated that there are many options available with which to address transportation needs in the local and regional context – some of which are all-inclusive to the population, and some which are more needs-specific: persons that require more assistance for transportation may not be easily accommodated by a fixed route transit service, but a more comprehensive DRT system may be more suitable.

Should Steinbach pursue a fixed-route transit option, there are a number of ways this can be undertaken but further analysis would be needed with respect to road configuration, land use and the typology of destinations. For instance, in Airdrie, the transit routing follows a *Destination Oriented Transit* model, where transit routes service those destinations that have a higher pedestrian/user volume – in other words, those shops and services that are most frequently used. The researchers also learned from Airdrie that routing plans should be fluid enough to accommodate future developments on either end of the city.

Within the Canadian context, there is a range of transportation models that Steinbach can adopt into a working program that fits the city's needs and requirements. What is important to note is that the systems documented in the case studies have grown and evolved to fit the needs of the

community as a whole, not only one interest group. This is not to say that there aren't also special considerations designed for various users that require specific services, such as door-to-door services and taxi-saver programs. Rather, systems that incorporate some level of flexibility (such as those that become DRT during off-peak hours, for instance) are better able to meet a wider range of needs. It is also important to note that most transit systems evolve over time, changing to meet growing needs and or changing technological innovation. Rarely do systems remain static over time.

While a land-use and destination inventory was not undertaken for this study, it should also be noted that Steinbach's square-like street system and concentrations of major destinations and employers along or near two major roads, Main Street and Highway 12, (which intersect via Victoria Avenue) should greatly simplify any future routing deliberations. And based on the comparative analysis of other centres, Steinbach does remain well-positioned to move forward on developing a locally based transit initiative.

But choices are not just limited to routing, vehicle types, and different service models, but include different service delivery models too: a city can own, operate and run a public transit service, or contract it out to a private company, such as is the case in Airdrie.

Regardless of the governance model used, what is essential to make a transit operation work successfully is open communication. This means those city officials, relevant civic departments and external organizations as well as local citizens need to be consulted early in the planning process of any public transit service to facilitate effective route planning and service implementation. For instance, ensuring that snow clearing staff is consulted to determine how bus routes and stops will be given priority after snowstorms.

In light of the foregoing information, the Institute of Urban Studies recommends that, should the Steinbach Transportation Project Steering Committee choose to pursue this matter further, the following steps be taken:

1. Open a dialogue and consult directly with city policy makers and related departments;
2. Identify provincial and federal government responsibilities and grant structures as they pertain to transportation systems (including identifying if the funding from the Federal Gas Tax rebates can be used for local sustainable transportation systems);
3. Initiate a public consultation process to find the true requirement of service levels. These consultations would include all sectors of the city, including businesses, service providers, politicians, and most importantly, the general public;
4. Consult with transportation planners and engineers and other civic departments to identify what would need to be involved in implementing transit; and
5. As was the case in Airdrie, seek out the involvement of and partnership with the transit department and planners of the larger regional city – in this case, Winnipeg. There expertise would be invaluable in the planning and implementation process.

If this project is to proceed to a feasibility study, we further recommend that it be structured according to the five questions identified in section 5.5:

1. What is the service area?
2. What are the potential peak demands for times?
3. What level of service is required for the peak and off peak times?
4. What kind of service is required for the users?
5. What are the identifiable advantages and challenges that each type of service model will have within the community?

Although this report was not intended to determine the viability of a *specific* transit system type or model in the City of Steinbach, the report does show that there is the potential client base, necessary growth and most importantly the *need* for more sophisticated public transportation, whatever form that may take based on further deliberation and consultation.

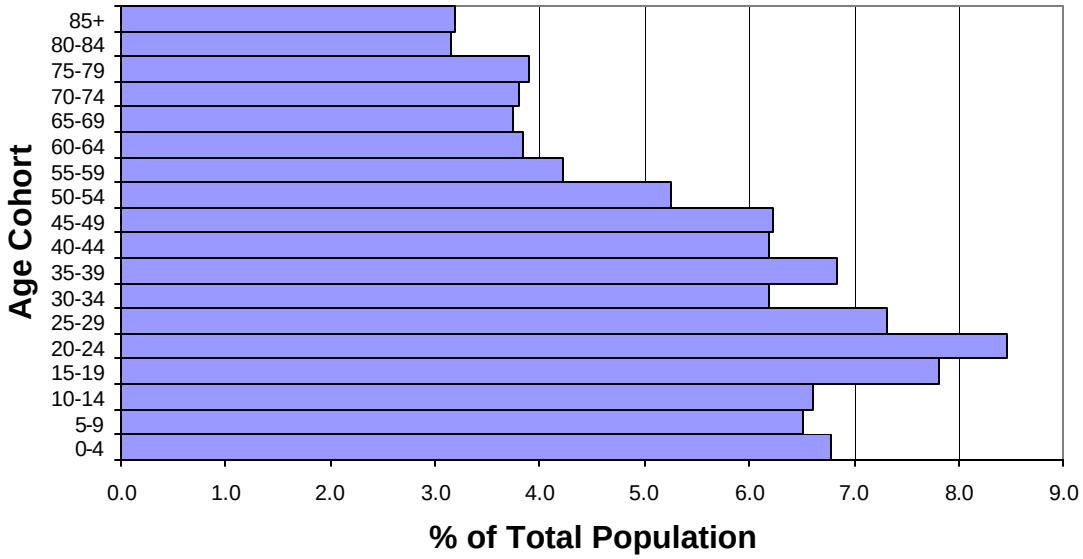
Therefore, the consulting team recommends that Steinbach move forward to determine a course of action that will result in the implementation of a pubic transportation system. Again, two critical points should serve this next step well:

- While the case studies presented in this report have provided insight and thorough research into these matters, it is ultimately the community of Steinbach that must determine their own course of action and the system that best meets local needs.
- The community must also recognize that public transportation systems evolve and change over time as needs shift and the community grows, starting small and "fine tuning" a system is common among most communities.

In closing, while Steinbach represents an ideal community to implement a transportation system, finding the right solution will require a community effort that must involve bringing all sectors together in a comprehensive planning process. However, fundamental to the success of moving any initiative forward will require a ***political champion***, most likely the Mayor who will then need to leverage support from the other levels of government as well as rallying the local community to support and build a system truly representative of the needs of Steinbach.

Appendix 1: Data Tables: Demographic Information

Age Structure of Steinbach, 2001



Births in Manitoba, 1947-2004

Table A1
Population Change in Steinbach and Nearby Municipalities, 1986-2001

Municipality	**1986**	**1991**	**1996**	**2001**	**percent Change 1986-2001**
De Salaberry [RM]	2,851	2,985	3,067	3,227	13.2
Franklin [RM]	1,835	1,651	1,724	1,781	-2.9
Hanover [RM]	8,033	8,905	9,833	10,789	34.3
La Broquerie [RM]	1,774	2,038	2,493	2,894	63.1
Niverville [T]	1,452	1,514	1,731	1,921	32.3
Piney [RM]	1,781	1,559	1,604	1,688	-5.2
Reynolds [RM]	1,175	1,297	1,314	1,298	10.5
St-Pierre-Jolys [VL]	912	907	925	893	-2.1
Ste. Anne [RM]	3,369	3,810	4,213	4,427	31.4
Ste. Anne [T]	1,402	1,477	1,511	1,513	7.9
Steinbach (T)	7,473	8,213	8,478	9,227	23.5
Stuartburn [RM]	1,629	1,517	1,563	1,603	-1.6
TOTAL (less Steinbach)	**26,213**	**27,660**	**29,978**	**32,034**	**22.2**

Table A2
Population Age Structure Change in Steinbach, 1991-2001

Age Cohort	Population			Change in Population			**percent Change in Population 1991-2001**	**Cohort Growth Rate as a Multiple of Town Growth Rate**
	1991	1996	2001	1991-96	1996-01	1991-01		
0-4	650	650	625	0	-25	-25	-3.8	-0.3
5-9	625	555	600	-70	45	-25	-4.0	-0.3
10-14	580	590	610	10	20	30	5.2	0.4
15-19	640	600	720	-40	120	80	12.5	1.0
20-24	750	765	780	15	15	30	4.0	0.3
25-29	735	660	675	-75	15	-60	-8.2	-0.7
30-34	635	630	570	-5	-60	-65	-10.2	-0.8
35-39	565	540	630	-25	90	65	11.5	0.9
40-44	430	540	570	110	30	140	32.6	2.6
45-49	350	465	575	115	110	225	64.3	5.2
50-54	310	365	485	55	120	175	56.5	4.6
55-59	300	310	390	10	80	90	30.0	2.4
60-64	315	315	355	0	40	40	12.7	1.0
65-75	675	695	695	20	0	20	3.0	0.2
75+	660	805	945	145	140	285	43.2	3.5
Town	8213	8478	9227	265	749	1014	12.3	

Table A3
Age Cohort Retention Analysis for Steinbach

Age Cohort	Size of Cohort 1991	Size of Same Cohort Five Years Later	Size of Same Cohort Ten Years Later	Ten Year Net Change	Ten Year percent Change
0-4	650	555	610	-40	-6.2
5-9	625	590	720	95	15.2
10-14	580	600	780	200	34.5
15-19	640	765	675	35	5.5
20-24	750	660	570	-180	-24.0
25-29	735	630	630	-105	-14.3
30-34	635	540	570	-65	-10.2
35-39	565	540	575	10	1.8
40-44	430	465	485	55	12.8
45-49	350	365	390	40	11.4
50-54	310	310	355	45	14.5
55-59	300	315	345	45	15.0
60-64	315	340	350	35	11.1

Table A4
Retention of Pre-Retirement Cohorts in Municipalities within Steinbach's Hinterland

Municipality	Age Cohort	Size of Cohort 1991	Size of Same Cohort Five Years Later	Size of Same Cohort Ten Years Later	Ten Year Net Change	Ten Year percent Change
De Salabery	50-54	120	120	120	0	0.0
	55-59	120	115	90	-30	-25.0
	60-64	125	115	100	-25	-20.0
Franklin	50-54	95	90	100	5	5.3
	55-59	85	75	75	-10	-11.8
	60-64	115	100	80	-35	-30.4
Hanover	50-54	370	345	305	-65	-17.6
	55-59	295	270	260	-35	-11.9
	60-64	240	200	175	-65	-27.1
La Broquerie	50-54	90	95	100	10	11.1
	55-59	65	70	70	5	7.7
	60-64	75	65	50	-25	-33.3
Niverville	50-54	50	60	70	20	40.0
	55-59	45	50	55	10	22.2
	60-64	45	40	50	5	11.1
Piney	50-54	115	120	130	15	13.0
	55-59	120	125	120	0	0.0
	60-64	120	110	90	-30	-25.0
Reynolds	50-54	65	60	75	10	15.4
	55-59	70	65	60	-10	-14.3
	60-64	75	55	50	-25	-33.3
St.Pierre Jolys	50-54	30	35	25	-5	-16.7
	55-59	30	35	25	-5	-16.7
	60-64	25	15	20	-5	-20.0
Ste. Anne (RM)	50-54	155	185	205	50	32.3
	55-59	120	200	185	65	54.2
	60-64	100	180	185	85	85.0
Ste. Anne (T)	50-54	75	70	60	-15	-20.0
	55-59	45	35	50	5	11.1
	60-64	50	70	65	15	30.0
Stuartburn	50-54	95	90	85	-10	-10.5
	55-59	95	90	95	0	0.0
	60-64	105	95	85	-20	-19.0

Appendix 2: Potential Contacts for Key Informant Interviews, Phase Two

- City of Steinbach (including the handi-van operation),
- Clearsprings Mall Administration,
- School boards (public and private),
- Employment centres (including Safeway and Canadian Tire for a consumer and employment perspective),
- Educational institutes (esp. the soon-to be completed Steinbach multi-institutional campus); Bible college,
- Churches and church groups,
- Eastman Employment Services,
- Daycare centres,
- Loewen Family Foundation,
- Steinbach Arts Council,
- Mennonite Museum
- Steinbach Taxi

Additionally identified by the Institute of Urban Studies:

- Steinbach immigrant settlement office
- City of Airdrie Transit
- City of Cranbrook Transit
- Winnipeg Transit
- Brandon Transit
- Grey Goose Bus Lines (Thompson Transit)

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