

Technical Paper

County of Grey Transportation Master Plan

Paper 3c - Transit Strategy

1.0 Introduction

Grey County, which is predominantly rural in nature with a handful of small towns and built-up areas, does not have a county wide public transit system. The City of Owen Sound offers the only public transit service within the Grey County area (although this service is only provided within the City limits). While there are specialized transit services offered within the County, these are individual services that cater to very specific geographic areas and demographic segments of the population (ie. seniors, disabled, etc.). As such, travel within Grey County is heavily dependent on the private automobile. Those residents of Grey County who do not have access to a private automobile (seniors, youth, low income families, disabled persons, etc.) are thus severely limited in terms of their mobility. Limited mobility translates into limited access to essential services and employment opportunities which, in turn, results in social isolation. The implementation of a county wide public transit system in Grey County would increase mobility and accessibility of the rural population and reduce the social inequities inherent with a car centric society. It is noted that traffic congestion, a common pressure point when discussing public transit considerations, is not an issue for Grey County as the County road network operates below capacity. Rather mobility and accessibility, as noted, are the primary concerns.

2.0 Public Transit

2.1 Public Transit Service Options

A brief summary of typical public transit services is provided below. It is noted that the discussion on rural transit focuses on road transit (ie. buses).

2.1.1 Conventional Transit Service (Fixed Route/Fixed Schedule)

The conventional, or traditional, transit service consists of a fixed route and a fixed schedule. The transit vehicle travels along a pre-determined route making scheduled stops at pre-determined locations. The conventional service is most commonly offered in urban locations where population densities are relatively high and the service route is easily accessible by the users.

2.1.2 Demand Responsive Service

Demand responsive transit is a flexible service in that there is no fixed route or schedule. Rather, the route and schedule are dictated by the user demands for any given day. The user calls the provider in advance to request a pick-up at the user's location for transport to the desired destination. The provider, in turn, will organize a vehicle to respond to the request. Depending on the notice required by the provider to arrange the requested service (ie. 24-hours vs 48-hours vs real-time), the provider may co-ordinate a number of pick-ups by a single vehicle (this, of course, is also dependent on the requested destinations). In terms of route, the demand responsive service is extremely flexible and is largely

dictated by the pick-up and destination requests by the user. In terms of schedule, the degree of flexibility is determined by the notice period required by the provider. As the required notice period is decreased (ie. approaches real time), flexibility increases for the user and the service becomes more reflective of a typical taxi service.

2.1.3 Conventional/Demand Responsive Hybrid Service

This type of service combines certain attributes of the conventional transit service with those of the demand-responsive transit service. The following are typical examples of a hybrid service.

2.1.3.1 Route Deviation Service

The route deviation service follows a specific route at scheduled times and includes scheduled stops or unscheduled stops. Upon pre-arranged user request, the transit vehicle is permitted to deviate from the route to pick-up or drop-off a passenger (unscheduled stop); however, the vehicle must re-enter the fixed route at the same point at which the initial deviation occurred (thus ensuring that the fixed route is followed in its entirety). In considering that the service must maintain its scheduled stops on-time, the extent to which route deviation occurs is controlled through the definition of a deviation area (deviation beyond this area will result in a disruption to the overall schedule). The route deviation service allows users to access the service at the scheduled stops (as per conventional transit) or via a request in advance for a route deviation (as per demand responsive transit).

2.1.3.2 Point Deviation Service

This service establishes scheduled stops at scheduled times along a route (the stops are generally locations where user demand would be high such as a town centre, shopping mall or employment district) but does not specify the route to be followed between the scheduled stops. The actual route between the stops is dictated by user requests made in advance for pick-up and drop off at pre-scheduled stops (pre-scheduled in that they are requested and arranged in advance by the user but are not regular stops and do not appear on the published schedule). Although the route is flexible and allows for pre-scheduled stops, service to the scheduled stops must remain on-time, or remain within a determined window of time, as per the established schedule.

The route and point deviation services are best utilized in areas where trips of the typical user are not time sensitive. Thus, in the event of a deviation from the route, the user does not associate the deviation with poor service.

2.1.4 Other Services

2.1.4.1 Many-to-Few Service

The many-to-few (or many-to-one) service provides scheduled service to and from a handful of clustered destinations or a single destination (these destinations are usually high demand destinations). The user requests service in advance to and from one of the scheduled destinations. The routes are thus wholly determined by the provider given the user requests for any given day. The destinations are

not flexible, which is typical of a conventional transit service, whereas the ability for a user to call to arrange pick-up is typical of a demand responsive service.

2.1.4.2 Jitney Service (Fixed Route/Flexible Schedule)

A jitney service runs on a fixed route with no schedule. This type of service runs on a high frequency and requires high demand. A park-and-ride facility offering transportation between a remote parking lot and a high demand destination/origin (ie. airport) is a typical example of a jitney service. These services are not usually associated with public transit as they are often privately owned and operated.

2.2 Public Transit Costs

It is acknowledged that public transit services are almost always supported by government subsidies. That is to say, it is rare that a public transit service will recoup its operating costs via its standard operating revenue stream (ie. fares, advertising space, etc.). The extent to which a service is subsidized depends on many factors including the characteristics of the service area (ie. size of area and ridership) and the level/type of service offered. A common measure of a transit service's performance is the revenue to cost ratio (which reflects the percent of costs recovered or offset by revenues). The revenue stream includes all revenue generated through operations (ie. does not include subsidy revenue). Table 1 provides a sample of revenue-cost ratios of local public transit services.

Table 1: Revenue-Cost Ratios (local services)

Public Transit Service	Revenue - Cost Ratio	Source
Barrie Transit	0.42	City of Barrie 2013 Operating Budget
Colltrans	0.21	Town of Collingwood 2012 Budget
Orillia Transit	0.62	2013 CAO Budget Report
Owen Sound Transit	0.39	2012 Owen Sound Transit Route Study, HDR
Toronto Transit Commission (TTC)	0.70	2011 TTC Operating Budget

In 2011, Owen Sound Transit reported a revenue-cost ratio of 0.39, which indicates a recovery of 39% of its costs through standard operating revenues (the remaining 61% would be subsidized). In 2012, the costs to operate Owen Sound transit exceeded the revenues by \$620,000. In 2013, a shortfall of \$750,000 has been projected.

The *2010 OMBI Benchmarking Report*¹ reported an average revenue-cost ratio of 0.43 in 2010 (the Ontario Municipal Benchmarking Initiative collects performance data across 37 municipal service areas). The revenue-cost ratios for those OMBI participants with transit services are provided in Table 2.

¹ *2010 OMBI Benchmarking Report*, Ontario Municipal Benchmarking Initiative. Online: http://www.ombi.ca/wp-content/uploads/OMBI_2010_Transit.pdf [Accessed February 2013]

Table 2: Revenue-Cost Ratios (OMBI Participants)

Municipality/Region	Revenue - Cost Ratio		
	2008	2009	2010
City of Barrie	-	0.45	0.43
Region of Durham	0.40	0.35	0.35
City of Hamilton	0.58	0.58	0.50
City of London	0.58	0.55	0.55
City of Ottawa	0.46	0.43	0.52
City of Sudbury	0.44	0.39	0.40
City of Thunder Bay	0.33	0.33	0.33
City of Toronto	0.74	0.67	0.70
Region of Waterloo	0.35	0.33	0.34
City of Windsor	0.50	0.48	0.47
York Region	0.40	0.37	0.37

As noted, only 4 of the 11 OMBI participating municipalities/regions with transit services reported a revenue-cost ratio of 0.50 or greater, with the City of Toronto reporting the highest revenue-cost ratio of 0.70. Even those services with high ridership do not recover the operating costs through standard operating revenues. This results from high costs to operate (equipment, maintenance, fuel, staff, etc.) and restraints on standard revenues, particularly fare revenue as a transit service must be affordable to the user and thus cannot simply raise fares to cover costs.

The actual costs to implement and operate a rural public transit service in Grey County are difficult to identify without first establishing the demand for public transit and the type of service required to satisfy that demand. No two rural transit services are the same and thus the operating costs will vary depending on the services provided. A national study of rural transportation services in the United States identified a cost range of \$1.50 to \$9.70 per trip², an indication of the wide variation in costs depending on the type of service implemented. Operating costs for transit service are typically in the order of \$60 to \$80 per hour, which considers fuel, maintenance, driver costs, etc. but not capital expenditures.

2.3 Public Transit Benefits

While the costs of public transit are well known and often publicized, there are also benefits to public transit that deserve consideration. The benefits do not always receive fair attention for the simple reason that they are not easily monetized. Studies have been conducted in an effort to measure the beneficial value of public transit; however, the benefits and associated values are dependent on

² *TCRP Report 6: User's Manual for Assessing Service-Delivery Systems for Rural Passenger Transportation*, Jon Burkhardt, Beth Hamby, and Adam McGavock, Transportation Research Board, Washington DC, 1995.

variables such as the type of service offered, the type of user, ridership levels (expected or actual) and certain demographics of the service area (such as employment and average earnings). The following are typical benefits associated with public transit:

- User benefits – benefits experienced by users as a result of increased access to services;
- Equity benefits – public transit reduces social isolation by increasing the mobility of the otherwise transportation disadvantaged, thus aiding community equity;
- Option value – the benefit realized by those who would otherwise rely on more expensive modes of transportation (ie. taxi services);
- Efficiency benefits – public transit use realizes certain efficiencies when contrasted with the private automobile (ie. reduced congestion and pollution emissions; cost savings related to parking, fuel, and maintenance; etc.); and
- Infrastructure benefits – increased public transit use can reduce the number of vehicles on the road which ultimately reduces road maintenance costs and the need for additional infrastructure (ie. road widening or new roads).

It is further noted that public transit is commonly viewed as subsidized by public monies. In this respect it could also be argued that the road network is also subsidized through tax revenues, and to a far greater extent than any public transit service.

As can be seen, the benefits of public transit are numerous but at the same time are difficult to measure. In terms of Grey County, any public transit service to be offered/implemented must be somewhat defined in order to identify and accurately value the benefits associated with such service.

3.0 Rural Transit - Examples

3.1 City of Kawartha Lakes

The City of Kawartha Lakes recently completed a 13-month pilot project which introduced limited public transit on 4 rural routes (operated on alternating days) connecting to Lindsay at a cost to the City of \$48,000 (funded by provincial gas tax funds)³. The service operated similar to a conventional service with scheduled stops on each of the routes (the bus did not divert from its route and only stopped at designated bus stops). It is understood that no studies were undertaken to identify the extent or location of latent demand for public transit in the area. During the 13-month pilot, the service had provided 895 rides. At the noted operating cost of \$48,000, the cost per ride was approximately \$54. Assuming that each of the 895 riders paid the full adult fare of \$2.00 (exact fare revenue is not available), the fare revenue over the 13-month pilot would be \$1,790. This equates to a revenue-cost ratio of 0.04 (or less than 4% of costs recovered through revenues). Given the costs and low ridership, the City of Kawartha Lakes discontinued the service after the pilot period.

³ *Rural transit routes defended despite \$54 cost per rider.* Lisa Gervais. <http://www.thepost.ca/2012/10/08/rural-transit-routes-defended-despite-54-cost-per-rider>

3.2 Bancroft - The Rural and Overland Utility Transit (TROUT)

The Rural and Overland Utility Transit (TROUT) service is supported by the Town of Bancroft and several neighbouring municipalities. Initially operated to provide transportation to seniors, the service has evolved into a fixed route and scheduled service (a hybrid of conventional transit and demand responsive) providing service for all. TROUT runs 5 routes during the week, providing service to a different community each weekday. The routes to each community are fixed, with passengers able to “wave down” the bus anywhere along the route (the service also has scheduled stops). Those requiring service to their front door can schedule the pick-up 48 hours in advance. TROUT connects each of the participating communities to the Town of Bancroft - offering trips into Bancroft in the AM and trips out of Bancroft in the PM. Between the AM and PM schedule, TROUT travels a fixed route within the Town of Bancroft.

TROUT service is operated on a funding formula which includes fare revenues, advertising revenues, municipal contributions, the provincial gas tax rebate for transportation and contributions from other community support initiatives. For 2011-2012 (April 1 to Mar 31 fiscal year), TROUT reported revenues of \$235,125 and costs of \$269,105, realizing a loss of \$33,980⁴. However, of the total revenues, only \$21,845 was generated by transit operations (ie. fares and advertising). This equates to a revenue-cost ratio of approximately 0.08 (or 8% of costs recovered through revenues). The participating municipalities contributed \$18,705, with the remaining \$194,575 of revenue coming from other sources as noted above. Despite the loss, TROUT service is recognized as a success in rural transit; with ridership increasing each year (ridership has increased from 5,228 in 2010/11 to 5,983 in 2011/12 and is projected to reach 7,011 in 2012/13).

4.0 Grey County Transit Strategy

4.1 Rural Population

The population of Grey County, as per the 2011 census data, is 92,568 (this includes the population of Owen Sound - reported at 21,688). The census data further reports that 49,563 residents, or 54% of the total population, are considered to live in a rural setting. If the population of Owen Sound is removed from consideration (and assuming that 100% of the Owen Sound population is considered as urban), the percentage of those residents in Grey County living in a rural setting increases to 70%. This is an important reality when considering the feasibility of a county wide public transportation offering, as conventional approaches are not necessarily appropriate in rural settings.

4.2 Transportation Disadvantaged

Ready access to transportation is not a benefit that is available to all members of the general population. The level of access available to any one person may be determined by a variety of factors such as geographical location (ie. rural vs urban), income level or age. Residents of rural areas, such as Grey County, typically have far fewer transportation options available to them than do residents of

⁴ TROUT Report to Municipalities 2010-2012, John Keith & Gord MacDonald. October 2012.

urban areas. This can generally be attributed to the economies of scale that are associated with the greater population densities and development levels of urban areas (high density population/development are desirable characteristics with respect to public transit and other transportation offerings). As such, residents of rural areas tend to be far more dependent on the private automobile. Where alternatives modes to the car are not available or are not considered feasible (ie. long distances will preclude non-motorized modes such as walking or cycling), those who do not have ready access to a private automobile are disadvantaged with respect to transportation. Segments of the population that may be vulnerable to experiencing transportation disadvantage include:

- low income households/individuals;
- single parent families;
- disabled individuals;
- seniors; and
- youths.

The intent of identifying the vulnerable segments of the population is to identify the potential user groups in Grey County that would realize the greatest benefit from a transit offering. A review of the 2011 census data for Grey County reveals the following:

- 21.1% of the population was 65 years of age or older;
- 18.8% of the population was 17 years of age or younger; and
- 12.5% of census families are single parent families.

With respect to the age demographic in Grey County, the Ontario Ministry of Finance projects that the percentage of the population 70 years of age or older will rise from 14.6% in 2012 to 27.4% in 2036⁵. This dramatic increase is consistent with ongoing conversations about the aging population in Canada. It is inevitable that as the population ages, the number of individuals requiring transportation assistance will also increase for this demographic.

The 2011 census data related to household income had not been released at the time of publication; however, the 2006 data indicated that 7.8% of the economic families in Grey County were considered to be low income households⁶.

4.3 Public Transit Demand

Before implementing a rural transit service, the demand for such must be identified in order to determine whether a transit service can be supported, and, if so, where the service should be located. Based on the origin-destination data gathered for this study, the greatest volumes of daily trips occur between Owen Sound and the Township of Georgian Bluffs (2,460 trips) and between Owen Sound and the Municipality of Meaford (1,095 trips). By no means do these volumes indicate that a transit service

⁵ *Population by 5-yr age group, 2012-2036 – Reference scenario – Census divisions in Southwestern Ontario*, Ontario Ministry of Finance, 2013.

⁶ *Your Community in Profile: Grey, Bruce, Huron, Perth*. Ontario Trillium Foundation, 2008.

can be supported, rather they provide a starting point for further research into where the demand may exist. As the only City within the County (and a hub of essential services and employment), it is considered logical to focus on connecting Owen Sound with the surrounding municipalities. However, further study is required to determine where demand for public transit exists, and whether such is significant enough to warrant service. It is recommended that the County co-ordinate with the municipalities and with those organizations currently providing transit service within the County to determine demand levels and the location of such. Trip surveys should also be circulated to the public to gather further demand data.

It is further noted that any study into demand should also attempt to identify the predominant market or user type. Seniors, youths, stay at home parents and commuters all have very different transportation needs. The type of transit service provided must suit the needs of its primary target market.

4.4 Public Transit Opportunities

Acknowledging the need for the County to identify the demand and market for public transit, the following opportunities are recommended as possible options in establishing new, or enhancing existing, transit services within the County.

4.4.1 Local Transit Service

Introducing new local conventional transit services within Grey County is not recommended at this time. The population levels and densities in the existing population centres are not such that would support a stand-alone service. A recent study completed for the Town of Bradford-West Gwillimbury identified a desired population threshold of 30,000 people for establishing a public transit service⁷. While public transit services have been introduced in municipalities with lower populations (Owen Sound, Collingwood, Midland), their respective populations far exceed the population levels of the individual urban centres/built-up areas within Grey County. Despite this reality, the County should begin laying the groundwork to ensure that future growth in the County occurs in a manner that would support local public transit initiatives in these population centres. In this respect the County should collaborate with the municipalities to develop transit supportive development strategies (ie. intensification based land-use policies, identification of specific growth areas, transit-supportive design policies for future development, etc.).

In terms of existing local services within Grey County, Owen Sound provides the only scheduled public transit service. While there are examples of local public transit being expanded to include adjacent service areas (such expansion has occurred in Simcoe County between Collingwood and Wasaga Beach, with Collingwood expanding the Colltrans service into Wasaga Beach to provide a successful link between these communities and a proposed expansion of the Barrie Transit service between Barrie and CFB Borden), expansion of the Owen Sound transit service is not considered realistic at this time.

⁷ *County of Simcoe Transportation Master Plan*, Earth Tech Canada Inc, Markham, ON. July 2008

However, consideration should be given to minor scale route expansion that has the potential to increase ridership (ie. providing service to the movie theatres on the Sunset Strip). The Colltrans expansion links Collingwood with Wasaga Beach, two service areas with respective populations in excess of 16,000 (for a total serviceable population of over 30,000). In addition, the population density along this link is much higher than the municipalities surrounding Owen Sound. However, as Owen Sound is a major hub of essential services and employment, the County should initiate discussions with the City and the adjacent municipalities regarding the future potential role of Owen Sound Transit in connecting these municipalities with Owen Sound. Furthermore, the location of future development and designation of settlement areas within these municipalities (Georgian Bluffs, Meaford and Chatsworth) should consider the ability to connect to Owen Sound via public transit.

4.4.2 Inter-Municipal Transit

Inter-municipal connections within the County are recognized as an important element of the overall transit strategy for Grey County. Many of the primary settlement areas within Grey County do not have the essential services required by the general population. It is becoming more common for such services to be located in large urban settlements, such as Owen Sound. As such, access to these services can be expensive as taxi services are often the only transportation option for those without access to a private automobile. Limited inter-municipal service is currently provided by Greyhound, a private bus operator. The existing service, however, is not an exclusive inter-municipal service but rather a segment of Greyhound's larger inter-city network. It is recommended that the County investigate the potential for private-public partnerships with private bus operators currently providing inter-city services in Ontario. While Greyhound is an obvious candidate to enter into such a partnership (given that Greyhound currently provides service in Grey County), it is recommended that the County define the scope of service to be offered and solicit proposals from several inter-city bus operators as part of the competitive tendering process. The service offering should focus on connecting the primary settlement areas in Grey County with Owen Sound. To determine the type of service to be provided, discussions are recommended with the municipalities, current transit service providers (including the operators of specialized services within the County) and the public in order to identify demand and need.

4.4.3 Inter-Regional Transit

The opportunity to introduce inter-regional public transit is limited for Grey County. While there is interest from the public in a connection to GO Transit services in Barrie (specifically the rail service which ultimately serves the GTA), such would be difficult to implement given the location of Grey County and the resulting travel distance and travel time. It is therefore recommended that the County concentrate on establishing inter-regional routes on a smaller scale. Discussions should be initiated with Simcoe County and the Town of Collingwood regarding the potential to expand the Colltrans service into the Town of the Blue Mountains. This route would provide benefits for both counties as synergies already exist between Collingwood and Blue Mountain (it is understood that preliminary discussions are under way).

The County should enter discussions with Metrolinx regarding the extension of Go Transit bus services from Orangeville into Grey County. While it is acknowledged that the introduction of a Go Transit

service is not likely, the County should attempt to establish Metrolinx's threshold requirements for providing such service.

4.4.4 Alternative Service

It is recommended that the County explore the possibility of coordinating and supporting alternative transit services within the County. The TROUT model discussed in this paper provides the framework for a rural service which should be further investigated by the County. Grey County should enter into discussions with the surrounding municipalities and the operators of specialized services within the County (such as the Grey County Social Services van, SMART, HCSS, the Georgian HandiVan, etc.) to establish whether the existing transit services can be expanded or enhanced. Rather than begin a public transit offering from scratch, it is considered prudent to coordinate the existing services in order to realize potential operating efficiencies. Given that Grey County is not a transit operator, it is necessary to include those organizations that do offer transportation services and leverage their expertise and existing services to increase mobility and accessibility within the County.

4.4.5 Rail Transit

Regardless of public desire for passenger rail service within the County, the lack of rail infrastructure and low population density makes the realization of such highly unlikely. Passenger rail services, as convenient and desirable as they are, are costly to provide. The provision of GO service north of Toronto to the City of Barrie was not re-introduced until 2007, despite a large serviceable population along the line (Barrie, Newmarket, Aurora, Bradford, etc.) and existing infrastructure. The costs to install new railway tracks in addition to the annual costs to operate a passenger service into Grey County are prohibitive. As such, passenger rail transit service in Grey County is not considered a feasible option for the foreseeable future. However, it is recommended that the County maintain ownership of the existing rail right-of-way through the County.

5.0 Funding Opportunities

The implementing of any transit initiatives will require investment and support at the County level. Aside from typical revenue streams (ie. fares and advertising), the County should work together with the municipalities to establish an appropriate funding formula. Provincial and federal funding schemes available for public transit initiatives should be identified and leveraged. In this respect, it is recommended that the County review existing transit models and establish best practices that can be implemented within the County. The funding formula established must be sustainable to ensure transit services in the long term.

6.0 Transit Strategy Summary

The following summarizes the key points of the recommended transit strategy for Grey County:

1. Support existing local transit services within the County.
2. Support the transit-supportive development of the County and its municipalities through Official Plan land-use policies that encourage intensification and guided growth in settlement areas.

3. Take a leadership role in coordinating discussions with municipalities and private operators to identify the demand and market for public transit within the County.
4. Investigate the potential to create public-private partnerships to provide inter-municipal transit service.
5. Explore inter-regional transit opportunities with Simcoe County, Dufferin County and Metrolinx.
6. Research existing rural transit models to establish best practices for implementation in Grey County.
7. Facilitate discussions with municipalities and organizations providing existing specialized transit services in the area in order to identify where existing services can be expanded, combined or enhanced.
8. Establish a sustainable and equitable funding formula with the municipalities, exploring and leveraging all public transit funding schemes and grants available from the Provincial and Federal governments.

Grey County, its municipalities and other potential transit stakeholders involved in the transit discussion should pay particular attention to the age demographic of the County. The aging population offers a unique opportunity to provide a transit service to a rapidly growing market segment (as previously noted, the percentage of the population aged 70 years or older is expected to surpass 27% in 2036); however, the rapid growth of this population segment will inevitably be followed by a rapid decline. It is therefore crucial that the development of transit provision maintain a dynamic aspect with a view to providing service to multiple user groups going forward (if the service is developed to cater solely to the senior population segment, the service will likely collapse beyond the 25 year horizon as the population segment declines).

It is recognized that Grey County is not in the position to act as a public transit service operator, nor is this transit strategy intended to establish Grey County as a public transit service operator. Rather it is intended that the County will act as a facilitator and supporter of existing and future public transit services operating within the County.