EAST HANTS
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Municipality of East Hants
Corridor Feasibility Study

Project No. 111-26496

FINAL

Corridor Feasibility Study

GENIVAR

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1. Introduction

For the past few years, East Hants has been exploring the options for transit services, in response to the transportation challenges facing the community. This has included discussions with Metro Transit in Halifax Regional Municipality (HRM), Kings Transit (KTA), and officials of the Halifax International Airport Authority (HIAA). Previous studies have investigated service options for the Mount Uniacke area as well as the corridor region, with potential to connect to HRM Metro Transit services.

In May 2012, HRM Metro Transit plans to initiate the second of the highway corridor services identified in the HRM Regional Transit Plan to connect Dartmouth (Nantucket terminal) to the airport. This service plan presents the opportunity for the Municipality of East Hants to revisit the service options for the corridor region and update its understanding of the feasibility for transit to serve residents of East Hants.

1.1 Background Review

This section discusses key background studies and data review, and identifies opportunities and challenges for implementing a transit service throughout the corridor of the Municipality of East Hants to the Halifax Stanfield International Airport. Information discussed throughout was drawn from existing technical data, discussion with East Hants staff and stakeholder consultation.

1.1.1 Summary of Background Studies

HRM Regional Transit Plan – Express Park-n-Ride and Rural Transit Service

This study was completed by ENTRA Consultants (now GENIVAR) in 2006-2007, and examined the feasibility for highway-based commuter services in the Highway 102, Highway 103 and Highway 107 corridors.

The recommended services were park-n-ride express services, with stops at key highway interchanges. In 2009, HRM implemented the first of these, in the Highway 103 corridor, connecting Upper Tantallon to downtown Halifax. The service has proven extremely popular, and has led to plans for the implementation of the second corridor service in the Highway 118/102 corridor, connecting Dartmouth (Nantucket terminal) to the Halifax Stanfield International Airport via Fall River. This service is expected to start in May 2012, with 30-minute service in the peaks and hourly off-peak service, operating from approximately 5:00am to midnight.

East Hants Transit Feasibility Study

This study was completed by ENTRA Consultants (now GENIVAR) in 2008, and built on the work completed for HRM. The study specifically examined a similar highway-based service connecting the East Hants Highway 102 corridor communities to the airport. A survey of East Hants residents as well as airport employees was conducted for the study, which was funded jointly by the Municipality of East Hants and the Halifax International Airport Authority (HIAA).

The study identified the importance of the airport as an employment destination for East Hants residents, as well as for connections to other destinations in HRM. It identified the potential for a

park-and-ride-based service in the corridor with facilities at the primary Highway 102 exits, combined with an HRM service operating from Dartmouth to the airport and Enfield.

This study identified the service designs, parking locations and anticipated financial implications for a corridor service.

East Hants Strategic Plan

A review of the East Hants Strategic Plan was conducted and published in February 2011. The Strategic Plan outlines the overall strategy for the development of the community over the next 20 years.

The mission of the Municipality did not change from the existing version of the Strategic Plan, and is as follows:

> The Municipality of East Hants exists to deliver services in a financially responsible manner to diverse communities while; fostering sustainable development, preserving the natural environment and creating a high quality of life. The Municipality of East Hants respects the interests of its citizens, promotes active healthy lifestyles and values our history and our culture.

The Strategic Plan includes ten strategic directions, outlined here. Directions presented in bold are those that are directly supported by the provision of a municipally supported transit service.

1. **Generation of economic opportunities for growth.**
2. Develop evaluation criteria that will allow the Council to prioritize capital projects and to develop a multi-year plan for implementation.
3. **Heighten the visibility of the Municipality as a dynamic and viable community.**
4. Improve the working relationship between and among Councilors and staff.
5. **Improve the municipal relationships with the business community and developers while respecting the rights of residents.**
6. **Promote tourism with more effective focus on selected sites or attributes.**
7. **Strengthen recreation initiatives that improve healthy lifestyles and quality of life.**
8. Use the East Hants Official Community Plan to guide land use and development decisions to foster orderly and focused growth.
9. Enhance organizational efficiency and effectiveness.
10. **Enhance commitment to environmental sustainability.**

East Hants Combined Municipal Planning Strategy

The East Hants Combined Municipal Planning Strategy forms part of the East Hants Official Plan and was last amended in 2006.

While the plan does not include any specific references to the provision of transit, it outlines a number of objectives and associated guidelines that are support by and supportive of transit services, including:

- Community liveability
- Enhancing existing communities
- Community design
- Environmental sustainability
- Environmentally healthy communities
- Balancing and managing growth
- Active transportation features

1.1.2 Industry Practices Review

The following were selected based on their relevance to the East Hants context and examined as part of a best practices review of corridor services that are comparable to those proposed in the East Hants Corridor Feasibility Study:

- Spruce Grove Commuter Service (AB)
- Fort Saskatchewan Commuter Service (AB)
- Kings Transit Authority (NS)
- Abbotsford-Langley Commuter Service (BC)

These services may not completely mirror the requirements of the East Hants situation, for example, most are transporting commuters directly into larger major urban centres, but may share similar service features and requirements. General features are included here, along with a more detailed examination of the Kings Transit operation.

Service Characteristics

Service Frequency

The case study systems operate generally similar services with each focusing service during peak periods in the peak directions (and limiting or not offering service during non-peak times), starting between 5:30am and 9:00am, and resuming service during afternoon peaks generally between 4:00pm and 6:00pm. The shortest headways of the services reviewed were found in Spruce Grove, which offers 15-20 minute service during peak periods. Service in off-peak times can range from 60-120 minutes, or in some cases is not provided at all.

Travel Time

Trip times vary within each system but the typical times range between 60 to 90 minutes for one-way travel.

Vehicle Type

Most of the cases examined use highway coaches, but urban transit buses and small community buses are also used.

Fares

Fares in the peer review group fall in the following range:

- Local travel: $1.00 to $3.50 (one way)
- Commuter to neighbouring municipality: $5.00 (one way)
- Adult monthly pass (including service integration if required): $90 to $180

Other Features

- Service delivery models include services that are owned and provided by the municipality as well as leasing vehicles and operators from neighbouring larger systems (e.g. Spruce Grove and Fort Saskatchewan paying for Edmonton Transit vehicles and operations).
- Park and ride lots are provided for free in some of the peer group and can often be utilized as an incentive to increase ridership.
- While some services have inter-municipal fare reciprocity agreements, transfer to travel in other municipalities often requires payment of an additional fare.

Kings Transit

Kings Transit was reviewed as a service that is comparable to the proposed corridor services in East Hants. While it may not completely mirror the requirements of the East Hants situation it shares similar demographics and service requirements.

Description of Service

The Kings Transit service originally began as a service connecting Kentville and Wolfville in Kings County, but has been gradually expanded in cooperation with adjacent municipalities to serve a significant portion of the Highway 1 corridor in the Annapolis valley. Service now extends westerly from Kentville as far as Digby and Weymouth, and easterly from Wolfville as far east as Brooklyn, a distance of approximately 175km.

Service in the main urban areas of Wolfville and Kentville operates hourly from about 6:00am to about 9:00pm. In other areas, most routes operate with two-hour service from about 7:00am to about 9:00pm with reduced hours on Saturdays and no Sunday service.

The Highway 1 corridor is has similarities and differences from the Highway 2 corridor under consideration for this service. For the most part residential density in the Highway 2 corridor is more consistent than in the Highway 1 corridor. The lack of major nodes the size of Wolfeville or Kentville, or a post-secondary institution such as Acadia limits the opportunities in Highway 2 compared to Highway 1. Conversely, positive features of the Highway 2 corridor include that residential density along the Highway 2 corridor is more constant, a larger proportion of the corridor population lives within walking distance of the highway (limiting the need for diversions), the distance is considerably shorter and the corridor is anchored by the airport.

These characteristics will be considered as part of the ridership assessment for the corridor.

Fares

Exhibit 1 provides a summary of Kings Transit fares.

Exhibit 1 - Fares

Category	Fare Level
Adult Cash Fare	Any location in the corridor $3.50
Children 5-11	$1.75 (under 5 free)
Adult Monthly Pass	$90 per month
Student/Senior Monthly Pass	$65
Adult 10 Tickets	$30
Student/Senior 10 Tickets	$19

Performance Metrics

Exhibit 2 provides a summary of Kings Transit operational performance metrics. Information for taken from 2010 Canadian Urban Transit Association (CUTA) Transit Fact Book.

Exhibit 2 - Performance Metrics

Metric / Criteria	
Cost per trip	$7.05
Net cost per trip	$3.98
Cost Recovery (R/C)	44 percent
Trips per vehicle-hour	22.4

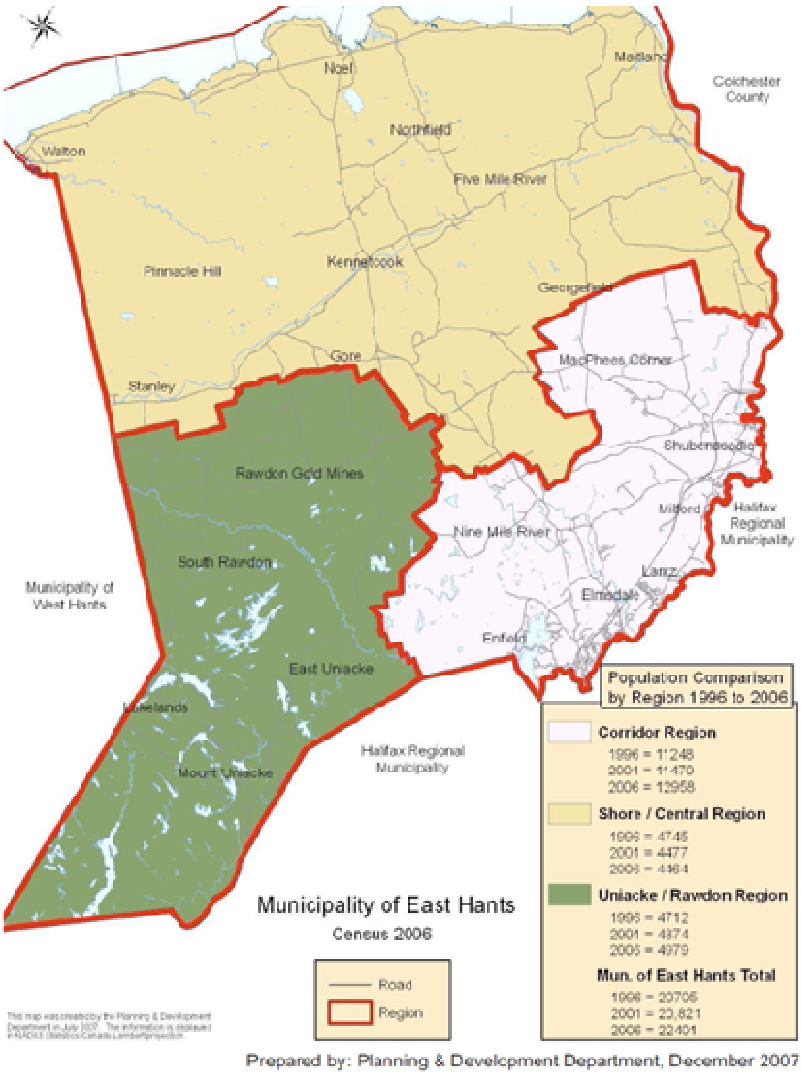
These fares and performance criteria will be used in the development of recommend fare structures and assessment of associated performance measures for the recommended East Hants system.

2. Market Analysis

2.1 Population

The 2008 Municipality of East Hants Socio-Economic Study identifies recent and projected population growth in the Corridor Region surrounding the Highway 102 corridor, which includes our study area and the communities of Enfield, Elmsdale, Lantz, Milford and Shubenacadie. Exhibit 3 identifies the communities and regions throughout East Hants, and indicates that population in the Corridor Region grew 15.2 percent from 1996 to 2006. This contrasts population throughout the Shore/Central and Uniacke/Rawdon Regions of East Hants, where population remained relatively constant over the same time period. Exhibit 3 also indicates that approximately 60 percent of the population of East Hants lives within the Corridor Region.

Exhibit 3 - East Hants



Source: Municipality of East Hants Socio-Economic Study, 2008

Exhibit 4 identifies the populations of the communities that contain a number of key destinations for the proposed corridor transit service.

Exhibit 4 - Community Populations

	Enfield	Elmsdale	Lantz	Milford	Shubenacadie
Population	3,621	3,099	2,007	1,599	1,618

Source: Municipality of East Hants Socio-Economic Study, 2008

2.2 Population Projections

Population forecasts for East Hants are provided in Exhibit 5, and indicate that small but steady population growth is projected in the municipality for the foreseeable future. As the Corridor Region is already home to the majority of East Hants residents, it is likely to continue to grow and absorb much of the population increase.

Exhibit 5 – East Hants Population Projections

	2006	2011	2016	2021	2026
Population	22,401	23,305	24,247	25,170	26,079

Source: Municipality of East Hants Socio-Economic Study, 2008

2.3 Employment

According to 2006 census data, approximately 4,000 individuals reported having their usual place of work in East Hants. While no specific data are available, a significant proportion of these jobs are located in the Corridor Region. The following counts are based on results of our consultation with a range of major area employers, and identify the number of employees that work at each location:

- Elmsdale Sobeys — 180 employees
- Elmsdale Superstore — 150 employees
- National Gypsum — 40 employees
- Elmsdale Lumber — 46 employees
- Scotian Homes/Home Hardware — 60 employees
- Shaw Brick — 180 employees (250 during peak season)
- Elmsdale Landscaping — 110 employees (during peak season)
- The Magnolia Nursing Home — 70 employees

2.4 Development Activity/Projections

The 2008 Socio-Economic Study indicates the following information regarding development in East Hants:

- Development activity in East Hants is 83 percent residential, 16 percent commercial, one percent institutional.
- The Corridor Region captures the majority of housing activity in East Hants (typically around 60 percent of new units), and historically captures the majority of approved lots and subdivision plans as well.
- 90 percent of housing units to (1988-2006) are single family dwellings.
- Lantz is projected to be the focus of short- to medium-term residential growth.
- Commercial activity is typically centred near Enfield and Elmsdale.

2.5 Commute Patterns – East Hants

According to the 2006 Census on Commuting Flow[1], a large number of East Hants residents work within their own municipality (2,665 persons). Major external commute flows for residents from other communities working in East Hants include from Halifax (775 persons), Colchester (250 persons) and West Hants (130 persons).

The total number of East Hants residents leaving the municipality to go to work in other places (5,610) is much greater than the total number of persons travelling from other places to East Hants for work (1,260).

Halifax is the main destination for residents of East Hants, with 5,025 persons commuting from East Hants to go to work in Halifax. Truro (230 persons) and Windsor (115) persons are the next most frequent destinations. Refer to Exhibit 6 and Exhibit 7 for East Hants commute flow details.

[1] Statistics Canada, 2008, "Commuting Flow Census Subdivisions: Sex (3) for the Employed Labour Force 15 Years and Over Having a Usual Place of Work of Census Subdivisions", Catalogue No. 97-561-XCB2006011. Ottawa. Released April 2008

Exhibit 6 – Commute Flows to East Hants

Place of Residence to Place of work	Total	Male	Female
West Hants to East Hants	130	55	75
Truro to East Hants	30	15	15
Stewiacke to East Hants	55	30	25
Pictou, Subd. B to East Hants	20	0	15
Halifax to East Hants	775	395	375
East Hants to East Hants	2665	1165	1500
Colchester, Subd. C to East Hants	200	95	105
Colchester, Subd. B to East Hants	50	25	30
Total	3925		
Total working in East Hants from outside	1260		

Source: Statistics Canada - 2006 Census. Catalogue Number 97-561-XCB2006011.

Exhibit 7 – Commute Flows from East Hants

Place of Residence to Place of work	Total	Male	Female
East Hants to Windsor	115	75	40
East Hants to West Hants	30	15	15
East Hants to Truro	230	55	175
East Hants to Toronto	25	20	10
East Hants to Stewiacke	75	25	55
East Hants to Pickering	20	20	0
East Hants to Indian Brook 14	20	10	10
East Hants to Halifax	5025	2690	2340
East Hants to East Hants	2665	1165	1500
East Hants to Colchester, Subd. C	35	20	15
East Hants to Colchester, Subd. B	35	20	20
Total	8275		
Total leaving East Hants for work	5610		

Source: Statistics Canada - 2006 Census. Catalogue Number 97-561-XCB2006011.

2.6 Commute Patterns – Truro

This study also examined the potential for and feasibility of extending service north from Shubenacadie to Truro.

According to the 2006 Census on Commuting Flow, a total of 9,935 people are employed in Truro. Of the daily 6,890 persons who come to work in Truro from other municipalities, 6,040 are residents of Colchester, with only 230 originating from East Hants. Conversely, 1,410 people leave Truro daily for work, 885 are destined for Colchester, with only 30 working in East Hants. HRM is the destination for approximately 230 residents of Truro, while approximately 275 employees travel to Truro from HRM.

Refer to Exhibit 8 and Exhibit 9 for Truro commute flow details.

Exhibit 8 - Commute Flows to Truro

Place of Residence to Place of Work	Total	Male	Female
Truro to Truro	3045	1270	1780
Stewiacke to Truro	95	10	85
Pictou, Subd. C to Truro	25	15	10
Pictou, Subd. B to Truro	45	20	15
Pictou, Subd. A to Truro	45	10	35
New Glasgow to Truro	50	10	45
Millbrook 27 to Truro	20	10	20
Halifax to Truro	275	110	160
East Hants to Truro	230	55	175
Cumberland, Subd. B to Truro	20	10	0
Colchester, Subd. C to Truro	2365	975	1390
Colchester, Subd. B to Truro	3320	1355	1970
Colchester, Subd. A to Truro	355	155	200
Antigonish, Subd. B to Truro	25	0	20
Annapolis, Subd. C to Truro	20	10	10
Total	9935		
Total working in Truro from outside Truro	6890		
Total working in Truro from East Hants	230		

Source: Statistics Canada - 2006 Census. Catalogue Number 97-561-XCB2006011.

Exhibit 9 - Commute Flows from Truro

Place of Residence to Place of Work	Total	Male	Female
Truro to Truro	3045	1270	1780
Truro to Oxford	40	40	0
Truro to Millbrook 27	205	90	115
Truro to Halifax	230	145	85
Truro to East Hants	30	15	15
Truro to Colchester, Subd. C	435	295	140
Truro to Colchester, Subd. B	425	270	160
Truro to Colchester, Subd. A	25	20	0
Truro to Amherst	20	20	0
Total	4455		
Total leaving Truro for work	1410		
Total working in East Hants from Truro	30		

Source: Statistics Canada - 2006 Census. Catalogue Number 97-561-XCB2006011.

2.7 Airport Commuters

GENIVAR's previous work included a survey of employees at the airport. For the purpose of the study, total employees working at the airport were estimated at approximately 6,000, and a survey completed as part of the study was by 782 individuals. Results of this survey have been filtered for the East Hants context and show the following information:

Airport Employee Survey

- 157 out of 782 respondents were East Hants residents working at the airport.
- Among East Hants residents, 48 percent were from Enfield and 26 percent were from Elmsdale.
- 58 percent of all East Hants respondents were aged 25 to 44.
- 63 percent of all East Hants respondents were female, 37 percent male.
- 94 percent of all East Hants respondents travel to the airport on Monday to Friday.
- 95 percent of all East Hants respondents have access to a vehicle to get to the airport.
- 87 percent of all East Hants respondents park in free spaces provided by their employer.
- Important service features for a transit service from East Hants to the airport (selected by more than 80 percent of all East Hants respondents) include: schedule reliability to and from the airport, speed of service and frequency in peak hours.
- 81 percent of all East Hants respondents would like bus stops along secondary highways and local streets.
- Park and Ride lot and bus terminal in a central location in East Hants was identified as useful by 81 percent of all East Hants respondents.
- Further application of the survey respondent/location breakdown to total airport employees estimates that there are approximately 576 Enfield residents and 312 Elmsdale residents working at the airport.

Airport Employee Survey Assessment

If this proportion is representative, then approximately 1,200 East Hants residents are estimated to work at the airport. In turn, this would mean that approximately one-quarter of the East Hants residents reporting a workplace in HRM would be destined for the airport. Since the airport is the largest employment area in close proximity to East Hants, this seems a reasonable estimate.

It may be possible to capture a very small percentage of those residents who have access to a car, and incentive and disincentive policies would be important in maximizing this amount. The degree to which a service would attract the five percent of employees who do not have access to a car would depend on the attractiveness of the service, as determined by the speed and frequency of a corridor transit service.

In addition to this potential, it is important to note that a transit service would also expand the potential labour pool of the airport area, providing access to transportation for those who would now not consider employment at the airport because of the lack of transportation options.

2.8 Market Research and Needs Assessment

Based on the review of background materials, discussion with stakeholders and staff, travel and commute patterns, and assessment of existing and projected demographics, population, employment, and development, GENIVAR has identified key markets and destinations to be served by a corridor transit service in East Hants.

As discussed throughout Section 2, the airport is a frequent destination for East Hants residents and a major employment generator, and is therefore a primary destination that should be considered by all proposed route and service options. East Hants residents commuting beyond the airport may also be able to transfer at the airport and continue on service into Halifax Regional Municipality. A number of higher population residential areas exist within the Trunk 2 corridor area, along with key destinations such as the Hants East Rural High School and the Sportsplex, and these should all be served by proposed route and service options.

The following indicate identified key markets and destinations:

Key Markets

- Corridor commuters
- Airport employees and employees of airport tenants
- Commercial and government employees near Exit 8 / Highway 214
- Other HRM commuters
- Students
- Seniors

Key Destinations

- Commercial/retail area near Exit 8 / Highway 214
- Government office area near Exit 8 / Highway 214
- Hants East Rural High School in Milford
- Halifax Stanfield International Airport
- Residential population in Enfield
- Residential population in Elmsdale
- Projected future residential development and Sportsplex in Lantz
- Residential population in Shubenacadie
- Health service agencies in Elmsdale

3. Consultation Summary

As part of the corridor study, GENIVAR together with East Hants staff, conducted stakeholder consultation to maximize the input and involvement of relevant stakeholders. Stakeholder consultation included a series of in-person interviews held throughout East Hants during the week of January 9, 2012, with a number of follow-up meetings during the week of January 16, 2012. In total, approximately 20 stakeholders were consulted, representing a broad range of interests.

Through these meetings we were able to establish effective two-way communication with key stakeholders to identify their needs, issues and priorities with regard to the potential for corridor transit services in East Hants.

This section provides a summary of the feedback received through the stakeholder meetings, and these results have informed development of the needs assessment and corridor service options.

3.1 Online Survey

As discussed previously in Section 2.7, GENIVAR conducted an online survey of employees at the airport as well as East Hants residents as part of the East Hants Transit Feasibility Study in 2008. These surveys were completed by more than 1,000 individuals in total (782 respondents to the airport employee survey, 240 respondents to the East Hants resident survey), and results from these surveys have been analyzed to inform our understanding of the transportation needs and issues of the Municipality.

3.2 Stakeholder Input Comments

Where relevant, each stakeholder provided data and information about their clients or constituents and their relevant programs that has been considered in the development of service alternatives.

Responses from the stakeholders are summarized in the following paragraphs.

Local Business and Organization Interviews

Telephone and face-to-face interviews were conducted with a number of local businesses to seek their views on the concept of a local transit service and the possible impacts on their business from an employee recruitment point of view and the benefits to their employees and customers.

Interviews were conducted with the following local businesses:

- Elmsdale Sobeys
- Elmsdale Superstore
- National Gypsum
- Elmsdale Lumber

- Scotian Homes/Home Hardware
- Shaw Brick
- Elmsdale Landscaping
- Strides Health & Fitness Centre
- The Magnolia Nursing Home

Most employers interviewed indicated that employees are generally recruited from the local area. While most employers indicated that they had no difficulty finding qualified applicants for job openings, others acknowledged that lack of transportation options can make it difficult for some employees to travel to work, especially for students to fill part-time openings, and agreed that a local public transit service would broaden the pool of perspective employees by offering transportation to all residents.

All businesses interviewed support the concept of a local transit service indicating that the implementation of a public transit service would benefit the communities as a whole and provide customers, especially seniors and those without available transportation, with improved access to local retail businesses.

The Magnolia Nursing Home has 71 residents and identified transportation is a major issue for the residence. A local service would give many residents the opportunity to travel within the community for shopping and attending social events.

Interviews were also conducted with a number of organizations and agencies including:

- HIAA
- East Hants Alternative Transportation Service (EHATS)
- Hants East Rural High School
- Municipality of East Hants, Department of Recreation and Culture
- HRM Transportation Planning
- HRM Metro Transit
- Hants Regional Development Authority
- Municipality of East Hants (CAO)
- Municipality Of East Hants (Councillors)
- East Hants & District Chamber of Commerce
- Nova Scotia Dept of Transportation
- Nova Scotia Utility & Review Board, Motor Carrier Division
- Province of Nova Scotia, Service Nova Scotia

Halifax International Airport Authority

HIAA is very supportive of transportation connections to the airport to support their tenants, as well as for customers of the airport. HIAA has supported the implementation of the HRM Metro transit service to the airport through funding support for the vehicles.

HIAA is very interested in a service that would expand the opportunity for East Hants residents to access employment opportunities at the airport, particularly at tenant operations, current and planned.

Expansion plans for the airport include a significant expansion of retail and commercial opportunities to try to capitalize on the approximately 12 million annual visitors. This will support previous estimates of employment opportunities at HIAA.

HIAA recognizes that employment pools for tenants may be limited by the lack of transportation options, and are interested in supporting a service that connects East Hants residents to the airport. This represents a potential funding opportunity for the proposed service.

East Hants Alternative Transportation Service (EHATS) offers door-to-door transportation to residents of East Hants through a combination of two wheelchair equipped vans and local volunteer drivers using their own vehicles, providing approximately 4300 trips annually. The East Hants Alternative Transportation Service was started to meet a need for transportation for the East Hants Adult Learning Association. EHATS charges customers a membership of $20 and 65 cents per kilometre to travel. EHATS conducts regular runs to the East Hants Learning Centre as well as a number of trips for medical and grocery shopping. Many of the registered members of the service are social assistance recipients.

EHATS is funding through Service Nova Scotia's Community Transportation Assistance Program (CTAP), fares and municipal contributions.

EHATS supports the concept of a local transit service as it would offer increased travel options to its' clients and possibility reduce the reliance on EHATS service for some clients, freeing space for new members. There could also be some planned coordination of travel between the two services.

Hants East Rural High School currently has between 800 and 900 students and 53 teachers. Interviews were conducted with the Principal and Vice-Principal of the High School both of whom were very supportive of a local transit service indicating that a public transit service would be a great benefit to the school and the students who attend the high school. Students attending after school sports and activities are not provided school busing and most rely on parents for transportation. A transit service would allow students without transportation options to attend after school activities and reduce reliance on parents to drop-off and pick up students.

Many students have free classes before and after school classes commence but arrive or depart on the regular school bus runs. This means that these students often arrive at the school well before their classes begin or stay at the school well after their classes end. A local transit service would allow these students the opportunity to arrive or leave the school at times closer to beginning or end of their classes.

The Principal and Vice-Principal also indicated that students from the Indian Brook area sometimes have difficulty attending classes on a regular basis due to unreliable transportation. A bus service to the area would assist these students in attending classes on a regular basis.

While the Hants East Rural High School offers facilities for a number of after-hour activities there are plans to expand the use of its 800 seat auditorium for events such as stage acts, music concerts, dance competitions and other activities for public use. A public transit service would support the use of these after hour activities.

A local transit service would also assist students attending the local public swimming pool and East Hants Sportsplex activities after school.

Municipality of East Hants, Department of Recreation and Culture staff expressed difficulties for students in finding transportation to after-school activities and part-time employment. A local transit service would improve travel to the new East Hants Sportsplex and the public swimming pool. There are also plans for the construction of a new skate board park in the future. The Department views a transit service as supporting the Department's active transportation initiatives and the use of local walking and bicycle trails and sports activities for all residents.

Province of Nova Scotia, Department of Transportation discussions were held with staff from the Province of Nova Scotia Department of Transportation to review the objectives of the study and receive feedback. Department of Transportation staff advised that if park-and-ride sites were proposed for this service, a traffic impact study approved by the Department would be necessary. Also all bus stop locations would need to be evaluated for safety and approved by the Department. These requirements are addressed as part of the implementation plan.

Halifax Regional Municipality, Transportation Planning Manager reviewed the future of the Municipality's plans for transit service to the Halifax Stanfield International Airport and future plans to extend the service further along Highway 102. A park and ride lot is currently under construction at the Fall River exit and service is expected to commence from Dartmouth along Highway 118, into the park and ride lot at the Fall River exit, back along Highway 102, through the Aerotech Industrial Park into the Halifax Stanfield International Airport and return. There are no plans to continue the service further along Highway 102 to the Enfield area in the immediate future.

HRM, Metro Transit staff echoed the comments from HRM Transportation Planning. Service between Dartmouth and the Halifax Stanfield International Airport is scheduled to commence at the end of May 2012. Service will be every 30 minutes during peak travel times with reduced frequency off-peak. Service will operate between 5:30 am and 12:15 am approximately. The one-way adult cash fare will be $3.25 one way. Metro Transit received $500,000 funding from the HIAA and will operate 40' conventional transit buses. Metro Transit will focus service improvements in the urban with no plans to expand service further along Highway 102 in the immediate future.

Hants Regional Development Authority staff reviewed developments planned for the area including expansion of the East Hants Industrial Park. They also identified Indian Brook as a possible market for local transit service.

Municipality of East Hants (CAO) reviewed the objectives of the study and identified the need for transit service especially for senior citizens given the aging population.

Municipality of East Hants (Councillors) Councillors were invited to a meeting to review the objectives of the study and express their views on potential transit service. The councillors in attendance were supportive of the concept of a local transit service, discussed the benefits to the community and agreed that if the service moved forward, a trial period of three to five years would be needed to allow the service to grow and mature.

East Hants and District Chamber of Commerce represents 180 members. Most businesses are located in the Elmsdale, Enfield and Shubenacadie areas. Approximately forty percent are located within HRM. Discussions centered on the lack of reliable transportation available to residents seeking employment with local businesses and attending medical appointments and social events.

Nova Scotia Utility and Review Board, Motor Carrier Division staff reviewed the objectives of the study and advised on regulatory requirements. If the transit service is approved, the Municipality of East Hants would be required to apply to the Motor Carrier Division for approval for an operating license. The application would include the type of vehicles to be used, fares, routing and schedules. If the service is contracted to a private carrier, then that carrier would apply for an amendment to their existing license. Staff advised that in the event that a transit service is planned, a license should be applied for early in the process and before any vehicles are ordered, should there be a difficulty with the approval of the license. All vehicles are inspected for safety by the Motor Carrier Division twice a year.

Province of Nova Scotia, Service Nova Scotia staff advise that Service Nova Scotia is in the process of restructuring the funding process for TripNS funding requiring applicants to complete a feasibility study followed by a business plan and finally a pilot project. Funds could be available for each phase.

Funding is available under the Community Transportation Assistance Program (CTAP) program for door-to-door service and capital funding up to 50% for the purchase or refurbishment of an accessible vehicle is available under the Accessible Transportation Assistance Program (ATAP). There may also be funding available from EfficiencyNovaScotia www.efficiencyns.ca (formally Conserve NS) who offer Transportation Efficiency Incentives Programs for projects such as the purchase of hybrid vehicles. Municipalities can also apply gas tax funding to transit vehicles buses if the municipality owns the vehicles.

Development Community

Interviews were conducted with the following developers:

- Armco Capital
- Clayton Developments
- Elegant Acreage Land Co (Paul Mombourquette)

There was no indication from developers that development activity in the corridor area would increase beyond the present historical activity of between 120-150 dwelling units per year. All

developers interviewed were of the opinion that development in East Hants would not increase in the near future due primarily to economics comparative financial benefits of building in HRM compared to East Hants

Further to this, each developer believed that a transit service to the airport would be welcomed and be of great benefit to the East Hants community. Transit was seen as good “bang for buck” for municipal spending. It was suggested that the transit route include Lantz, Enfield, and Elmsdale.

4. Corridor Service Options

Based on the assessment to date, the following section will provide an overview of the process utilized to develop the corridor route and service options.

The process of identifying a preferred corridor service option began with development of six individual routes. The following provide an overview of the route and service option development process:

- Each individual route (identified as Routes 1 through 6) throughout Section 4 represents a different possible way to provide transit service to the key destinations and populations throughout East Hants.
- Individual routes provide the basis for the service options discussed in Section 5.
- Each individual route map includes a legend of “timing reference points” (identified as points A through K in the legend accompanying each route map) that were segments used to calculate timing and speed for the route options.
- Precise transit stop locations have not been calculated as part of this study, so these reference points do not necessarily correspond to key destinations or stops within the individual routes.
- These individual route options were then arranged in different combinations to form the service options that are evaluated in Section 5 of this document. For example, (and as shown in Exhibit 10) Route 1 and Route 2 are combined to operate in tandem, and together form Service Option 2. In the same way, the other service option scenarios involve different combinations of the individual routes described throughout this section. Combining the route options in such a manner provides us with a range of potential options to meet the transit needs of East Hants.

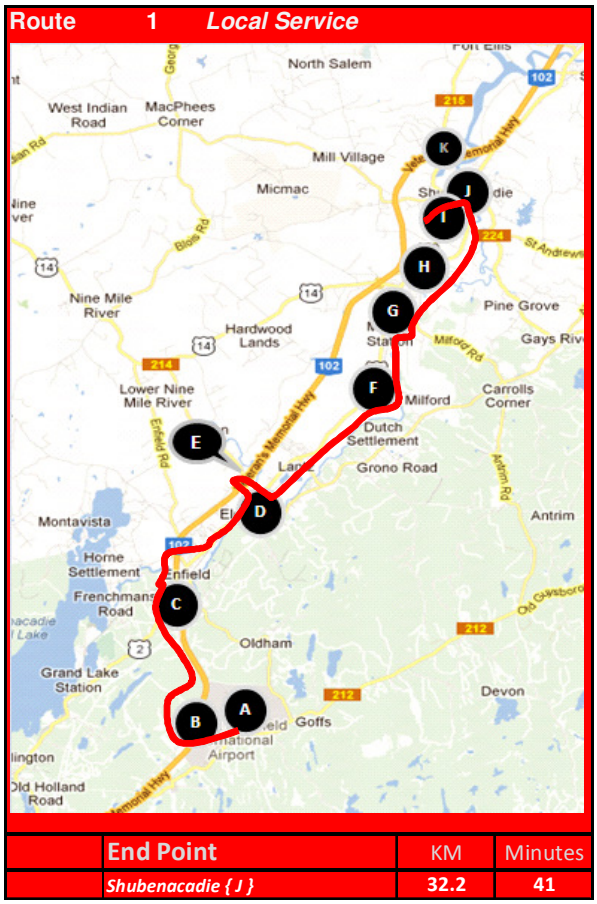
Exhibit 10 - Route and Service Options

Individual Routes	→	Service Options	→	Combination of Individual Routes
Route 1	These individual routes have been organized in different combinations to form service options	Service Option 1	=	Route 1 + Route 1
Route 2		Service Option 2	=	Route 1 + Route 2
Route 3		Service Option 3	=	Route 1 + Route 3
Route 4		Service Option 4	=	Route 2 + Route 5
Route 5		Service Option 5	=	Route 1 + Route 4
Route 6		Service Option 6	=	Route 1 + Route 6

Route 1 – Local Service

- As shown in Exhibit 11, Route 1 has a focus on providing local service through the Trunk 2 corridor with service to shopping, government and health service areas on Highway 214 to an end point in Shubenacadie.
- Service starting from the airport to Exit 7 through Enfield; Highway 214 to shopping area (Sobeys etc.), across Highway 102 to service Superstore shopping area and government and health services area; return to Trunk 2 north through Milford, north to Hants East Rural High School and Shubenacadie turn around loop point; return trip reverses the route back to the airport.
- 41 minute one-way time northbound from the airport.
- 32.2 km one-way distance northbound from the airport.

Exhibit 11 - Route 1



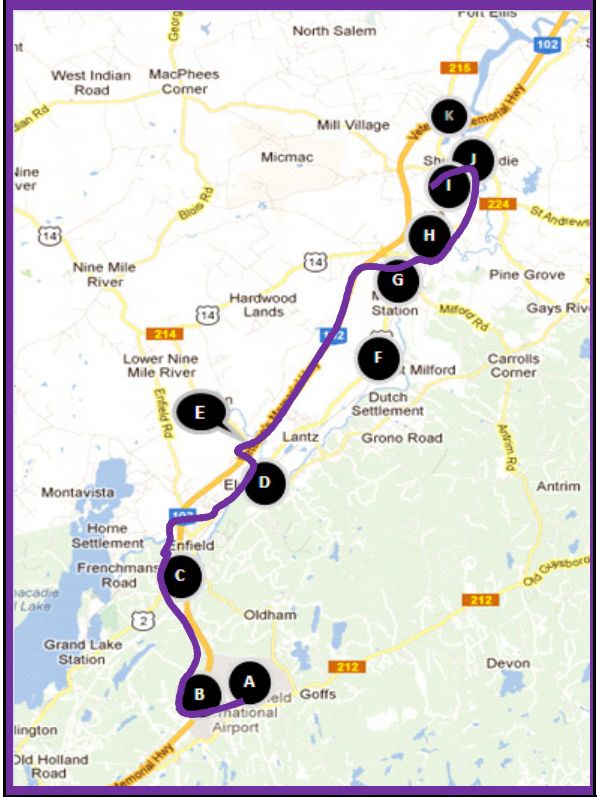
ID	Name
A	Airport
B	Gate of HWY 102 to Airport
C	Exit 7: HWY 2 & HWY 102
D	Elmsdale: HWY 2 & HWY 214
E	Elmsdale: HWY 102 & HWY 214
F	HWY2 & Woodworth
G	Milford Middle School
H	East Hants Rural High School
I	Shubenacadie boundary
J	Shubenacadie turn around
K	HWY102 2 & HWY 215

Route 2 – Partial Express on North Portion of Highway 102

- As shown in Exhibit 12, Route 2 has a focus on providing local service through Enfield and Elmsdale then express north on Highway 102 to an end point in Shubenacadie.
- Service starting from the airport to Exit 7 through Enfield; Highway 214 to shopping area (Sobeys etc.), across Highway 102 to service Superstore shopping area and government and health services area; continue north on Highway 102 to Exit 9 and north on Trunk 2 to Shubenacadie turn around loop point; return trip reverses the route back to the airport.
- 33 minute one-way time northbound from the airport.
- 29.2 km one-way distance northbound from the airport.

Exhibit 12 - Route 2

Route 2 *North portion of HWY 102*



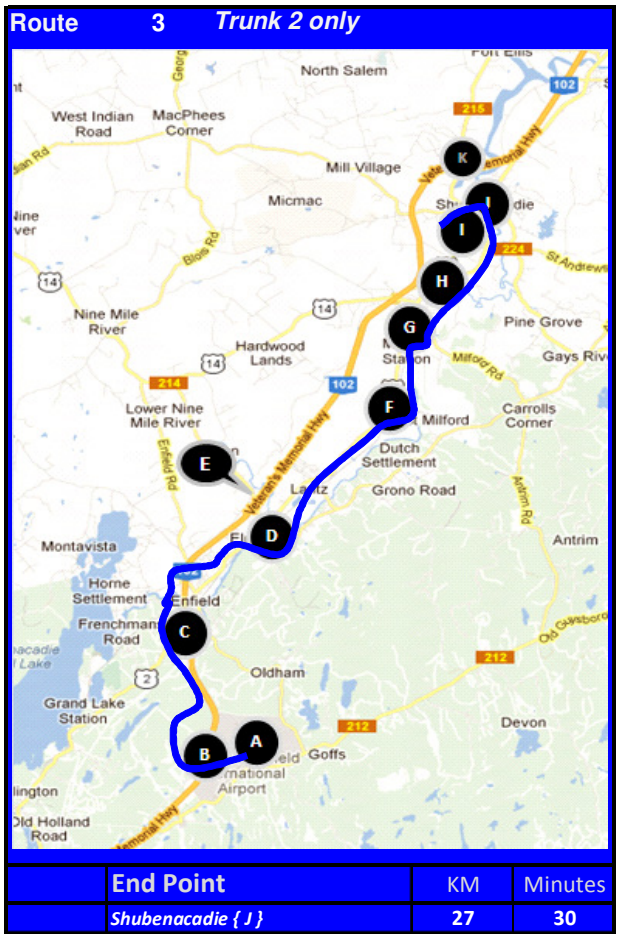
	End Point	KM	Minutes
	Shubenacadie { J }	29.2	33

ID	Name
A	Airport
B	Gate of HWY 102 to Airport
C	Exit 7: HWY 2 & HWY 102
D	Elmsdale: HWY 2 & HWY 214
E	Elmsdale: HWY 102 & HWY 214
F	HWY2 & Woodworth
G	Milford Middle School
H	East Hants Rural High School
I	Shubenacadie boundary
J	Shubenacadie turn around
K	HWY102 2 & HWY 215

Route 3 – Trunk 2 Corridor

- As shown in Exhibit 13, Route 3 has a focus on providing local service through the Trunk 2 corridor with an end point in Shubenacadie.
- Service starting from the airport to Exit 7 Trunk 2 north through Enfield, Elmsdale, Lantz and Milford, north to Hants East Rural High School and Shubenacadie turn around loop point; return trip reverses the route back to the airport.
- 30 minute one-way time northbound from the airport.
- 27.0 km one-way distance northbound from the airport.

Exhibit 13 - Route 3

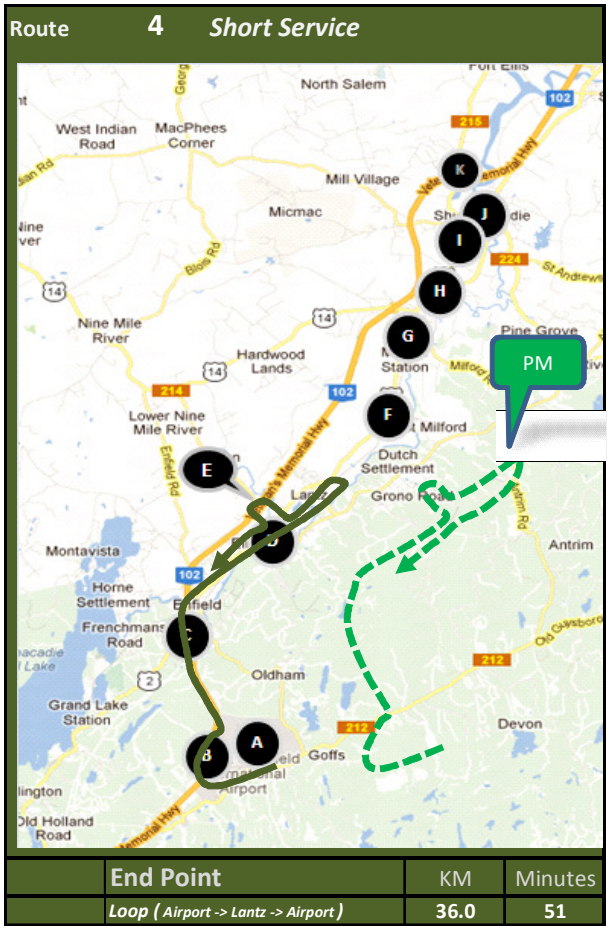


ID	Name
A	Airport
B	Gate of HWY 102 to Airport
C	Exit 7: HWY 2 & HWY 102
D	Elmsdale: HWY 2 & HWY 214
E	Elmsdale: HWY 102 & HWY 214
F	HWY2 & Woodworth
G	Milford Middle School
H	East Hants Rural High School
I	Shubenacadie boundary
J	Shubenacadie turn around
K	HWY102 2 & HWY 215

Route 4 – Short Service Loop to Highway 214

- As shown in Exhibit 14, Route 4 has a focus on providing a short loop from the airport through Highway 214 and to the Sportsplex in Lantz.
- AM service starts from the airport to Exit 7 through Enfield; north to Lantz and a turn-around point at the Sportsplex; returning south on Trunk 2 via detour on Highway 214 to shopping area (Sobeys etc.), across Highway 102 to service Superstore shopping area and government and health services area; return to Trunk 2 and south through Enfield to the airport.
- PM service alters this, starting at the airport to Exit 7 through Enfield; Highway 214 to shopping area (Sobeys etc.), across Highway 102 to service Superstore shopping area and government and health services area; return to Trunk 2 north to Sportsplex turn-around in Lantz; direct return south to the airport on Trunk 2.
- 51 min to complete the full loop.
- 36.0 km to complete the full loop.

Exhibit 14 - Route 4



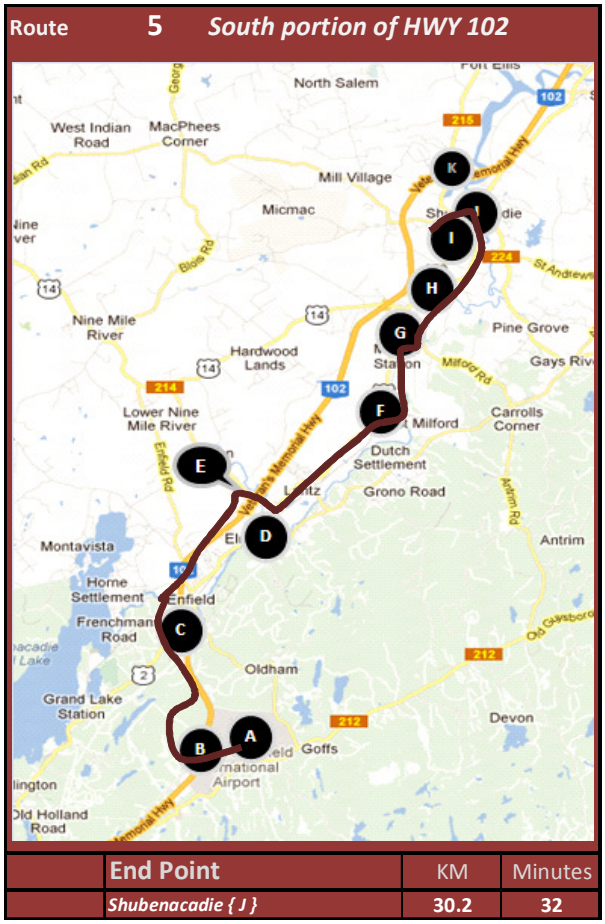
	End Point	KM	Minutes
	Loop (Airport -> Lantz -> Airport)	36.0	51

ID	Name
A	Airport
B	Gate of HWY 102 to Airport
C	Exit 7: HWY 2 & HWY 102
D	Elmsdale: HWY 2 & HWY 214
E	Elmsdale: HWY 102 & HWY 214
F	HWY2 & Woodworth
G	Milford Middle School
H	East Hants Rural High School
I	Shubenacadie boundary
J	Shubenacadie turn around
K	HWY102 2 & HWY 215

Route 5 – Partial Express on South Portion of Highway 102

- As shown in Exhibit 15, Route 5 has a focus on generally providing local service through the Trunk 2 corridor with a portion of the route on Highway 102 and an end point in Shubenacadie.
- Service starting from the airport north on Highway 102 to the Exit 8 interchange at Highway 214 through Superstore shopping area and government and health services area and to Sobeys shopping area on Highway 214 across Highway 102; continue to Trunk 2 and then north through Lantz and Milford, north to Hants East Rural High School and Shubenacadie turn around loop point; return trip reverses the route back to the airport.
- 32 minute one-way time northbound from the airport.
- 30.2 km one-way distance northbound from the airport.

Exhibit 15 - Route 5



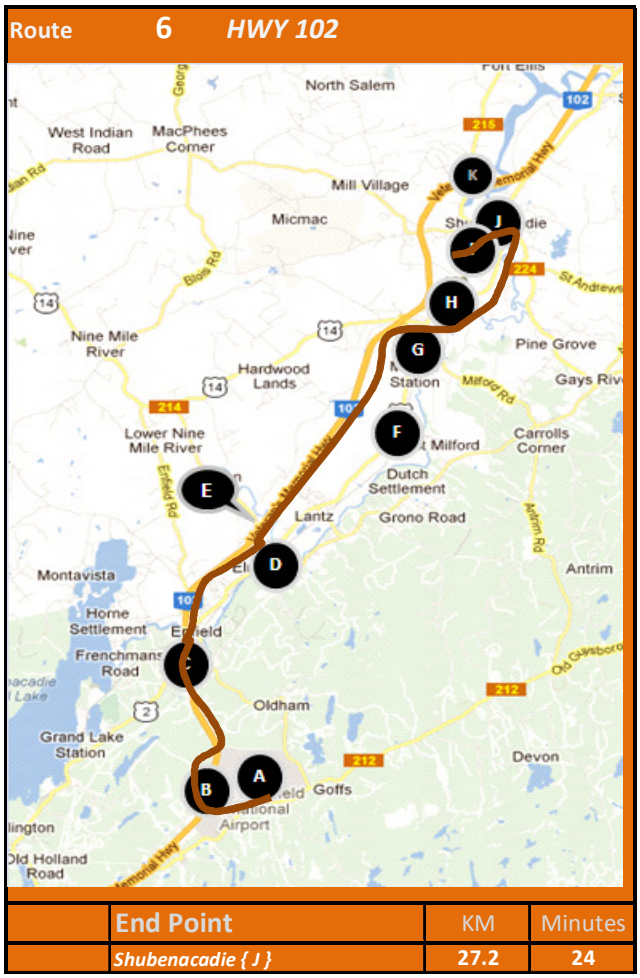
	End Point	KM	Minutes
	Shubenacadie { J }	30.2	32

ID	Name
A	Airport
B	Gate of HWY 102 to Airport
C	Exit 7: HWY 2 & HWY 102
D	Elmsdale: HWY 2 & HWY 214
E	Elmsdale: HWY 102 & HWY 214
F	HWY2 & Woodworth
G	Milford Middle School
H	East Hants Rural High School
I	Shubenacadie boundary
J	Shubenacadie turn around
K	HWY102 2 & HWY 215

Route 6 – Highway 102 Express to Shubenacadie

- As shown in Exhibit 16, Route 6 has a focus on providing express service from the airport to Shubenacadie.
- Service starting from the airport north on Highway 102 to Exit 8 interchange at Highway 214; service to Superstore shopping area and government and health services area and across Highway 102 to shopping area (Sobeys etc.); return on Highway 214 to Highway 102 north to the Exit 9 interchange and north to Shubenacadie turn around loop point; return trip reverses the route back to the airport.
- 24 minute one-way time northbound from the airport.
- 27.2 km one-way distance northbound from the airport.

Exhibit 16 - Route 6



ID	Name
A	Airport
B	Gate of HWY 102 to Airport
C	Exit 7: HWY 2 & HWY 102
D	Elmsdale: HWY 2 & HWY 214
E	Elmsdale: HWY 102 & HWY 214
F	HWY2 & Woodworth
G	Milford Middle School
H	East Hants Rural High School
I	Shubenacadie boundary
J	Shubenacadie turn around
K	HWY102 2 & HWY 215

5. Service Option Evaluation

To determine a preferred service option, the individual route options presented in Section 4 were combined in variations to present six service option packages. These service options were developed to identify the most efficient and effective transit solution for the potential corridor service.

For example, one service option may combine Routes 1 and 4, while another combines Routes 2 and 3 and so forth. A full list of route combinations and services options is shown in Exhibit 10 in Section 4.

These service options were then evaluated and ranked based on evaluation criteria that have been developed for the purposes of the East Hants Corridor Study context. Evaluation overviews for each service option are found in this section. Evaluation of all service options and identification of a preferred service option will ensure that the municipality is recommended the most efficient and cost effective transit solution to meet existing and future transit needs throughout the Highway 102/Trunk 2 corridor.

5.1 Evaluation Criteria

Evaluation criteria utilized for this study are summarized in Exhibit 17. The service option that best meets the objectives of the criteria will be recommended as the preferred service option.

Exhibit 17 - Evaluation Criteria

Evaluation Criteria	Criteria Description
Coverage	Considers the number of key destinations and populations served
Service Frequency Factor	Considers the combination of intervals between buses (known as service intervals or “headway”) and the proportion of the population served by connections. For this criteria lower values are better
Direct Service	
(a) Key Destinations	Directness of service (express) to key destinations
(b) Population	Directness of service (express) to areas with higher population
(c) Travel time	Ability of service to provide as quick a travel time as possible
Speed on bus	Considers time on bus and speed limit on route segments
Ridership Potential	Potential ridership based on service option coverage of populations and key destinations
Transfers	The need to transfer buses as part of origin-to-destination travel; can have significant impact on whether or not the service is attractive to customers

Cost

Annual cost of operation was calculated for each service option, but has not been included in the evaluation table due to the similarity of the cost totals between all options. Costs of the service are discussed in the financial plan, included in Section 8.

5.2 Evaluation Rating Scale

The following scale has been utilized to identify the rating of evaluation criteria throughout the service options:

5.3 Service Characteristics

Each of the service options is designed to serve the key market groups and areas, and therefore have similar overall service characteristics. These include:

- Level of service: objective to provide 30-minute peak service between key connections; 60-minute service in off-peak.
- Hours of service: initially, service is evaluated for weekday, service from 7:00 am to 7:00 pm; additional scenarios consider the addition of evening, Saturday and Saturday evening service.
- Route characteristics: options are developed to test the impacts of more direct and faster service via Highway 102, versus the better coverage and access to residential employment areas offered by service on Trunk 2. Options combine service on both routes, with different directions of travel, depending on peak period and direction.

5.4 Ridership Forecasting

Ridership forecasting for each option was based initially on an estimate of rides per vehicle-hour, with different levels for peak and off-peak periods. These initial values were set at:

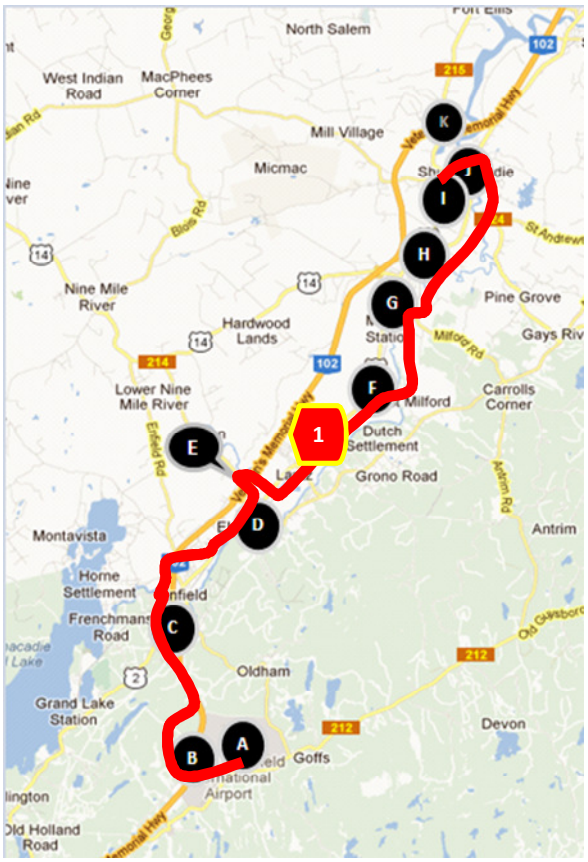
- 12 passengers per vehicle-hour, peak
- 6 passengers per vehicle-hour, off-peak

These values were then adjusted for each individual route, based on an aggregated calculation which considered travel speed (faster on Hwy 102, slower on Trunk 2), and the frequency of service, weighted by the significance of the connections served. These significance values were a combination of qualitative and quantitative factors, including population, employment, residential-to-employment and residential-to-school connections (for peak periods), along with residential-to-retail connections for off-peak periods.

5.5 Service Options

Exhibit 18 - Service Option 1

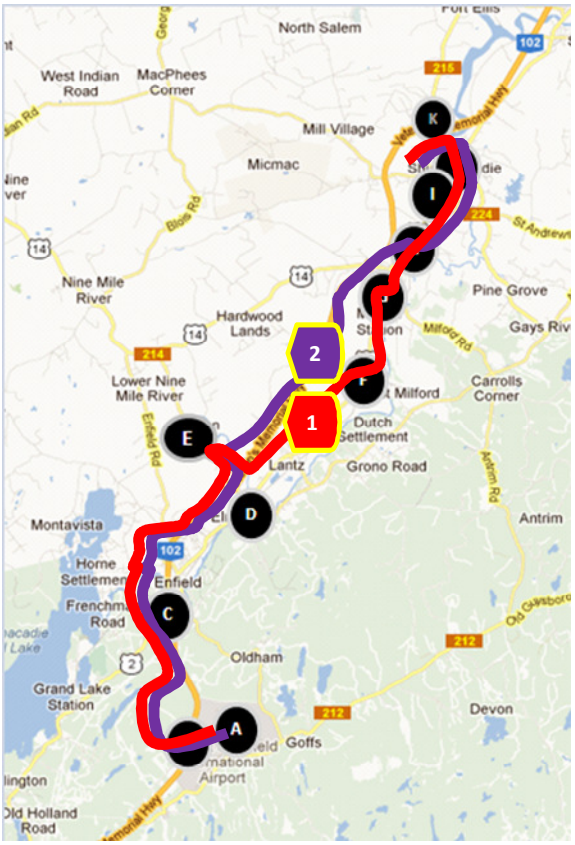
- This option operates two Route 1 buses together serving both directions during AM and PM peaks,
- Minimum service is provided during off-peak periods (evenings, midday, weekends) via operation of one Route 1 bus only (both directions)
- Average speed is slower due to the detour providing service to commercial, government and business park/service areas on Highway 214 and the lack of “express” segments on Highway 102
- Headways are higher due to the detour providing service to commercial and government areas on Highway 214 and the lack of “express” segments on Highway 102



Criteria	Evaluation	Rating
Coverage	Provides service to all identified key destinations and population areas	●
Service Frequency Factor	45	●
Direct (a)	Does not provide express portions along Highway 102 north of Exit 7	◔
Direct (b)	Does not have express portions along Highway 102 north of Exit 7	◔
Direct (c)	Does not utilize express potential along Highway 102 north of Exit 7	◔
Speed on bus	Average speed 28.2 km/h	◔
Transfer	Does not require transfer	●
Ridership	Ranked sixth out of the six service options for projected ridership	◑

Exhibit 19 - Service Option 2

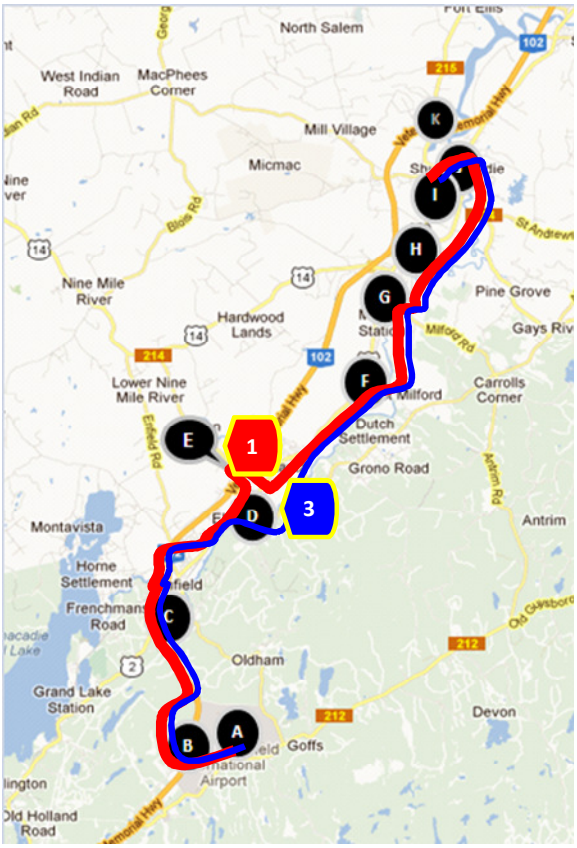
- → Routes 1 and 2 operate together in both directions during AM and PM peaks
- → Each peak vehicle covers both routes, one operating on Route 1 then Route 2, the other on Route 2 then Route 1
- → Reduced service is provided during off-peak periods (evenings, midday, weekends) via operation of Route 1 only (both directions)
- → Provides the full "local" service offered by Route 1 in conjunction with corridor-type service provided on segments of Route 2



Criteria	Evaluation	Rating
Coverage	Provides service to all identified key destinations and population areas	●
Service Frequency Factory	55	◕
Direct (a)	Has express service on portions of Highway 102	●
Direct (b)	Has express service on portions of Highway 102	◕
Direct (c)	Has express service on portions of Highway 102	●
Speed on bus	Average speed 25.5 km/h	◑
Transfer	Does not require transfer	●
Ridership	Ranked second out of the six service options for projected ridership	◕

Exhibit 20 - Service Option 3

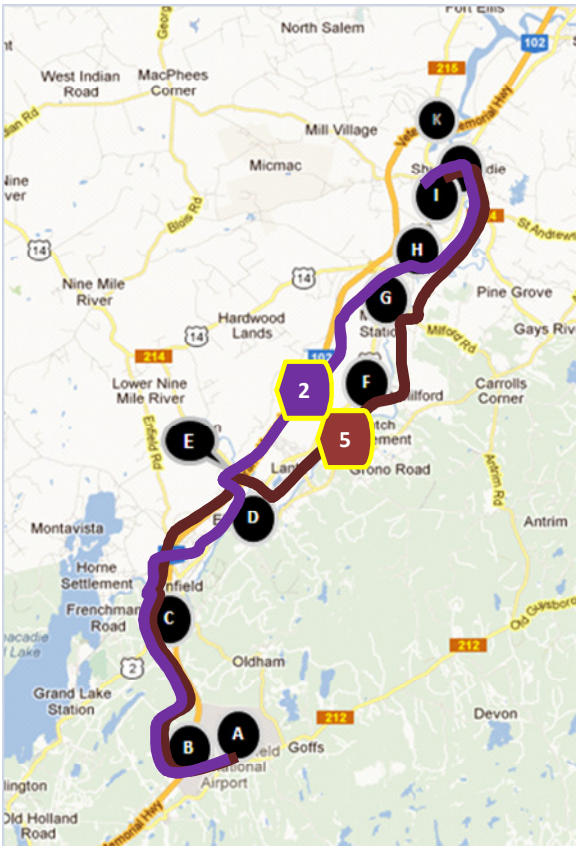
- → Routes 1 and 3 operate together in both directions during AM and PM peaks
- → Each peak vehicle covers both routes, one operating on Route 1 then Route 3, the other on Route 3 then Route 1
- → Minimum service will be provided during off-peak periods (evenings, midday, weekends) via operation of Route 1 only
- → Provides the full local service offered by Route 1, including service to commercial and government areas on Highway 214 in conjunction with the slightly more direct local connection between the airport and Shubenacadie offered on Route 3



Criteria	Evaluation	Rating
Coverage	Provides service to all identified key destinations and population areas	●
Service Frequency Factory	55	◕
Direct (a)	Option does not have express portions on Highway 102 north of Exit 8	◔
Direct (b)	Option does not have express portions on Highway 102 north of Exit 8	◔
Direct (c)	Option does not have express portions on Highway 102 north of Exit 8	◔
Speed on bus	Average speed 29.5 km/h	◕
Transfer	Does not require transfer	●
Ridership	Ranked sixth out of the six service options for projected ridership	◑

Exhibit 21 - Service Option 4

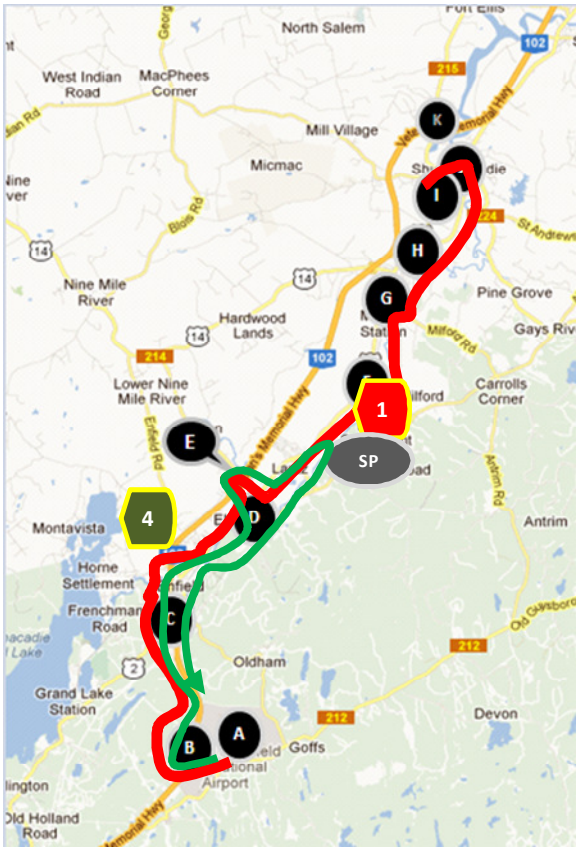
- → Routes 2 and 5 operate together in both directions during AM and PM peaks
- → Each peak vehicle covers both routes, one operating on Route 2 then Route 5, the other on Route 5 then Route 2
- → Reduced service is provided during off-peak periods (evenings, midday, weekends) via operation of Route 1 only
- → This option combines local service offered by Route 5, including service to commercial and government areas on Highway 214 in conjunction with the direct express connection between the airport and Shubenacadie offered on Route 2



Criteria	Evaluation	Rating
Coverage	Provides service to all identified key destinations and population areas	●
Service Frequency Factor	52	◕
Direct (a)	Express service on Highway 102 but no direct connection from Lantz to Enfield	◑
Direct (b)	Option has express service on Highway 102	●
Direct (c)	Option has express service on Highway 102	●
Speed on bus	Average speed 19.7 km/h	◔
Transfer	Transfer required for residents on Trunk 2 corridor north of Elmsdale (e.g. Lantz) traveling south of Hwy 214 at Elmsdale (and vice versa)	◔
Ridership	Projected to attract the highest ridership of the six service options	●

Exhibit 22 - Service Option 5

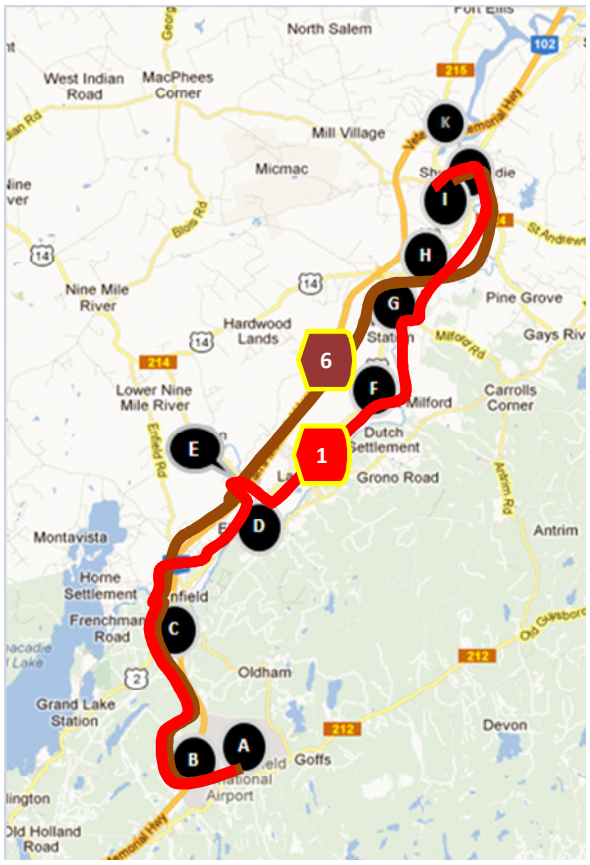
- → Routes 1 and 4 operate together during AM and PM peaks
- → Each peak vehicle covers both routes, one operating on Route 1 then Route 4, the other on Route 4 then Route 1
- → Reduced service will be provided during off-peak periods (evenings, midday, weekends) via operation of Route 1 only
- → Provides the full local service offered by Route 1, including service to commercial and government areas on Highway 214 in conjunction with a direct connection between Lantz and the airport on Route 4



Criteria	Evaluation	Rating
Coverage	Provides service to all identified key destinations and population areas	●
Service Frequency Factor	35 – provides highest frequency service to largest population areas	●
Direct (a)	Direct service between the airport and Enfield / Elmsdale but no express north of Exit 8 on Highway 102	◕
Direct (b)	Direct express service between the airport and Lantz but no express north of Exit 8 on Highway 102	◕
Direct (c)	Direct express service between the airport and Lantz but no express north of Exit 8 on Highway 102	◕
Speed on bus	Average speed 34.4 km/h	●
Transfer	Does not require transfer	●
Ridership	Ranked second out of the six service options for projected ridership	◕

Exhibit 23 – Service Option 6

- → Routes 1 and 6 operate together in both directions during AM and PM peaks
- → Minimum service will be provided during off-peak periods (evenings, midday, weekends) via operation of Route 1 only
- → Provides the full local service offered by Route 1, including service to commercial and government areas on Highway 214 in conjunction with a direct corridor connection between the airport and Shubenacadie on Route 4



Criteria	Evaluation	Rating
Coverage	Provides service to all identified key destinations and population areas	●
Service Frequency Factor	70	◔
Direct (a)	Option has express service on Highway 102	●
Direct (b)	Option has express service on Highway 102	●
Direct (c)	Option has express service on Highway 102	●
Speed on bus	Average speed 17.6 km/h	◔
Transfer	Does not require transfer	●
Ridership	Ranked second out of the six service options for projected ridership	◕

5.6 Evaluation Ranking

Exhibit 24 provides an overview of the scoring and evaluation of each proposed service option. Based on the scoring relative to all service options, Option 2 has been identified as the preferred option, followed by Option 6 and a tie between Option 4 and Option 5.

Scoring assigned four points for a full circle, three points for a three-quarters filled circle, two points for a half-circle and one point for a quarter-filled circle.

Exhibit 24 – Evaluation Summary

	Option 1	Option 2	Option 3	Option 4	Option 5	Option 6
Coverage						
Frequency						
Direct (a)						
Direct (b)						
Direct (c)						
Speed on bus						
Transfer						
Ridership						
Total Scoring	**18 points**	**27 points**	**19 points**	**23 points**	**28 points**	**25 points**
Overall rank	**6th**	**2nd**	**5th**	**4th**	**1st**	**3rd**

5.7 Service Recommendation

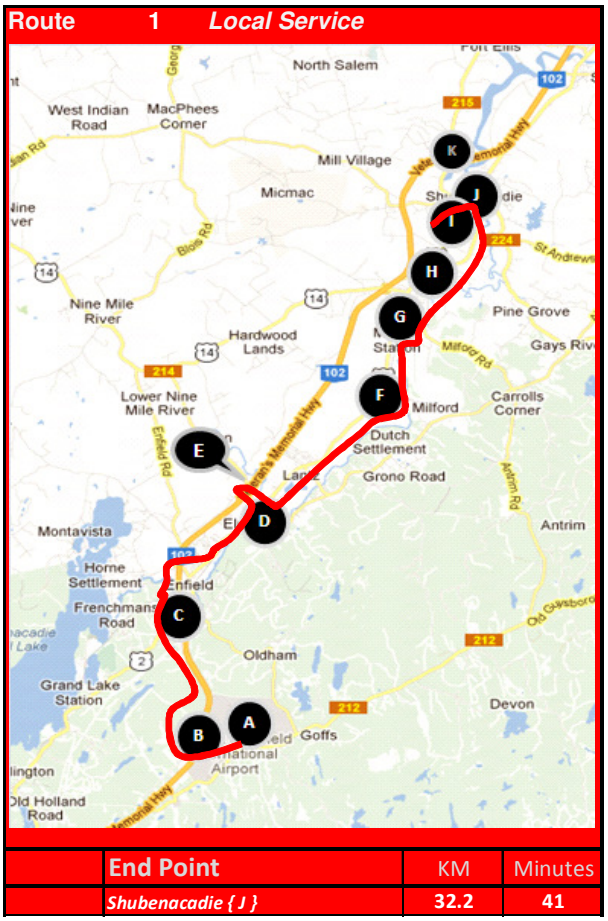
Based on our review of routes and service options we have identified Service Option 5 as the preferred service concept. This service is recommended to be implemented in a two-phase process. Ultimately, Service Option 2, combining Route 1 and Route 2 is recommended, operating with two buses in peak and one off-peak. However, if a lower cost implementation stage is desired, GENIVAR recommends that the service be implemented with Service Option 5, which can be implemented with one vehicle, and represents the best single vehicle solution combining optimizing cost and ridership.

5.7.1 Phase One– Initial Implementation

Full implementation of Option 5 includes operation of Route 1 and Route 4 together during weekday AM and PM peaks, supported by operating Route 1 by itself during off-peak periods. Phase One recommends a one-bus, reduced version of this full service via operation of just Route 4 by itself during AM and PM weekday peaks, supported by operation of just Route 1 by itself during off-peak periods.

Exhibit 25 identifies Route 4 (to be operated individually during AM and PM peak periods) and Route 1 (to be operated individually during off-peak periods).

Exhibit 25 - Phase 1 Routes



The following are characteristics of Phase One service:

- Initial weekday operation, from approximately 7:00am to approximately 7:00pm. Details of precise start and finish times and other schedule considerations would be developed during the implementation planning.
- Peak and off-peak operation comprising one vehicle. AM and PM peak would operate Route 4 between the airport and the Sportsplex in Lantz and in the off-peak Route 1 would operate between the airport and Shubenacadie via routing primarily on Trunk 2 that also serves shopping, government and health services on Highway 214.
- Weekday AM Peak service would operate from approximately 6:30 am until about 9:00 am, with one southbound trip on Route 1 from Shuebenacadie to the airport, followed by three trips in both directions on Route 4 between the airport and Lantz. Service on Route 4 would deviate from Highway 2 to the Elmsdale commercial areas at Exit 8 in the southbound direction only.
- Weekday AM Peak service would operate from approximately 3:00 pm until about 6:30 pm with three trips in both directions on Route 4 between the airport and Lantz, followed by one northbound trip on Route 1 from the airport to Shubenacadie, with service ending about 7:00 pm. Service on Route 4 would deviate from Highway 2 to the Elmsdale commercial areas at Exit 8 in the northbound direction only.
- Weekday off-peak service would comprise four round trips (about every 90 minutes) on Route 1 between Shubenacadie and the airport.
- Major stops would be established at the Hwy 102 exits with park-n-ride opportunities and along Hwy 2 at significant community areas in Enfield, Elmsdale, Lantz, Milford and Shubenacadie. Stop locations would include the Elmsdale commercial and service areas, Sportsplex, Hants East Rural High School and others. Details of these stop locations would be established during implementation planning.

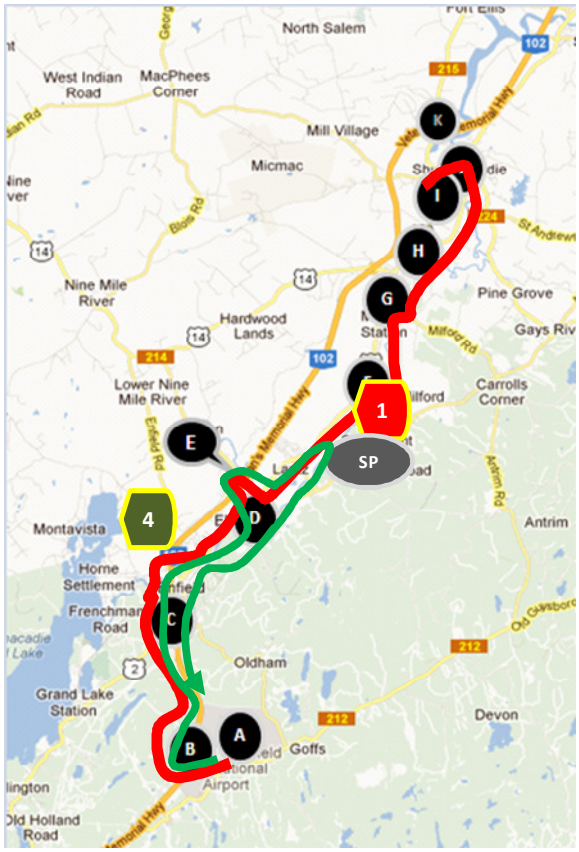
5.7.2 Phase Two – Full Corridor Service Implementation

As shown in Exhibit 26, Option 5 is the recommended Phase Two full corridor Service Option. This builds on the existing routing from Phase One and comprises a combination of Route 1 and Route 4 in the peaks, supported by Route 1 in the off-peaks. Service Option 5 features the following characteristics:

- Initial weekday operation, from approximately 6:30am to approximately 7:30pm. Details of precise start and finish times and other schedule considerations would be developed during the implementation planning.
- Peak operation comprising two vehicles. One vehicle would operate between the airport and Shubenacadie via Route 1 primarily on the Trunk 2 corridor (with service to shopping, government and health services on Highway 214), and the other vehicle would operate Route 4 between the airport and the Sportsplex in Lantz (with service to shopping, government and health services on Highway 214).
- Off-peak service would operate from about 9:00 am to about 3:00 pm, using one vehicle operating via Route 1 (Trunk 2) between the airport and Shubenacadie (with service to shopping, government and health services on Highway 214).
- Off-peak service would operate every 90 minutes

- Major stops would be established at the Hwy 102 exits with park-n-ride opportunities and along Hwy 2 at significant community areas in Enfield, Elmsdale, Lantz, Milford and Shubenacadie. Details of these stop locations would be established during implementation planning.
- Once, and if, HRM establishes a service beyond the airport to Enfield, the service design and routing of these two services should be integrated, perhaps with the HRM portion operating express from Enfield and the East Hants service connecting through the airport, as recommended in the original airport service design.

Exhibit 26 - Preferred Service Option



5.7.3 Service to other Communities

Service to Indian Brook

Consideration was given to the potential for a connection to the Indian Brook community west of Shubenacadie. This service would benefit the Indian Brook community by providing connections to the commercial, retail and employment opportunities in the corridor, especially in Shubenacadie, as well as connections to the Hants East Rural High School, where it is estimated that approximately 65 students from Indian Brook are enrolled.

Connecting to Indian Brook would require approximately 10 additional minutes of travel time in each direction, but would not affect the travel time of East Hants residents, since the connection is at the end of the proposed routes. The additional travel time would however increase the service interval in each direction during the peaks, unless additional vehicle resources were applied.

As it is a separate jurisdiction, extending service to the community would require a cooperative funding agreement between Indian Brook and the Municipality.

GENIVAR recommends that East Hants meet with community leaders from Indian Brook to make them aware of the service opportunity, and consider a route extension in the future, if requested and fully funded by Indian Brook.

Service to Truro

Part of the mandate of this review was to consider the implications of extending the proposed service to Truro for connections to East Hants as well as the airport.

As shown in Exhibit 8 and

Exhibit 9, commuting patterns from Truro to East Hants and HRM are not significant when compared to the travel patterns being served more locally. The additional distance to Truro (about 30 km from Shubenacadie) would add about 45 minutes of travel time to the route, and a minimum of about five vehicle-hours of service per day, or more than 1,200 annual vehicle hours.

Acadian Lines currently operates two trips per day in each direction (outside of peak periods) between Truro and Elmsdale, with continuing service to Halifax. The one-way fare from Truro to Elmsdale is about $16.00. One-way travel time between Truro and Elmsdale is 45 minutes.

Given the current schedule of the existing intercity service, it is possible that a peak hour service could attract some ridership for East Hants commuters, airport connections and travel to HRM. The additional travel time required for the commuter trip from Truro to Dartmouth and Halifax compared to private auto suggest that the attractiveness of this service would be very low for these longer distance trips. Connections to East Hants and the airport may attract some ridership, but it is not expected to exceed one to two percent of the peak ridership (estimated at about 600 daily peak trips), or six to ten daily trips.

Due to the low work trip demand and the additional vehicle-hours required to get to Truro from Shubenacadie, it is not likely to be feasible at this time to extend the corridor service to Truro.

Additional study may be required to determine if a service extension to Truro is feasible in the future.

6. Service Delivery Options

This section outlines potential service delivery options for the corridor service and concludes with identification of a recommended option.

6.1 Service Delivery Options

Option 1 - Municipality of East Hants Owned and Operated

This option would include the purchase, maintenance and operation of the transit vehicles by the Municipality of East Hants. The municipality would be responsible for day-to-day delivery and management of the transit service.

Advantages: The Municipality of East Hants would have total control over the operation of the transit service.

Disadvantages: This option would include high management costs to the municipality in the day-to-day management and administration of the transit service. These costs would include the maintenance of the vehicles, dispatch and scheduling functions, recruitment and training of transit drivers, marketing and customer service.

Option 2 -Transit Service Operated by the East Hants Alternative Transportation Service

Under this option, the Municipality of East Hants would purchase the transit vehicles and the East Hants Alternative Transportation Service (EHATS) would provide the day-to-day operations, management and administration.

Advantages: The East Hants Alternative Transportation Service has some local transportation services in place and experience in providing transportation service and transportation funding.

Disadvantages: The East Hants Alternative Transportation Service began transportation service to meet the needs of the clients of the East Hants Adult Learning Association (EHALA). Their experience is only in door-to-door service with a membership basis clientele, and they have no experience providing fixed route public transit service. Also, some drivers are volunteers using their own vehicles. Discussions with EHATS indicate that they would prefer to give their transportation service to another provider to operate.

Option 3 - Contract Service to Metro Transit

The Municipality of East Hants could approach the Halifax Regional Municipality to consider Metro Transit operate a service into East Hants. Under this option, either the Municipality of East Hants would own the vehicles and Metro Transit would operate and maintain them, or Metro Transit would provide both the vehicles and operations.

Advantages: Metro Transit has the necessary infrastructure to provide a “full service” to the Municipality of East Hants in terms of dispatch and scheduling services, trained bus drivers, maintenance facilities, management and administrative service.

Disadvantages: Metro Transit maintains high operating costs including unionized bus operators, maintenance and administrative employees likely making the service cost prohibitive to the Municipality of East Hants. Metro Transit’s future plans are to concentrate improving

service to the urban core of HRM and would unlikely be interested in providing service to the Municipality of East Hants.

Option 4 - Municipality of East Hants to Purchase Transit Vehicles and Contract the Maintenance and Operations to a Private Carrier

The Municipality of East Hants would purchase the transit vehicles and tender for the maintenance and operation of the service.

Advantages: The Municipality of East Hants would own and be eligible for capital funding of the transit vehicles and could brand the vehicles as appropriate. The contractor would provide trained bus operators, vehicle maintenance, dispatch, scheduling, and general day-to-day management and administration of the service. A private carrier would have experience in providing public transportation services and in most cases could provide additional back-up vehicles in the case of accidents or maintenance of the municipal vehicles. A contracted service will also provide the municipality with known operating costs.

Disadvantages: A contracted service would require oversight by the Municipality to ensure the service is operated according to the terms of the contract, to promote and recommend and approve changes to the service. Arrangement between the Municipality and the carrier would need to be identified in the case of the Municipality discontinuing the service.

6.2 Recommended Service Delivery Option

GENIVAR recommends implementation of Option 4, based on the assessment of the advantages and disadvantages in the context of East Hants.

This option allows the Municipality to have control over the direction, promotion and planning of the service without incurring the high costs associated with driver recruitment and training, dispatch operators and systems, maintenance and other management and administration functions by operating the transit service in-house. A private carrier would also have experience in providing public transportation

Under Option 4, the Municipality would procure the transit vehicles allowing the Municipality opportunities for capital funding such as funding available under the Federal Gas Tax and Service Nova Scotia Accessible Transportation Assistance Programs. The buses would be owned by the Municipality and branded for the municipality's transit service. This would also allow the Municipality to sell advertising affixed to the buses to generate additional revenues. The vehicles would also be available for disposal if the Municipality decides to discontinue the service. In many cases, a private operator would have their own vehicles that could be used in the event that a municipal vehicle is unavailable due to maintenance and repairs. This could reduce the number of total vehicles the Municipality would need to purchase.

Option 4 would provide the Municipality with known operating costs which could be budgeted and managed by the Municipality.

Under this option, the private operator would provide all operating requirements while the Municipality maintains control over hours of service, routing, scheduling, fare levels, promotions and planning. A mechanism would be developed to provide regular operating information such as ridership, fare revenues, service disruptions, etc. to the Municipality.

6.3 Integration with East Hants Alternative Transportation Service

Discussions with staff from the East Hants Adult Learning Association, which operates the East Hants Alternative Transportation Service revealed opportunities to integrate the existing transportation service with the proposed service. EHALA is a multi-faceted adult learning support group which, as noted in Section 3, introduced transportation service to help support their clients who could not otherwise access programs. Transportation is not part of their principal mandate, and for this reason, the group does not appear very interested in expanding its transportation service beyond its clients' needs, but would be supportive of efforts to integrate its service with that of another operator, particularly the Municipality. Once the details of the service recommendations are clearly understood, this option should be revisited with EHALA.

Integration of the EHATS service into a Municipally-operated service could also make sense, and there may be some economies of scale and other service-related efficiencies that would benefit users of both services.

EHALA currently receives CTAP funding from the Province, and while a service operated by the Municipality may meet the funding criteria, it is unlikely that such a service would be eligible, since the Province only allocates the per capita funding of this program to a single entity in any geographic area. Even if it were to fund the service, funds would be redistributed, at the expense of the EHATS service.

An integrated service, operated by the Municipality, may be able to take advantage of this funding to support both services. EHATS currently transports clients daily (often during peaks) from the Shubenacadie area to programs in Elmsdale, and some of these passengers could likely take advantage of the proposed Trunk 2 service, freeing up EHALA resources to provide services to clients in other areas.

This and other types of service integration may suggest a more formal association over time; however, GENIVAR does not recommend pursuing this option at the moment. Implementation of the proposed service should be kept simple and streamlined for the short-term, and the initial operation will give further insight into how passengers of the two systems might best be served in the future.

7. Support Components

7.1 Fares

Establishing an appropriate fare is a crucial consideration in the design of a new service, second only to appropriate routing and service levels. Fare structures directly affect the attractiveness of the service and determine revenue. Higher fares will increase revenue per passenger and overall revenue, but have a negative impact on ridership. Since revenue is important to the overall sustainability of the service, but the key objective is ridership, it is important to find the appropriate fare level that optimizes revenue and ridership.

7.1.1 Fare Comparison

Exhibit 27 shows a comparison of fare structures from systems throughout Nova Scotia.

Exhibit 27 - Fare Structure Comparisons

	Adult			Youth			Senior/Child		
System	Cash	Ticket	Pass	Cash	Ticket	Pass	Cash	Ticket	Pass
KTA	$3.50	$3.00	$90	$3.50	$1.90	$65	$3.50	$1.90	$65
Strait Area Transit	$8.00	$5.00	-	$8.00	$2.25	$130	-	-	-
Cape Breton	$1.25 plus $1 / zone	-	-	-	-	-	$1.00 plus $1 / zone	-	-
Metro Transit									
Regular Service	$2.25	$1.80	$70	$2.25	$1.30	$64	$1.50	$1.80	$52
MetroLink express (increment to regular fare)	$0.50	$0.50	$0.50 (or $85)	$0.50	$0.50	$0.50	$0.50	$0.50	$0.50
MetroX commuter (increment to regular fare)	$1.00	$1.00	$1.00	$1.00	$1.00	$1.00	$1.00	$1.00	$1.00

7.1.2 Fare Options

There are several fare options that could be considered for a corridor service such as that proposed for East Hants:

- Flat fare
- Fare-by-distance
- Zone fares
- Premium fares

Flat Fare

With flat fares, there is a single flat fare for travel anywhere the service operates. Discounts may be applied for frequent or pre-paid trips (passes or tickets) with concession fares for passenger classes such as seniors or youth.

Flat fares are the simplest to administer and to understand, but may attract criticism in areas where there is a significant mix of very short and very long trips.

Fare-by-Distance

Fare-by-distance is the other end of the continuum from flat fares, where fares vary and increase directly with the distance travelled. Taxis generally operate on a fare-by-distance structure; transit services typically do not. This type of fare requires strict calculation of the distance travelled by each passenger and is therefore not practical in a transit environment

Zone Fare

Zone fares are a variation on fare-by-distance, where fares increase generally with the distance travelled, but only when zone boundaries are crossed. Zones are typically organized so that the increment in fare between any two zones is similar, and a base fare is charged for any trip. Zone fares are much more practical for transit and intercity travel than fare by distance and are therefore quite common in longer distance transit services and intercity coach service.

In East Hants, each of the communities in the corridor could be considered a zone, so that zones would be set for Shubenacadie, Milford, Elmsdale/Lantz, Enfield and the airport.

Zone systems require ticketed fare payment, or electronic fare media (smartcards) to accurately determine the fare payment for each trip and are therefore more complicated to administer and use.

Premium Fares

Systems with a combination of urban transit and longer distance corridor or commuter services often charge a premium fare for what is considered premium service. Metro Transit, for example, charges an additional 50-cent premium for its premium MetroLink service and a $1.00 premium for the MetroX commuter service. Passengers who carry regular fare prepaid instruments such as tickets or passes must pay the premium increment to ride these services.

Given the longer distance added to the trip outside of East Hants, the Municipality may consider a small premium for travel to and from the airport.

System Transfers

Riders of the East Hants service will be able to transfer to and from the planned HRM Metro Transit route connecting to the airport from the Nantucket terminal in Dartmouth, with connections to other Metro transit services.

Within the time frame and scope of this study, it was not possible to explore reciprocal fare agreements between East Hants and HRM for transfers between the two services. For the short-term then, riders transferring between the two services will be expected to pay the full fare for both services, further limiting the attractiveness of the trip from East Hants to Halifax.

However, an integrated fare system, with free transfers, or a small transfer fare should be explored with HRM for future application.

Fare Recommendations

For fare structures, GENIVAR recommends:

- A flat fare for all trips in the East Hants corridor - this system will be simple to administer and understand, and is appropriate for the distances involved and the single jurisdiction environment.
- Airport premium – a small premium for travel between East Hants and the airport. On boarding at the airport, riders would pay the base fare plus the premium; on boarding southbound trips destined to the airport, riders would pay base fare plus the premium and receive a simple proof of payment stub. Passengers alighting at the airport would be required to produce the proof of payment to confirm payment. Regardless of the vehicle configuration used, alighting at the airport would be limited to the front door to facilitate this process.
- East Hants should pursue a transfer agreement with HRM with consideration of the additional attractiveness offered versus any revenue implications.
- A fare structure with volume and prepaid discounts as well as concession fares.

  For fare levels, GENIVAR recommends the fare table depicted in Exhibit 28. These fares establish a common cash fare for all riders – a trend increasingly common in the industry, designed to make the prepaid fares more attractive and reduce cash handling costs. The discount for 10-ride tickets is approximately 15 percent from the adult cash fare. This fare is set as the base fare for all other discounts. Youth and Senior/child tickets are discounted about 15 percent from the adult ticket price. Monthly passes are discounted about 15 percent from the ticket price in all passenger classes, and based on about 40 rides per month.

Exhibit 28 - Recommended Fare Table

	Cash	Ticket (10)	Monthly Pass	Airport Premium
Adult	$3.25	$2.75	$95	$1.00
Youth	$3.25	$2.35	$85	$1.00
Senior/Child	$3.25	$1.40	$50	$1.00

The fare table should be reviewed annually, with considerations for small annual increments in the adult base ticket fare and corresponding discounts. Discounts for passes in each fare class should remain consistent. For example, if adult passes are discounted from the ticket price by 15 percent, then all passes for all passenger classes should be discounted the same amount. Concessions for seniors and youth are applied at the 10-ride ticket level.

Cash fares should be increased in minimum increments of $0.25 to keep coin payment as simple as possible.

7.2 Fleet & Facilities

7.2.1 Fleet

Given the ridership projections for the proposed service, a low- to medium-capacity vehicle with accessibility features will be appropriate. Several vendors offer high-quality vehicles of this type, and a number of Canadian suppliers can procure these vehicles. These vehicles are typically the cut-away type based on a GMC 3500 or similar chassis, with diesel or gasoline engines, rear-wheel drive and either lift or low-floor accessibility.

Vehicles come with a variety of options including a range of seating configurations, seat types, bicycle racks, luggage racks, parcel racks, air conditioning and others. Cost per vehicle depends on seating capacity, accessibility features (low-floor or lift) and optional amenities, and typically range in price from $90,000 to $150,000.

Under the recommended service delivery option, the municipality would not be required to maintain any fleet storage or maintenance facilities, since these would be the responsibility of the contractor. This would be the case whether the vehicles were provided by the contractor, or owned by the municipality.

7.2.2 Other Amenities

The municipality would be responsible for the identification of stop locations, and the installation of appropriate stop facilities. At a minimum, these include signage and appropriate safe, level boarding areas.

At keys stops, particularly those at park-n-ride locations and along Trunk 2 corridor, concrete or asphalt stop pads should be considered, linked to existing sidewalks and parking areas. These pads should approximately six metres long and two metres wide.

At major stops, particularly those at park-n-ride locations and key destinations on Trunk 2 (such as Hwy 214 intersection, commercial areas, HERH, and such, shelters should be considered in addition to the concrete pad, in the peak waiting direction (for example, southbound in Shubenacadie, northbound at Magnolia Centre, both directions in Elmsdale)

7.3 Accessibility

Accessibility is a crucial element of any transit service, to ensure that the service is available to all on an equal basis. Generally, low-floor vehicles are a preferred method of providing accessibility compared to lift-equipped vehicles, since the former benefit all passengers, while the latter benefit only those using mobility aids. Also, low-floor vehicles provide for faster boarding and alighting of passengers using mobility aids (in fact, all passengers) compared to lift-equipped vehicles.

When considering vehicle procurement, and when determining the specifications for a contractor RFP including vehicles, consideration should be given to low-floor vehicles to provide accessibility. However, given the level of demand anticipated for this service, lift-equipped vehicles will be sufficient to ensure accessibility, and will likely be cheaper to purchase.

7.4 Technology Guidelines

A variety of technology applications can help contribute to the success of the recommended transit service, most dealing with communication between the vehicle and the operations centre and with customers. Many of these improve customer service and make the overall travel experience more attractive.

Automatic Vehicle Location (AVL)

AVL systems provide real-time information on a vehicle's location on the route and can be used to provide a variety of system enhancements such as:

- → Detailed operational data to assist with planning and management
- → Foundation for customer service elements such as stop announcements and trip planning

AVL systems for transit are currently priced at approximately $8,000 to $10,000 per vehicle plus $50,000 to $100,000 for the system requirements. For a smaller system, overall process are more likely at the higher end of the ranges

Automatic Stop Announcements

Using AVL systems, these systems provide audio and visual announcements of the next stop to assist passengers, especially those with visual impairments. These systems are increasingly popular in transit systems across the country, and are becoming required by law in Ontario. Cost of this technology is similar to AVL systems, and a small increment in price if purchasing an AVL system.

Transit System Website

The availability of a transit website, with route and fare information as well as current updates on service changes and disruptions and marketing and promotional material, is a basic requirement of a transit service in today's environment.

Customer Trip Planner

As an add-on to the system website, many systems feature an on-line trip planner that allows a customer to enter their origin and destination and receive detailed instructions on how to make the trip. These services can be supplied by transit-specific vendors as part of scheduling systems and are also offered by Google. While the Google service is nominally free, considerable effort is required to initially format and maintain the data. Given the simple nature of the route and schedules in the early phases of this service proposal, this application is not recommended.

Customer Call Centre

In addition to the online information customers, all transit systems offer a customer service phone line for information, route planning complaints and such. This service can be provided by either the municipality or the contractor. For the initial phases of this service, GENIVAR recommends making this service part of the contractor-supplied service, since most operators will already have the infrastructure and skills in place to mange this function.

7.5 Marketing and Communications

Marketing a transit service is a crucial element in the success of a service. This means more than making information about the service passively available, but taking an active role to inform residents of the value of the service and the opportunities it offers.

Primary Markets

Marketing transit in East Hants should focus on making the service attractive and acceptable for captive riders, but should also attempt to attract choice riders, who may choose transit if their exposure to and experience on the system is positive.

Captive riders who will use the service due to necessity rather than choice will account for high proportions of ridership on the system in the short-term. These riders include students, seniors, and other low-income individuals and will comprise the primary customer base for transit in East Hants. These demographics have been identified in the market assessment and should be a focal point for marketing strategies.

Commuters

The commuter market for transit service in the Corridor Region crosses several demographic lines, including adults, high school student commuting to and from school as well as youth accessing part-time or full-time employment opportunities in the corridor, particularly in the Elmsdale area, or at the airport.

Promotions could be developed in conjunction with corporate or other partnerships to reward riders or monthly pass holders for their patronage. These promotions could occur as service improvements and changes are implemented, and would both promote new service improvements while thanking existing riders.

Students

Students will be important ridership demographic for transit in East Hants, both for travel outside of typical school busing hours as well as for non-school related trips. Promotional and special event days could be used throughout the school year to encourage as many students as possible to utilize transit. At launch, a transit display booth located at HERH and a year-round presence at the school could provide transit information centre with schedules, maps and other system information provided in a designated area.

Seniors

Seniors represent one of the more vulnerable populations in East Hants with respect to transportation, and an important transit market. It will be important to engage with the senior communities, both to inform them of the opportunities offered by the service and to maintain customer service by responding to their concerns. A fully accessible fleet, technology applications such as audible and visible on-board stop announcements, as well as continued improvements to accessibility throughout the system should be integral to the system.

Additional promotions and partnerships between East Hants transit, senior citizens' groups, seniors' residential facilities (such as Magnolia) and local retailers such as grocery stores or other merchants or locations of interest should be pursued.

East Hants transit should promote transit to seniors in a way that advertises the benefits of transit and destinations throughout the municipality, and should also conduct sessions that inform seniors about the system, including increasing system accessibility, on-board announcements and provide instructions on how to board, pay for a trip and request a stop. East Hants Transit should maintain presence at senior citizens residences beyond promotional presentations or events, ensuring that easy to read information materials are available year round.

Marketing to Non-Riders

While marketing to riders should be an important component of the marketing strategy, transit awareness, particularly service improvements, should be promoted to the general public, including non-riders who may be convinced to become riders. Some people may be unaware of the benefits or existence of transit in the community while others may choose other forms of transportation for a variety of reasons; in either case, the public perception of the system can be improved through marketing.

Marketing to non-riders may also include inducements to raise awareness of and attract new customers to the system such as reduced fares or free rides on promotional days. Engagement strategies with non-riders and targeted marketing to populations living or traveling near the corridor service could further public awareness of the system and potentially attract new ridership.

Key Messages

Key messages that should form a part of the on-going marketing program include:

- Environment: using transit is an effective way to reduce environmental footprints, reducing GHG emissions, oil consumption and infrastructure requirements
- Access: a transit service improves access for the entire community to important community services such as recreational facilities, employment opportunities, shopping, and health and social services,
- Convenience: transit services in the corridor are convenient and easy to use, proving competitive travel times, and alternatives to private auto or school bus travel when these are not available or inappropriate.
- Choice: transit provides another alternative for transportation in the community.

7.6 Staff

Initially, very few staff resources are required to maintain the service. During implementation, resources would be required to finalize route options, procure a contract operator, develop marketing and communications and to manage the contract. For budgeting purposes, GENIVAR has assumed that these resources can be drawn largely from existing staff. However, during initial start-up and implementation, additional resources could be contracted externally, either

from the preferred contractor or a third party. A small budget amount has been included for this purpose.

As the system matures, additional resources may be required for contractor liaison, customer service and marketing, and a 1.0 FTE position has been included for future years.

8. Financial and Implementation Plan

Exhibit 29 shows the overall financial plan for the first three years of service, plus additional stages adding evening and Saturday service, which would only be implemented once warranted by the performance monitoring program and approved by council.

The following noted provide additional detail to Exhibit 29.

8.1 Financial Plan

Annual Vehicle Hours

The annual vehicle hours are based on the service plan developed for Option 5 which include:

- Year 1 to Year 3 – weekday-only service from approximately 6:30 am to approximately 7:00 pm; reduced service on weekday holidays included (Route 1 operation)
- Stage 2 – additional peak period vehicle added to improve peak period service on Route 1 or on Route 4.
- Stage 3 – weekday evening service added to extend service day from approximately 7:00 am to approximately 10:00 pm; reduced service on weekday holidays included (Route 1 operation)

Hourly Operating Cost

In the first year of service, transportation costs are calculated at an hourly rate that includes the contractor providing the vehicles. Beginning in Year 2, the rate is reduced to reflect the Municipality acquiring vehicles for the service, taking advantage of capital funding opportunities.

The rates used in this table are based on discussions with local service providers: $85 per vehicle hour with a contractor-supplied vehicle; $70 per vehicle-hour with a municipal-provided vehicle. These and all other values are held constant (2011 $) for the life of the plan.

Staffing Costs

As described in Section 7.6, initial staff resources will comprise those required to support marketing activities and contract management.

For budgeting purposes, GENIVAR has assumed that these resources will amount to a 1.0 full-time equivalent (FTE) position in the longer-term, as the system matures for contractor liaison, customer service and marketing.

A budget amount of $35,000 has been included for external support during planning and implementation and $25,000 for on-going support.

Other Operating Costs

A variety of additional Operating costs have been included, primarily related to the marketing and advertising of the service, consistent with the discussion ion Section 7.5.

An on-going amount has been included to support annual marketing plans, website maintenance, map and schedule printing and such. A more significant amount has been

included as part of the Year 1 budget to support a significant launch marketing program. This type of expenditure may be considered a capital cost under some funding guidelines.

An on-going amount has been included for stop and shelter maintenance. This function could be contracted to a third party, if desired.

An annual amount for vehicle replacement has been included, based on a cost per vehicle of $100,000 and a six-year life span.

Ridership and Revenue

Ridership for the preferred options is based on the methodology described in Section 5.4. As noted, the ridership in the first two years has been discounted to reflect the additional time required for ridership and travel patterns to mature, and to ensure that revenue forecasts are realistic.

Revenue has been calculated on a presumed distribution of ridership percentages within the various fare classes and fare media options. Peak ridership is heavily weighted to adults and students, while midday ridership is weighted to students and seniors. Children are assumed to make up a very small percentage of the ridership in the system overall.

The calculation of average fare is based on the total revenue divided by the total ridership and applied to future years in constant 2011 dollars at a rate of $2.60

Net Operating Costs

Net operating costs are calculated as the total operating cots minus revenue, and rage from $260,000 in Year 1, decreasing to about $206,000 in Year 3 (in constant dollars) assuming that the operation is converted to municipally-owned vehicles. If the service were to remain with vehicles contractor-supplied, the net cost would increase in Year 3 would be about projected at about $240,000.

Capital Costs

Principal capital costs comprise the vehicles and some stop infrastructure. As noted previously, capital purchase of the vehicles has been deferred to Year 2 in this budget, and unit costs for vehicles is estimated at $100,000. Service operation requires two vehicles, plus one spare.

Recommended vehicles should be budgeted with an expected life of about five to six years (depreciation about $20,000 per vehicle, or $50,000 annually.

Performance Summary

Cost Recovery

Cost recovery is projected in the first year at about 25 percent. This value will increase as ridership matures, and is shown to increase to about 31 percent in Year 2 based on the assumption that hourly contract costs are reduced with the purchase of vehicles. If vehicles are not purchased for Year 2, the cost-recovery rate in Year 2 is projected at about 27 percent, with a similar increase in Year 3. This value is lower than current KTA performance.

Rides per capita

Rides per capita (based on the corridor estimated population range from just more than 3.6 in Year 1 to about 4.0 in Year 3. This value is slightly lower than the KTA performance.

Average Fare

The average fare in Year 1 is calculated at about $2.60, based on detailed calculations of ridership and revenue. In future years, this value is used to calculate revenue based on detailed calculations of ridership.

Passengers per hour

Passengers per vehicle-hour are in the range of 11.0 to 12.0 over the life of the plan. This value is conservative compared to KTA performance.

Exhibit 29 - Financial Plan

	Stage 1			Stage 2	Stage 3
	Year 1	Year 2	Year 3	Add peak	Add eve
Operating Costs					
Operating hours	3,150	3,150	3,150	4,095	5,958
Hourly Cost - Contractor Vehicle	85	85	85	85	85
Hourly Cost - Municipal vehicle	70	70	70	70	70
Annual Transportion Costs	**$268,000**	**$221,000**	**$221,000**	**$287,000**	**$417,000**
Staffing Costs					
FTE	0	0	0	1	1
Wages and Salaries	$0	$0	$0	$62,500	$62,500
External Support	$35,000	$25,000	$25,000		
Other Operating Costs	**$45,000**	**$53,333**	**$53,333**	**$53,333**	**$70,000**
Launch Marketing	$30,000				
On-going Marketing/advertising	$5,000	$10,000	$10,000	$10,000	$10,000
Stop/Shelter Maintenance	$10,000	$10,000	$10,000	$10,000	$10,000
Capital Reserve Contribution		$33,333	$33,333	$33,333	$50,000
Total Operating Costs	**$348,000**	**$299,333**	**$299,333**	**$402,833**	**$549,500**
Ridership and Revenue					
Ridership	**34,000**	**35,700**	**37,400**	**43,000**	**48,000**
Within East Hants	21,000	22,300	23,300	26,800	29,900
To/From Airport/HRM	13,000	13,400	14,100	16,200	18,100
Average Fare	$2.60	$2.60	$2.60	$2.60	$2.60
Revenue	**$88,400**	**$92,800**	**$97,200**	**$111,800**	**$124,800**
Net Operating Cost	**$259,600**	**$206,533**	**$202,133**	**$291,033**	**$424,700**
Capital Costs					
Vehicle Purchase		2	0	0	1
Vehicle Cap Cost	$0	$200,000	$0	$0	$100,000
Stops and Shelters	$50,000	$50,000			
Technology			$75,000		$10,000
Total Capital Costs					
Performance Indicators					
Cost Recovery Ratio	25%	31%	32%	28%	23%
Net Cost per passenger	$7.64	$5.79	$5.40	$6.77	$8.85
Passengers per hour	10.79	11.33	11.87	10.50	8.06
Passengers per capita	3.66	3.84	4.03	4.63	5.17

8.2 Funding Options

Federal

The Federal Gas Tax program is eligible for funding transit capital expenditures, such as vehicles, stops and amenities and such. The current program has been fully allocated through 2014, but is expected to be renewed with similar funding levels and criteria after 2014.

The Municipality of East Hants should consider allocating some of its future gas tax money to fund capital purchase such as vehicle replacement.

Provincial

The Provincial CTAP funding opportunities have been described earlier in this report, and do not represent a significant opportunity in the short-term.

The Provincial NSTrip program, which was accessed to fund this study, will continue to support transit development in the Province. It is GENIVAR's understanding that this program will provide pilot program funding, and could be used to support the initial implementation of this proposed service, with capital and operating support.

Private

Private sector opportunities may be available for both capital and operating funding support. As part of the consultation process for this study, officials at the airport expressed support for the service concept. The airport provided capital funding to HRM to support the purchase of vehicles for the planned airport link, and may represent a source of capital funding for the vehicles for this service.

In addition to funding support, the airport can be relied on to provide policy and program support to encourage its employees and those of its tenants to support the proposed service.

Other private sector companies, particularly those employers whose employees are expected to take advantage of this service and who will benefit from the improved access to their services should be approached to assist with capital or operating expenses. Support initiatives may include operating or capital funding, provision of transit stops and amenities on their property, or policy and program support to encourage employees to support the proposed service.

8.3 Implementation Plan

The following list represents the steps necessary as part of the implementation planning, prior to the launch of the service.

8.3.1 Marketing

Launch Marketing

Marketing the launch of the service will be critical to its early success, both in terms of ridership and building community support. Activities should include print and web-based advertising, as well as community activities to preview the service. Using the vehicle as a community booth at activity centers such as shopping areas, Sportsplex, seniors centres and such can help promote

the launch of the service, distribute information and materials, and raise community awareness. Specific activities include:

→ apply for grant for marketing plan support and start-up costs

→ develop service branding concept

→ establish website

→ create route maps and schedules

→ develop pre-launch marketing and advertising program and materials

→ Implement pre-launch marketing program

On-going marketing

On-going marketing and advertising of the service following the launch is also important. In addition to industry-standard tools such as route maps and schedules and information websites, market-specific promotions should be implemented from time to time. These could include, for example:

→ student-oriented campaigns to attract secondary students to the off-peak service for employment trips, recreational trips and school trips not served by conventional school busing

→ seniors-oriented campaigns, developed in conjunction with retailers to provide free transit days for shopping

→ commuter-oriented campaigns, developed in conjunction with employers, particularly airport employers, to promote peak services, including employer-subsidies for fares and passes

8.3.2 Park-n-Ride Locations

Formal park-and-ride locations should be provided to help reduce informal parking activities and to promote the value of the transit service. An existing commuter parking lot is located on the west side of Highway 102 at Exit 8 (Elmsdale) and retail parking lots are located at Exit 7 and at Exit 8. Each of these represents opportunities for commuter parking to access the transit service. While commuter park-and-ride is not expected to be a significant driver of this service, it should still be accommodated and in fact is likely to occur informally if not accommodated.

Facilities could be developed in conjunction with area retailers to utilize available parking spaces and combine with a local transit stop opportunity.

The existing commuter parking lot at Exit 8 is a provincial facility and, while available to the public, its use should still be reviewed with provincial authorities to identify and understand any capacity constraints that might exist from time to time, as well as address any concerns from the provincial perspective.

Specific activities include:

→ Identify potential park-n-ride locations at Exit 7 and Exit 8

→ establish agreements with landowners, as appropriate

→ conduct appropriate design and impact studies for provincial approval, where required

8.3.3 Funding Partners

Funding partners may be available, particularly to support capital purchases such as vehicles. HIAA staff have indicated an interest in this service and a partnership with the Authority should be pursued. Considerable lead time may be required for this process, which is the rationale for not including the costs for Municipally-owned vehicles until Year 2.

8.3.4 Service Contractor

As a contracted service, selecting an appropriate contractor is perhaps the most important element of establishing the service. A review of potential contractors indicates a reasonable response to this service is likely, and should satisfy the Municipality's procurement requirements.

Procurement processes should follow the Municipality's typical processes and be governed by them. Timelines for the process total up to about 12 weeks. The contractor should be in place sufficiently ahead of the launch to assist with development of detailed route planning and implementation.

Specific activities include:

→ develop draft service contract (3-4 weeks)

→ finalize service contract (1-2 weeks)

→ tender service contract (2-3 weeks)

→ select service contractor (2-3 weeks)

→ total: 8-12 weeks

8.3.5 Route Planning

Route planning activities can be completed in conjunction with the service contractor or a third party or both. Specific stop locations will need to be established at:

→ R.L. Stanfield International Airport (combined with HRM Metro Transit stop location)

→ Exit 7 area

→ Exit 8 retail area

→ Exit 8 commuter parking lot

→ Sportsplex (including turning area for Route 4 buses)

→ Hants East Rural High

→ Shubenacadie (including turning area for Route 1 buses)

Other stop locations will need to be determined based on safety, visibility and terrain, in residential areas and adjacent other destinations such as:

→ Magnolia Center

→ Residential areas of Highway 102 in Enfield, Elmsdale, Lantz, Milford and Shubenacadie

→ Major intersections

Signs will need to be installed at each stop location, including route and schedule information at high demand stops. Shelters should be considered on the basis of the highest demand boarding locations.

Other specific activities include:

→ obtain provincial approval as required, for specific stop locations

→ finalize schedules

→ establish signage at route terminals

8.3.6 Post-Implementation

Following implementation it will be important to monitor the service including specific travel times to ensure the reliability of schedules and to monitor ridership on a frequent basis. Performance monitoring activities such as schedule adherence checks and ridership counts can be included in the service contract and performed by the contractor.

This information, including cost and revenue performance, should form the basis of regular reports to senior management and council.