

# Ministry of Education Effectiveness & Efficiency Review

Phase 1 Review

Transportation Consortium #12 (Peel District School Board and Dufferin-Peel Catholic District School Board)

May 2007

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# Executive Summary

## Introduction

This report details the findings and recommendations of an Effectiveness and Efficiency review (E&E review) of the Transportation Consortium #12 (Transportation Department) serving the Peel District School Board and Dufferin-Peel Catholic District School Board conducted by a review team selected by the Ministry of Education. This review is the result of recent government initiatives to develop an equitable approach to funding across the province and minimize the administrative burden for non-transportation staff associated with providing safe, reliable, effective, cost efficient transportation services. This section of the report is designed to provide an overall assessment of the Transportation Department and detail the findings and recommendations that were particularly noteworthy. These major findings and recommendations are enhanced and supplemented by the specific findings and recommendations detailed in each section of the body of the report.

The E&E review evaluated the Transportation Department's performance in four specific areas of operation including Consortium management; policies and practices; routing and technology use; and contracting practices. The purpose of reviewing each of these areas was to evaluate current practices to determine if they are reasonable and appropriate; identify whether the Transportation Department has implemented any best practices; and provide recommendations on opportunities for improvement in each of the specific areas of operation. The evaluation of each area was then utilized to determine an overall rating for the Transportation Department that would be used by the Ministry to determine any in-year funding adjustments that would be provided.

## Effectiveness and Efficiency Review Summary

The joint transportation department was initially formed in 1994 by the Peel District School Board ("Peel") and the Dufferin-Peel Catholic District School Board ("Dufferin-Peel") to provide student transportation services through a single department ("Transportation Department"). The Transportation Department was intended to generate efficiencies by combining student data and mapping information into one routing software system (EDULOG) and by maximizing the efficient use of buses between Boards. The joint operation transports nearly 74,000 students to over 350 schools using over 1,600 vehicles.

The joint nature of the operating requirements has forced the Transportation Department to become accustomed to balancing the service and cost issues that confront every transportation operation. As a result, staff are skilled in the functional use of the routing software and have utilized more complicated functionalities of the system in an attempt to improve routing efficiency. In addition, the Transportation Department has designed its organizational structure to separate route development from managerial, technical support, financial and administrative requirements. The skills of the Transportation Department staff and the functional organizational structure will be a useful asset in implementing many of the recommendations proposed in this report.

Peel and Dufferin-Peel were early adopters of a joint transportation operation similar to the Consortia model that has since been mandated across the Province. As an early adopter, these two Boards recognized the potential benefits of coordinating operations in such a way that costs may be better controlled and opportunities for service improvements could be enhanced through economies of scale. However, many of the practices implemented by the Boards limit the ability of the Transportation Department to evaluate and implement service options that may present service and cost benefits. The E&E Review identified a series of practices that are preventing the Transportation Department from operating in a manner consistent with a fully integrated, effective and efficient Consortium. Significant concerns identified included:

- *The lack of a joint governance structure* - The Transportation Department reports to each of the Partner Boards separately, thus limiting opportunities for co-ordinated decision making. The Transportation Department has adapted to this situation by operating two essentially independent networks; one for each Partner Board. The independence of the routing networks prevents the Transportation Department from realizing improvements in service and cost efficiencies that may be available through a greater level of integration.

- *Operational policies restrict the ability of the Transportation Department to plan effectively and efficiently, impeding the Transportation Department's ability to reduce transportation costs* - These policies include the limited integration of students from different Boards on any individual bus; the lack of harmonization in the distance a student may have to walk to a bus stop; the lack of integrated decision making on bell time changes; the use of a school-controlled courtesy rider program (not being tracked by the Transportation Department); and the significant flexibility in alternative bus stop locations.
- *Routing philosophies that value the re-use of the bus rather than maximizing the number of students on the bus require an increased use of vehicles, and thus increased transportation expenditures* - The current average overall planned capacity rate - the percentage of school bus seats that the Transportation Department plans for students to occupy - is 59 percent. This is well below industry common practices of 70 to 80 percent. Also, there is indication that the re-use of vehicles through multi-tiered routes can be improved.
- *The lack of quality of Dufferin-Peel student data* - Transportation operations cannot operate effectively and efficiently if baseline student data used to develop routes and schedules is not accurate. Significant concerns about the accuracy of Dufferin-Peel student data has led to the development of bus runs that include a significant amount of excess capacity to account for expected inaccuracies in the student data. Furthermore, no formal system exists to accurately communicate special needs student data for Dufferin-Peel students.
- *The lack of complete and current contract documentation with service providers* - The Transportation Department has established a functional standard contract for services, but contracts in place with the Operators are not current. Given that the contract document is intended to be the binding service agreement between the Transportation Department and the Operators, it is not clear what the obligations of either party are when the contracts are not current. In order to mitigate any potential risk it is important that the contract documentation be both complete and current.

A review of these major findings indicates that many of the challenges faced by the Transportation Department cannot be addressed only by changes to operational practice. Operational changes must be supported by concurrent changes in oversight structures and the policies and practices of both Boards. The recommendations contained in this report are intended to establish a highly functional Consortium operation that is structured in a manner consistent with Ministry requirements and operates in a manner that supports the Boards' goals. Specifically, it is recommended that the Boards and the Transportation Department:

- Establish a governance structure for the management of transportation operations that better integrates decision-making authority; promotes independence of the Transportation Department from either Board but also establishes a framework of accountability to both Boards; and promotes student success by minimizing the school and Board resources that must be dedicated to the provision of transportation services.
- Develop an integrated policy infrastructure that minimizes the constraints placed on the Transportation Department and maximizes the opportunities to promote operational efficiency. In particular, policies restricting the integration of students from different schools should be eliminated, service eligibility policies should be harmonized, courtesy riders should be tracked and managed by the Transportation Department, and the flexibility in alternative bus stop locations should be reduced. Additionally, greater enforcement of policies should be implemented to ensure the safe and effective provision of transportation services.
- Evaluate alternative routing strategies that re-consider the current philosophy of focusing primarily on maximizing the re-use of a school bus. Transportation effectiveness and cost efficiency is built upon the principles of utilizing every seat available (i.e. increasing planned capacity rates) and reusing every individual vehicle as many times as possible. Implementing this recommendation would require that the Transportation Department select several limited areas throughout its operation and evaluate whether utilizing integrated runs, combination runs (where one bus transports students to multiple schools), transfer runs (where one student rides multiple buses to school), and greater use of tiered runs (where one bus travels to one school, collects a new group of students and travels to another school, etc), can increase the efficiency of the routing network. Successful practices could then be more widely implemented, according to local conditions.

- Work with Dufferin-Peel to improve both the frequency and accuracy of student data updates for both general needs and special needs student data. Peel has a successful tool to communicate and manage special needs student data in a timely and accurate fashion. Dufferin-Peel could adopt this system to ensure that special needs students' information is managed appropriately.
- Institute a competitive process for the procurement of transportation contracts. A competitive process will allow the Transportation Department to set service standards and provide a benchmark for monitoring Operator performance. Additionally, it will ensure market rates are paid for services.
- Improve the management of existing and future contracts for services. The lack of current and complete contract documentation for services increases risk exposure and reduces accountability for all parties to the agreement. Regardless of the services being procured (e.g., bus services, taxi services, accounting and technology support from the Boards) the Transportation Department should ensure contracts are developed that clearly articulate the service responsibilities and payment terms of each party. This issue is particularly critical in the case of bus Operators whose lack of current contracts may expose both the Boards and the Operators to increased liability.

The recommended changes represent a significant shift in the operating paradigm that currently governs transportation services at the Transportation Department. Implementation will require coordination among the Boards and the Transportation Department. However, it is expected that these changes will promote student success by reducing transportation expenditures and allowing the reallocation of funding to classroom activities.

## Conclusion

As a result of this review of current performance, the Transportation Department has been assessed as having a **low** level of effectiveness and efficiency. Based on this evaluation, the Ministry will provide additional in-year transportation funding that will narrow the transportation funding gap for the Peel and Dufferin-Peel Boards by 30 percent. The funding adjustments to be received are:

- Peel District School Board: \$2,944,226; and
- Dufferin-Peel Catholic District School Board: \$1,881,453.

# 1. Introduction

## 1.1 Background

### 1.1.1 Funding for Student Transportation in Ontario

The Ministry provides funding to Ontario's 72 school boards for student transportation. Under Section 190 of the *Education Act* (Act), school boards "may" provide transportation for pupils. If a school board decides to provide transportation for pupils, the Ministry will provide funding to enable the school boards to deliver the service. Although the Act does not require school boards to provide transportation service, all school boards in Ontario provide service to eligible elementary students and most provide service to eligible secondary students. It is a school board's responsibility to develop and maintain its own transportation policies, including safety provisions.

In 1998-1999, a new education funding model was introduced in the Province of Ontario outlining a comprehensive approach to funding school boards. However, a decision was made to hold funding for student transportation steady, on an interim basis, while the Ministry worked to develop and implement a new approach. From 1998-1999 to 2007-2008, an increase of over \$195 million in funding has been provided to address increasing costs for student transportation, such as fuel price increases, despite the fact that there has been a general decline in student enrolment in recent years.

### 1.1.2 Transportation Reform

In 2006-07, the government began implementing reforms for student transportation. The objectives of the reforms are to build capacity to deliver safe, effective and efficient student transportation services, achieve an equitable approach to funding and reduce the administrative burden of delivering transportation, thus allowing school boards to focus on student learning and achievement.

The reforms will include a requirement for Consortium delivery of student transportation services, effectiveness and efficiency reviews of transportation consortia, and a study of the benchmark cost for a school bus incorporating standards for safe vehicles and trained Drivers.

### 1.1.3 The Formation of School Transportation Consortia

Ontario's 72 school boards operate within four independent systems:

- English public;
- English separate;
- French public; and
- French separate.

As a result, a geographic area of the province can have as many as four coterminous school boards (i.e. boards that have overlapping geographic areas) operating schools and their respective transportation systems. Opportunities exist for coterminous school boards to form consortia and therefore deliver transportation for two or more coterminous school boards in a given region. The Ministry believes in the benefits of Consortia as a viable business model to realize efficiencies. This belief has been endorsed by the Education Improvement Commission in 2000 and proven by some established Consortium sites in the province. Currently, the majority of school boards cooperate to some degree in delivering transportation services. Cooperation between boards occurs in various ways, including:

- One school board purchasing transportation service from another in all or part of its jurisdiction;
- Two or more coterminous school boards sharing transportation services on some or all of their routes; and
- Creation of a Consortium to plan and deliver transportation service to students of all partner

school boards.

Approximately 99% of student transportation service in Ontario is provided through contracts between school boards or transportation consortia and private transportation Operators. The remaining 1% of service is provided using board-owned vehicles used to complement services acquired through contracted private Operators.

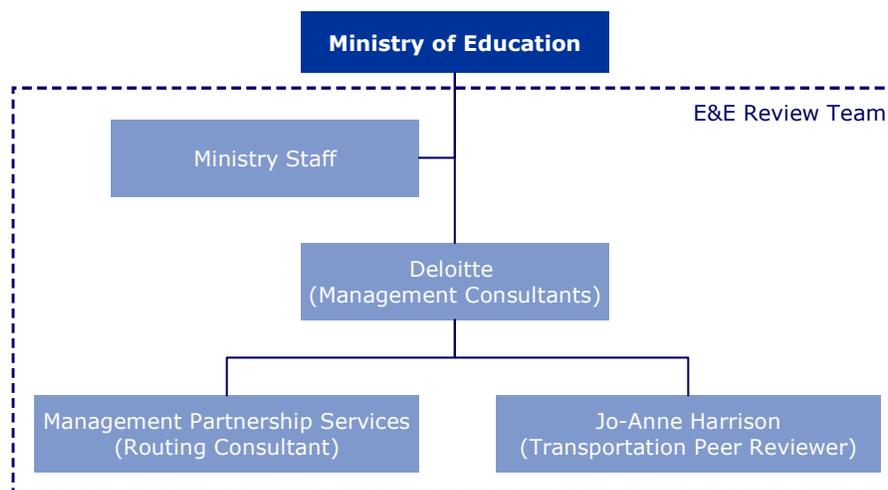
#### 1.1.4 Effectiveness and Efficiency Review

According to the Ministry Consortium guidelines, once a Consortium has met the requirements outlined in memorandum SB:13, dated July 11, 2006, it will be eligible for an E&E Review. This review will be conducted by the E&E Review Team who will assist the Ministry in evaluating Consortium management, policies and practices, routing and technology, and contracts. These reviews will identify best practices and areas for improvement, and provide valuable information that can be used to inform future funding decisions. Over the next two years, the Ministry plans to perform three phases of reviews (collectively the “E&E Reviews”) on transportation sites across the province.

#### 1.1.5 The E&E Review Team

To ensure that these reviews are conducted in an objective manner, the Ministry has formed a review team (the “E&E Review Team” as defined in Figure 1) to perform the E&E Reviews. The E&E Review Team was designed to leverage the expertise of industry professionals and consulting firms to evaluate specific aspects of each Consortium site. Management consultants were engaged to complete assessments on Consortium management, policies and practices, and contracts. A routing consultant was engaged to focus specifically on the acquisition, implementation, and use of routing software and related technologies. The Transportation Peer Reviewer has provided the E&E Review Team with valuable insight into student transportation delivery in Ontario.

Figure 1: E&E Review Team



#### 1.1.6 The Role of the School Bus Cost Study

The Ministry has acquired the services of a consultant through a separate request for proposal process to conduct a detailed cost study on the cost of contracting and operating a 72 passenger school bus. The cost model will complement the findings of the E&E Reviews. At the time the E&E results from the Phase 1 review are released, the results of the cost study will still be unknown. Any additional funding adjustments resulting from the results of the cost study will be determined at a later date.

## 1.2 Scope of Deloitte Engagement

Deloitte was engaged to lead the Team and serve as the Management Consultants of the E&E Review Team, as follows:

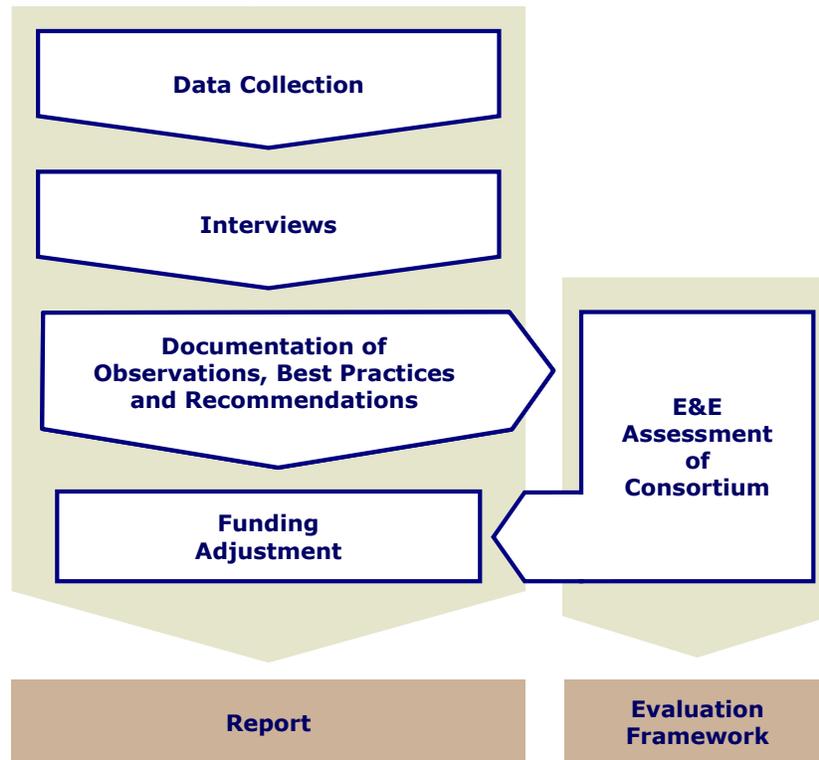
- Lead the E&E Review for each of the four (4) transportation Consortium to be reviewed in Phase 1 (refer to Section 1.1.4);

- At the beginning of each E&E Review, convene and moderate planning meetings to determine data required and availability prior to the review;
- Lead the execution of each E&E Review. The Ministry facilitated the process by providing the Consortium with information required in advance so that preparation and collection of information would be done prior to the on-site review;
- Review Consortium arrangement and governance structures, policies and practices including specialized and special needs transportation, Partner Board transportation policies, and contracting procedures;
- Incorporate the results of the routing and technology review to be completed by MPS; and
- Prepare a report for each Consortium which has undergone an E&E Review in Phase One. The target audience for the report will be the Ministry, the Consortium and its Partner Boards. Once finalized, each report will be released to the Consortium and its Partner Boards.

### 1.3 Methodology Used to Complete E&E Review

The methodology for the E&E Review is based on a 5 step approach, as summarized in the following sections.

**Figure 2: E&E Review Methodology**



A site review Report which documents the observations, assessments and recommendations is produced at the end of a site review. The Evaluation Framework, which provides the details on how the Assessment Guide was applied to reach an Overall Rating of each review site, has been developed to provide consistency.

### **1.3.1 Step 1 – Data Collection**

Each Consortium under review is provided with the E&E Guide (refer to document 18 in Appendix 3) from the Ministry of Education. This guide provides details on the information and data needs that the E&E review team would require, and the E&E Guide will become the basis for the data collection.

Data is collected in four main areas:

1. Consortium Management;
2. Policies and Practices;
3. Routing and Technology; and
4. Contracts.

### **1.3.2 Step 2 – Interviews**

The E&E Review Team will identify key Consortium staff, outside stakeholders and key policy makers with whom interviews will be conducted to further understand the operations and key issues impacting delivery of effective and efficient student transportation services.

### **1.3.3 Step 3 – Documentation of Observations, Best Practices and Recommendations**

Based on data collected and interviews conducted, the E&E Review Team will document their findings under three key areas:

- Observations which involved fact based findings of the review, including current practices and policies;
- Best Practices used by the Consortium under each area; and
- Recommendations for improvements based on the Assessment Guide. Figure 3 provides a summary of the key criteria used in the Assessment Guide to determine the effectiveness and efficiency of each Consortium.

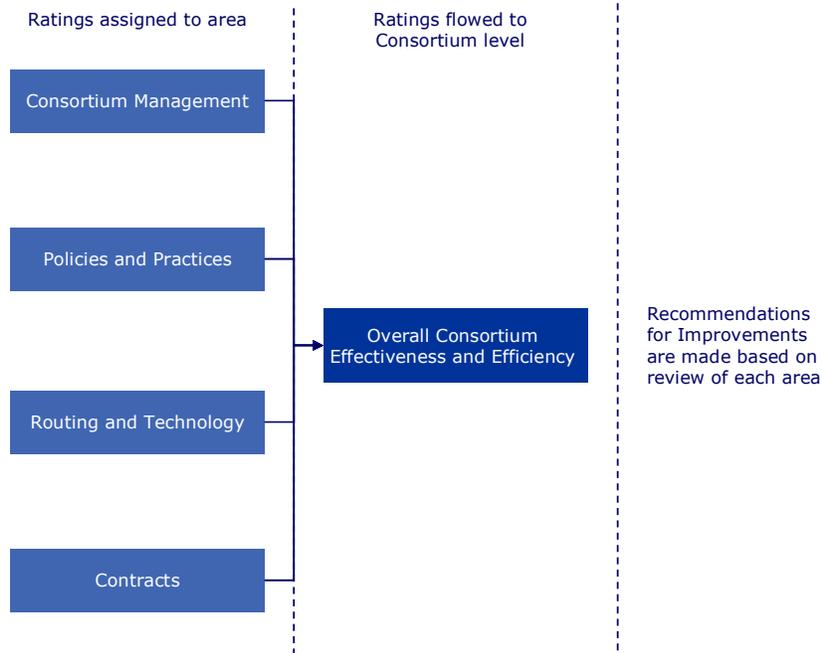
**Figure 3: Criteria of an Effective and Efficient Consortium**

	<b>Consortium Management</b>	<b>Policies and Practices</b>	<b>Routing and Technology</b>	<b>Contracts</b>
<b>Effectiveness</b>	<ul style="list-style-type: none"> <li>• Distinct entity focused on providing student transportation services for the partner boards</li> <li>• Well defined governance and organizational structure with clear roles and responsibilities</li> <li>• Oversight body exists with the mandate to provide strategic directions to the consortium management on the provision of safe, effective and efficient transportation service to support student learning</li> <li>• Management has communicated clear goals and objectives of the Consortium and these are reflected in the operational plan</li> <li>• Well established accountability framework reflected in the set up and operation of the consortium including documentation of terms in a Consortium Agreement</li> <li>• Operations are monitored for performance and continuous improvement</li> <li>• Financial processes ensure accountability and equity to Partner Boards</li> <li>• A budgeting process is in place which ensures timely preparation and monitoring of expenses</li> <li>• Key business relationships are defined in contracts</li> </ul>	<ul style="list-style-type: none"> <li>• Development of policies is based on well defined parameters as set by strategic and operational plans to provide safe, effective and efficient transportation service to students of the partner boards; and               <ul style="list-style-type: none"> <li>◦ Policy decisions are made with due consideration to financial and service impacts to partner boards</li> <li>◦ Communication between the consortium and partner boards facilitates informed decision making on issues directly affecting student transportation</li> <li>◦ Consortium's policies and practices are adequate and in compliance with all relevant safety regulation and standards</li> <li>◦ Practices on the ground follow policies</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Advanced use of transportation management software to store student data, and create a routing solution.</li> <li>• Disaster recovery plans and back up procedures are in place and operating properly</li> <li>• Responsibility and accountability for student data management is clearly identified</li> <li>• Routing is reviewed regularly</li> <li>• Reporting tools are used effectively</li> <li>• Special needs routing is integrated with regular needs where reasonable</li> </ul>	<ul style="list-style-type: none"> <li>• Competitive contracting practice is used</li> <li>• Contract negotiations are transparent, fair, and timely solution.</li> <li>• Contracts are structured to ensure accountability and transparency between contracted parties</li> <li>• Contracts exist for all service providers</li> <li>• Ongoing compliance checks for safety, legal and service requirements are performed by the consortium</li> </ul>
<b>Efficiency</b>	<ul style="list-style-type: none"> <li>• Oversight committee focuses only on high level decisions</li> <li>• Organizational structure is efficient in utilization of staff</li> <li>• Streamlined financial and business processes</li> <li>• Cost sharing mechanisms are well defined and implemented</li> </ul>	<ul style="list-style-type: none"> <li>• Harmonized transportation policies between partner boards enable efficient planning</li> <li>• Proper level of authority delegated to consortium to enable the realization of potential efficiencies e.g. bell time setting</li> <li>• Best practices in planning are adopted e.g. utilize tiered runs and combination runs to maximize the use of available capacity</li> <li>• Public transit usage is optimized where available and efficient</li> <li>• Service levels are reasonable and comparable to common practices</li> </ul>	<ul style="list-style-type: none"> <li>• System can be restored quickly if database fails</li> <li>• Student data is accurate, requires little post processing verification</li> <li>• System functionalities are used to identify efficiencies</li> </ul>	<ul style="list-style-type: none"> <li>• Contracts awarded are based on market prices and best value for money</li> <li>• Fair payment terms are included in contracts and implemented with clarity to both parties</li> </ul>

**1.3.4 Step 4 and 5 – E&E Assessment of Consortium and Site Report**

The Assessment Guide was developed to enable the E&E Review Team to provide each Consortium that undergoes an E&E Review with a consistent, fair and transparent method of assessment. The Assessment Guide is broken down between the four main components of review (i.e. Consortium Management, Policies and Practices, Routing and Technology, and Contracts) and, for each, illustrates what would constitute a specific level of E&E (refer to Figure 4 for diagram of process).

**Figure 4: Assessment of Consortium – Diagram Flow**



The Evaluation Framework provides details on how the Assessment Guide was applied, including the use of the Evaluation Work Sheets, to arrive at the final Overall Rating. The E&E Review Team then compiled all findings and recommendations into an E&E Review Report (i.e. this document).

### 1.3.5 Funding Adjustment

The Ministry will use the results of the E&E reviews and the cost benchmark study to inform any future funding adjustments. Only Boards that have undergone E&E Reviews are eligible for a funding adjustment. Figure 5 illustrates how the Overall Rating will affect a Board’s transportation expenditure-allocation gap.

**Figure 5: Funding Adjustment Formula**

Overall Rating	Effect on deficit boards <sup>1</sup>	Effect on surplus boards <sup>1</sup>
High	Reduce the gap by 100% (i.e. eliminate the gap)	No in-year funding impact; out-year changes are to be determined
Moderate-High	Reduce the gap by 90%	Same as above
Moderate	Reduce the gap by 60%	Same as above
Moderate-Low	Reduce the gap by 30%	Same as above
Low	Reduce the gap in the range of 0% to 30%	Same as above

### 1.3.6 Purpose of Report

This Report serves as the deliverable for the E&E Review conducted on the Peel District School Board and Dufferin-Peel Catholic District School Board Joint Transportation Department by the E&E Review Team during the weeks of January 1 to January 15, 2007, inclusive.

### 1.3.7 Material Relied Upon

Refer to Appendix 3 for a list of documents that the E&E Review Team relied upon for their review. These documents were used in conjunction with interviews with key Consortium staff, outside stakeholders, and key policy makers.

<sup>1</sup> This refers to boards that have a deficit/surplus on student transportation (see Section 7 – Funding Adjustments)

### **1.3.8 Limitations on Use of This Report**

The purpose of this Report is to document the results of the E&E Review of the Peel District School Board and Dufferin-Peel Catholic District School Board Joint Transportation Department. The E&E Review is not of the nature or scope so as to constitute an audit made in accordance with generally accepted auditing standards. Therefore, as part of this E&E Review, Deloitte has not expressed an opinion on any financial statements, elements or accounts to be referred to when reporting any findings to the Ministry. Additionally, procedures used by the E&E Review Team are not intended to disclose defalcations, system deficiencies or other irregularities.

## 2. Overview of Consortium

### 2.1 Introduction to the Transportation Department

Transportation Consortium #12 is the name used by the Peel District School Board (“Peel”) and the Dufferin-Peel Catholic District School Board (“Dufferin-Peel”) to describe their joint student transportation department (“Transportation Department”). The consortia plan submitted by the Boards to the Ministry did not meet the requirements outlined in Memorandum 2006:SB13, dated July 11, 2006. However, in light of the substantial transportation operating deficits being incurred by both Boards, the E&E Review Team was asked to review the Transportation Department as part of Phase 1 of the E&E Reviews.

The review of the Transportation Department was conducted by the E&E Review Team during the weeks of January 1 to January 15, 2007 inclusive. This review was conducted based on the understanding that the Transportation Department is expected to meet full Consortium status by September 2008.

Table 1 contains information submitted by the Boards to the Ministry as part of the 2005-06 Transportation Survey. This information provides a snapshot of the Boards’ current operations.

Note that this information covers all of Dufferin-Peel (including Dufferin County, which is not coterminous with Peel).

**Table 1: 2005-06 Transportation Survey Data**

Item	Dufferin-Peel	Peel	Total
Number of schools served	136	220	356
Total special needs <sup>2</sup> transported students	1,256	2,992	4,248
Total riders requiring wheelchair accessible transportation	102	223	325
Total specialized program <sup>3</sup> transportation	3,219	5,272	8,491
Total courtesy riders <sup>4</sup>	Not Reported		
Total hazard riders	0	0	0
Total students transported daily	29,288	44,538	73,826
Total contracted full- and mid-sized buses <sup>5</sup>	351	443	794
Total contracted mini-buses	151	371	522
Total contracted school purpose vehicles <sup>6</sup>	53	128	181
Total contracted physically disabled passenger vehicles (PDPV)	38	74	112
Total contracted taxis	0	0	0
Total Number of Contracted Vehicles	593	1,016	1,609

<sup>2</sup> Includes students requiring special transportation such as congregated and integrated special education students who require dedicated routes and/or vehicles; students that must ride alone; students that require an attendant on the vehicle.

<sup>3</sup> Includes students transported to French immersion, magnet and gifted programs. Students with special needs who are transported to specialized programs are captured as special needs transported students.

<sup>4</sup> Although no courtesy riders have been reported, our review indicated that in fact the Boards do accept courtesy riders – please refer to Section 4.2.1.

<sup>5</sup> Includes full-sized buses, mid-sized buses, full-sized buses adapted for wheelchair use and mid-sized buses adapted for wheelchair use; all vehicle counts are rounded to the nearest whole number

<sup>6</sup> Includes school-purpose vans, mini-vans and sedans

**Table 2: 2005-06 Financial Data<sup>7</sup>**

Item	Dufferin-Peel	Peel
2005/2006 Transportation Allocation	\$16,459,877	\$28,103,676
2005/2006 Transportation Expenditure	\$21,303,755	\$37,443,698
2005/2006 Transportation Surplus (Deficit)	\$(4,843,878)	\$(9,340,022)
Percentage of transportation expenditure expected to be spent by the Transportation Department in 2007/2008	94% <sup>8</sup>	100%

The Transportation Department was formed in 1994 between Peel and Dufferin-Peel and was intended to generate efficiencies by combining student data and mapping information into one routing software system (EDULOG) and by maximizing the efficient use of buses between Boards. Each Board still retains policy making authority for school bus transportation, and regular needs students from both Boards are not integrated on individual bus runs.

The Transportation Department provides student transportation services for the entire jurisdiction covered by both Peel and Dufferin-Peel. Beginning in September 2007, Dufferin-Peel plans to purchase services from the Wellington-Dufferin Student Transportation Services Consortium for its schools in the Dufferin County area.

In reviewing the E&E of the Transportation Department, it has been recognized that this area faces some unique challenges. The jurisdiction of the Boards includes both rural and urban settings, and the cities of Mississauga and Brampton are highly populated areas that have experienced significant growth over the past few years. One of the overriding impacts of this growth has been the increase in commuter traffic along major arterial roads, and the effect this increased traffic has on routing—such as the timing of routes. Also, there are many parts of the service area that are still in a high growth phase, resulting in school boundary changes and an increased need for holding schools. Often, students living in the Boards’ jurisdiction are required to change schools and buses to accommodate growth.

Both Dufferin-Peel and Peel have been operating in a transportation funding deficit position for a number of years. The combined deficit for the 2005/2006 school year is approximately \$14 million. The Boards have attributed this deficit to two major causes:

1. **Funding Deficiency:** Both Boards felt they were under-funded when transportation funding was changed in 1998. The boards attributed this to the fact that they had been operating as a joint department for 3 years and had previously gained some efficiencies in transportation.
2. **Growth:** For a number of years, Peel Region’s residential growth has been rapid. This has resulted in a need for more schools and more transportation services. There have been delays in constructing new schools in time to keep up with this rapid growth. These delays have increased the need for holding schools. Holding schools are vacant schools that are used to house students from either newly-built areas or from schools undergoing major renovations. Additionally, when new schools are constructed, municipal sidewalks and pedestrian accesses are frequently not completed which necessitates extended transportation in these areas as a lack of infrastructure is generally considered a hazard. These factors contribute to an environment where routes and boundaries are constantly changing, thus increasing the complexity and cost of transportation. The Boards believe that Ministry funding has not kept pace with the area’s growth.

Between the 1998-99 and 2006-07 school years, transportation funding to Peel increased by 69% while enrolment increased by 38%. Over the same period, transportation funding to Dufferin-Peel increased by 37% while enrolment increased by 12%.

<sup>7</sup> Based on Ministry Data – see Appendix 1.

<sup>8</sup> Based on historical spending percentage for Dufferin County and the fact that transportation service for Dufferin-Peel students in Dufferin County will be provided by the Wellington-Dufferin Student Transportation Services consortium, beginning Sept. 2007

## 3. Consortium Management

### 3.1 Introduction

Consortium Management encompasses the management of the entire organization providing student transportation services. The analysis stems from a review of the four key components of Consortium Management:

- Governance;
- Organizational Structure;
- Consortium Management; and
- Financial Management.

Given that the Transportation Department is not a Consortium, according to the criteria outlined in Memorandum 2006:SB13, this section is designed to evaluate existing practices and to provide guidance on transitioning from a joint transportation program to a full Consortium. Existing operations have been analysed based on observations from fact (including interviews) together with an assessment of best practices leading to a set of recommendations. These results are then used to develop an E&E assessment for each component, which is then summarized to determine an E&E assessment of Consortium Management, as shown below:

<b>Consortium Management – E&amp;E Rating:</b>	<b>Low</b>
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### 3.2 Governance

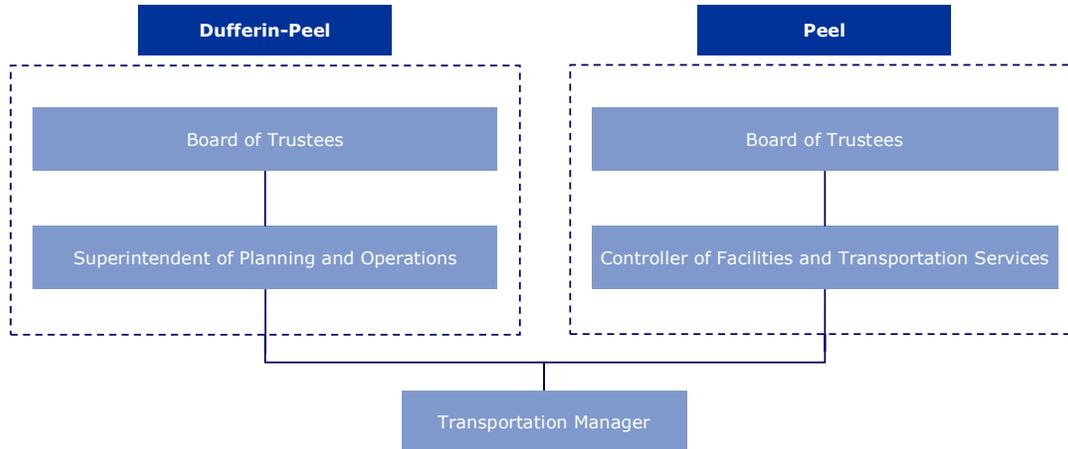
Governance refers to the way in which an organization is directed and controlled. Establishing administrative structures and processes which facilitate and monitor effective business management are primary responsibilities of a governance structure. Three key principles for an effective governance structure are: accountability; transparency; and the recognition of stakeholders. In order to respect these three principles, it is important that the governance body be independent of the management of day-to-day operations.

#### 3.2.1 Observations

Transportation management for Peel and Dufferin-Peel can best be characterized as shared staffing with relatively independent operations. Under the shared staffing model, both Boards operate their student transportation through the Transportation Department; however, there is no joint oversight body responsible for overall direction and co-ordinated decision making. As a result, management and administration of transportation operations is more difficult than under the Consortium model because staff have to manage multiple sets of expectations and requirements without the benefit of any unified strategy or framework for joint operation.

While efforts have been made to coordinate some aspects of the operation, the Transportation Manager must still report to each Board independently as depicted in Figure 6.

**Figure 6: Current Reporting Structure**



The current, non-integrated governance structure requires the Transportation Manager to serve as the arbitrator between the competing cost and service quality concerns of each Board. In order to manage the competing interests and minimize the impact that the operations of one Board has on the other, Transportation Department staff have designed two routing networks that are virtually independent of each other. The independence of the networks prevents the Transportation Department from realizing service and cost efficiencies that may be available through a greater level of integration.

### 3.2.2 Recommendations

One of the main goals of the Ministry's transportation reforms is to support education priorities by reducing the administrative burden on both schools and Boards. A Consortium can perform most administrative duties associated with transportation, leaving schools (principals) and Boards with more time and resources to focus on student achievement and success. A well-defined governance structure will allow the Consortium to function effectively and assume those administrative duties.

It is recommended that the Boards work together to develop a governance structure and Consortium which reflects the following best practices:

- The Consortium has an oversight committee with the following characteristics:
  - The oversight committee has equal representation from all Partner Boards with a sufficient number of members to allow for effective decision making. Equal representation ensures fairness amongst Partner Boards;
  - Committee Members are independent of the daily operations and management of the Consortium. This allows the oversight function to operate objectively and in the best interest of the Consortium; and
  - The oversight committee members act as the conduit of communication between the Consortium and trustees/Boards.
- The Consortium has a policy on governance that is transparent and clearly articulated. The policy should contain details on:
  - Selection of oversight committee members;
  - Term of oversight committee members;
  - Roles and responsibilities of members and committee;
  - Decision making (i.e. majority votes, consensus); and
  - Dispute resolution between Partner Boards.
- The Consortium has clearly stated mandate, goals and objectives. Having clearly stated mandate, goals and objectives will focus the Consortium on delivering its key services and guide operational planning and decision making;
- The Consortium is formed as a separate legal entity (corporation or partnership). This would allow for transparent and independent decision making, the resolution of certain human resources issues

(such as differing compensation and benefits for similar positions), and make senior level staff at the Consortium accountable for day-to-day business decisions; and

- The Consortium has appropriate liability insurance in place. The insurance should be sufficient to mitigate the risk of any potential liabilities. As a separate legal entity, the Consortium can hold its own liability insurance and should also be named as insured under the Partner Board’s insurance.

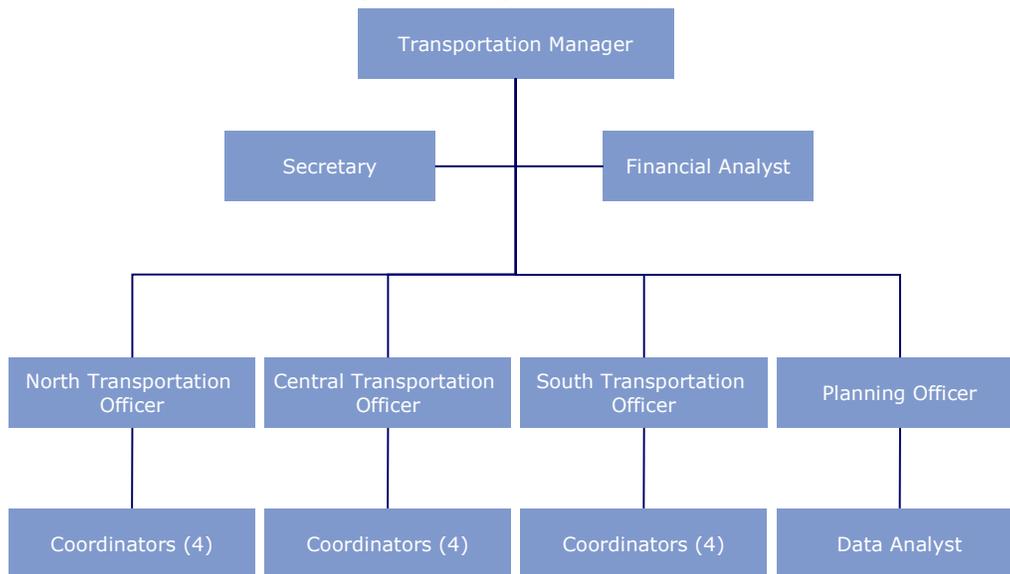
### 3.3 Organizational Structure

An organizational structure can have the power to provide for effective communication and coordination which will enable operations to run efficiently. The roles and responsibilities within the organization should be well defined. This will lead to operational efficiencies by ensuring tasks are not being duplicated and issues raised can be addressed effectively by managing up the chain of command. Ideally, the organization is divided functionally (by department and/or area) and all core business functions are identified.

#### 3.3.1 Observations

The Transportation Department’s organizational structure is shown in Figure 7. The Transportation Manager heads the Transportation Department and acts as the liaison between the Dufferin-Peel and Peel School Boards, Transportation Department staff, Trustees and Principals. The Transportation Officers are responsible for designing and managing bus routes in a particular geographic area within the jurisdiction. Since the Transportation Department is not a legal or business entity, the staff are either employed by the Dufferin-Peel Board or the Peel Board. The Coordinators and Secretary are unionized positions. Currently, these employees are subject to their Board’s respective local union agreements. The Officer level and above are part of the Management Team and are not represented by a union.

**Figure 7: Transportation Department Organizational Chart**



The roles and responsibilities of staff noted in Figure 7 have been clearly documented in job descriptions that the Transportation Department has developed. Although not expressly depicted in the organizational chart, job responsibilities have been delegated such that a functional split has been established. The Planning Officer and the Data Analyst serve as the primary technical resources while the Coordinators and Area Officers are responsible for daily management of operations.

#### 3.3.2 Best Practices

The Transportation Department has demonstrated a best practice in the following area:

- Roles and Responsibilities of staff are clearly defined in job descriptions and the organizational chart shows clear reporting relationships.

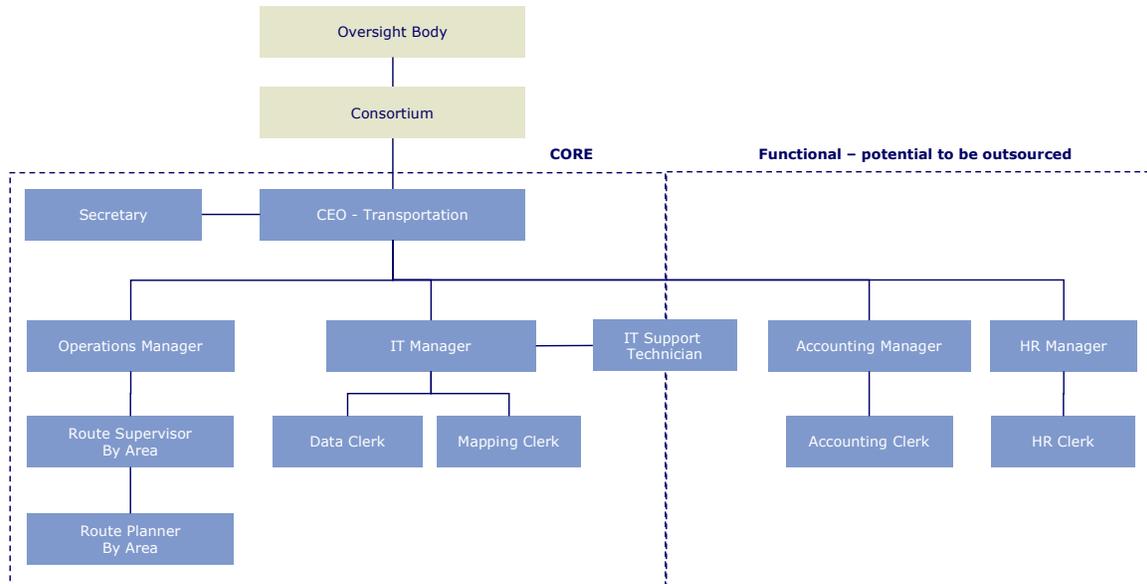
### 3.3.3 Recommendations

The current structure may be appropriate given the Transportation Department's current status. However, once a full Consortium is in place, certain changes or re-alignments within the organizational structure may be required. The following recommendations are intended to guide the Boards as they develop an effective organizational structure for the Consortium.

#### Structure

It is recommended that once an independent Consortium is established a functional structure similar to the example provided in Figure 8 be implemented. The structure is discussed below.

**Figure 8: Example of Consortium Organizational Structure**



The example in Figure 8 demonstrates a possible model of an effective organizational structure for an independently governed Consortium. The Consortium is headed by a CEO who oversees management of the Consortium. The Consortium is then sub-divided by functional duty/area: Operations, IT, Accounting and HR. Support Staff are in place to perform the duties required within each function. The Managers who lead each function are responsible for reporting to the CEO who in turn reports to the governing body that provides oversight. It is not necessary to have the technology support services such as hardware management and network support, accounting, and human resource within the consortium organization; however the Consortium should have control over these services by entering into support service agreements with the providers of these functions (e.g. the Boards).

#### Roles and Responsibilities

It is recognized that the Transportation Department has well defined roles and responsibilities of staff. Once a Consortium is in place, it is recommended that each job description be reviewed and revised as needed to ensure it reflects the revised structure.

### 3.4 Consortium Management

Consortium Management focuses on the operational aspects of the organization. This includes ensuring accountability of staff, focusing on continual improvement through operational planning and monitoring as well as ensuring risks are managed by having appropriate contracts and agreements in place to clearly define business relationships.

#### 3.4.1 Observations

##### Department Agreement

The Transportation Department was formed as a joint department between Peel and Dufferin-Peel. A formal agreement does not exist between the Boards, and there are no formalized policies regarding the operation of the Transportation Department. Also, there are no policies outlining how the Boards

will deal with issues such as dispute resolution and joint decision making. Each Board independently maintains policy and operating procedures pertaining to transportation services. Staff are made aware of daily operating procedures through routines that have been developed and by the direction of management.

#### *Operational Plans and Key Service Indicators*

There is no formal process of preparing and/or monitoring either short- or long-term operational plans. Instead, operations are reviewed in a reactive manner. If an issue arises, the Transportation Department will react to the issue and attempt to resolve it.

#### *Services Purchased from the Transportation Department*

Prior to the 2006/2007 school year, Conseil Scolaire de District Catholique Centre-Sud (CSDCCS) purchased student transportation services from the Transportation Department. This purchase represented approximately \$2 million per year in revenue, which included approximately \$60,000 in administrative fees. For the 2006-07 school year, CSDCCS has ended this arrangement. There does not appear to have been any purchase of service contracts in place with CSDCCS to cover these services.

Currently, the Orangeville Christian School purchases services from the Transportation Department. There is no purchase of service contract between the Boards and the Orangeville Christian School.

#### *Support services*

The Transportation Department is located in a Dufferin-Peel support building located away from the actual Board offices. Dufferin-Peel provides custodial services to maintain all of its buildings, including the building housing the Transportation Department. Dufferin-Peel charges the Transportation Department an annual fixed fee (on a dollar per square foot basis) to cover building related expenses such as rent, utilities and custodial services.

IT support services are provided by Dufferin-Peel at no charge to the Transportation Department. Accounting services are performed by Peel at no charge to the Transportation Department. HR functions are performed by each Board for the employees of the Transportation Department who are legally employed by the respective Boards. HR administrative services are not charged back to the Transportation Department; however, salaries for Transportation Department staff are. Since employees are either hired by Peel or Dufferin-Peel, they are paid under their respective home Board. The full salary cost of all of the Transportation Department staff is "charged" to the Transportation Department budget and the Financial Analyst in the Transportation Department will then split the total salary costs as part of total administrative costs on an un-weighted student count basis.

#### *Staff Training and Performance Reviews*

Newly hired staff at the Coordinator level (refer to Figure 7 – Organizational Chart) receive peer training from both the Data Analyst on the use of EDULOG and by the Area Transportation Officers on system and department processes. A new hire at the Officer level would receive orientation and training from their peers and the Transportation Manager. Should a position at the unionized level become vacant, it would be replaced through the same Board as the individual who left the position.

Since Transportation Department staff are employees of either the Dufferin-Peel or Peel Board, the process for staff performance reviews is dependent on the process in place at the respective Board. Reviews at the administrative level (Officers and above) are performed every 3 years. Below the administrative level, there is a probationary period for all unionized employees where they receive monthly assessments for the first three months, after that point the assessments are much less frequent (e.g. every 3-5 years).

### **3.4.2 Recommendations**

#### *Consortium Agreement*

It is recommended that, upon inception of the Consortium, a binding contract be signed by all Partner Boards. This is important to ensure the Partner Boards agree on the terms of the Consortium, more specifically on key elements of its operation including, at a minimum, the following clauses:

- Term - Setting a term forces the Consortium to review the contract on a regular basis to ensure all clauses and terms are still appropriate and fair;
- Cost sharing policies for all costs (operating and administrative) - It is important to clearly state the cost sharing policy to ensure that all Partner Boards agree that it is a fair policy and so that the accounting department can use the policy as a basis to split costs by Board without the risk of subjectivity;
- Dispute resolution between Partner Boards - A well defined dispute resolution clause avoids the risk that issues between Partner Boards can't be resolved in a timely manner; and
- Terms surrounding access to student information - Given the confidentiality of student information, it is imperative that the Boards specify which parties will have access to confidential information and how that information will be used.

#### *Consortium Policies*

It is recommended that once the Consortium is fully established, Management (with guidance from the oversight body) focus on documenting policies and practices relating to administration/operations, accounting, IT, HR, etc. as appropriate. Having well defined policies ensures that Consortium staff are cognisant of their roles and office procedures.

Additionally, it is recommended that the Boards, working with the Transportation Department, formalize a dispute resolution policy immediately. No formal dispute resolution policy exists for disputes between parents, schools, Operators and the Transportation Department or disputes between Boards regarding transportation issues. This has the potential to cause significant issues for the Transportation Department as there are no clear lines of authority. A formal dispute resolution policy would result in more consistent decision making. Also, it would enable parents, schools and Boards to understand where issues should be directed so they can be properly received, addressed and followed up. If there is no point of contact for disputes or complaints then the Transportation Department cannot ensure that it is aware of all issues and handle them in the best interest of students. Once a Consortium is formed, the dispute resolution policy should form part of the Consortium Agreement.

#### *Operational Plans*

The Transportation Department does not currently have any formal operational planning process in place. Preparing both short and long term operational plans can help to guide the direction of the Consortium. It can set clear goals focused on identifying efficiencies and ultimately providing a quality service at the least cost.

It is recommended that the Transportation Manager (or CEO of the Consortium), with support and guidance from the oversight body) prepare both short (less than 1 year) and long (3-5 years) term operational plans. The plans should indicate the Consortium's goals and objectives and key strategies going forward which will help achieve the stated goals and objectives. The plans should be approved by the oversight body and reviewed annually for progress. The overriding goal of the plans should be to provide safe, effective and efficient student transportation services to support student learning. This goal/objective should guide the development of policies and practices within the operational plans and strategic direction of the Consortium.

In addition to developing the operational plans, the Consortium management, with guidance and approval from the oversight body, should develop key service indicators. These can be used to measure performance and determine whether goals and objectives are being met.

#### *Staff Performance Planning*

The Consortium should develop a staff performance planning and review process. Having a process in place to reward the work of staff provides both motivation and guidance to help employees excel at their jobs. It will ensure that the focus of staff is aligned with the goals and objectives of the Consortium and to motivate staff to deliver exceptional performance.

#### *Support Services*

Currently, support services for the Transportation Department are being delivered by the Partner Boards. This is being done with no contracts in place and is essentially at the quality and specification to which the Boards decide is appropriate. This may not be meeting the needs of the Transportation Department, particularly as it applies to software upgrades since the Transportation Department does not control its agreement with EDULOG. It is recommended that once a Consortium is formed, it retain control over all support services including software and network support, HR, and accounting

whether they are outsourced to Partner Boards or not. If services are outsourced to Partner Boards, up-to-date contracts and detailed service specifications should be in place with all service providers. Ensuring contracts are in place will avoid the risk of misinterpretations on aspects of the agreement such as services provided, rates and term.

#### *Services Purchased from the Transportation Department*

It is in the best interest of the Transportation Department and both Boards to ensure that signed contracts are in place for all services being purchased. This will protect them from potential disputes over services provided and/or liabilities. It is recommended that standard contracts be developed and used for all service purchasing entities.

### **3.5 Financial Management**

A sound financial management process ensures the integrity and accuracy of financial information. This includes the internal controls that exist in the accounting process and ensuring that a robust budgeting process is in place which provides for accountability in decision making. This section will also review past financial performance of the Consortium over a minimum of 3 years to gain an understanding of any major variances year over year with the goal of understanding what decisions the Consortium has made which have either increased or decreased transportation expenditures.

#### **3.5.1 Observations**

The Transportation Department is not a business or legal entity and therefore cannot pay invoices as it does not have direct access to funds. Peel performs the back office accounting function for the Transportation Department. Expenses and revenues belonging to the Transportation Department are identified through the use of department codes. The Financial Analyst's role is to reconcile and allocate Transportation Department expenses and revenue between Boards.

##### *Accounts Payable*

There are two main categories of expenses within total transportation expenditures; Bus Operator costs and Administrative Costs.

- **Bus Operator Costs:** Peel advances each Operator 50% of the fixed monthly price on the 1st of every month as a pre-payment for services. Invoices for the remaining costs are received by Peel on the 15th of the month. When invoices are received by Peel they are forwarded to the Financial Analyst in the Transportation Department. The Financial Analyst must reconcile the amount per the invoices less prepayments for each Operator. Invoices are coded and entered into the Peel accounts payable system by the Financial Analyst. The invoices are then sent to the Transportation Manager for approval and then to the Peel accounting department for further verification and payment.

In addition to reconciling the invoices from each Operator, the Financial Analyst downloads EDULOG transportation data to a spreadsheet in order to determine the total split of runs and both general and special needs students, by Board. This is used to allocate the monthly costs between Boards.

The Boards pay and reconcile payments between them on a monthly basis. In addition, Dufferin-Peel provides a monthly advance to Peel for expected costs. On a yearly basis, the Financial Analyst will reconcile all costs split between Boards based on the October transportation data. This process results in the need for a final year end adjustment.

- **Administrative Costs:** Shared administrative costs, such as salaries and operational costs, are paid by each Board and split by the Financial Analyst based on percentage of unweighted student count (this includes transported students per EDULOG, not courtesy riders; see section 4.2.1). This is reconciled monthly; however, at year end a final adjustment is made based on the March headcount (per count in EDULOG and not including courtesy riders). Account codes are used at each Board to keep track of transportation related expenses.

##### *Cost Sharing Mechanism*

Peel and Dufferin-Peel have agreed, in practice, to the following cost sharing mechanism:

- Bus Contracts:
  - General needs transportation – bus cost split by percentage of runs per Board;
  - For routes involving service purchasing boards – cost of run split by percentage of student kilometres per board;
  - Special needs transportation – bus cost split by percentage of transported students per board; and
  - Provincial Schools – cost split by percentage of transported students attributed to each board.
- Other:
  - Taxi costs split by student (i.e. full cost of transporting the student is charged to the specific Board);
  - Transit costs split based on tickets delivered to boards; and
  - Administration costs split between boards based on unweighted transported student count.

#### *Budget Planning*

Each Board prepares its own budget, which include student transportation expenses. The Transportation Manager provides input to each Board on expected costs related to transportation. The Financial Analyst then combines the budgets of both boards to determine an overall budget for the Transportation Department.

#### *Budget Monitoring*

On a monthly basis, the Financial Analyst will receive the actual transportation expenses which are tracked against the budgeted amounts. The actual versus budget analysis is sent to the Transportation Manager for review and ultimately to the Finance Managers in each Board. The Transportation Manager is responsible for monitoring the transportation budgets for the two Boards, and reports to two individuals - the Superintendent of Planning and Operations at Dufferin-Peel and the Controller of Facilities and Transportation Services at Peel. Any variances are investigated and it is the responsibility of the Superintendent/Controller at each board to answer questions from trustees regarding overspending on transportation.

#### *Financial Performance Review*

The following is an analysis of significant variances in expenses over the past 3 years. Both Boards have been examined separately; see Appendix 1 for high level financial summaries. The E&E Review Team examined in more detail the major components of transportation expenditures and provided the following observations:

#### **Peel:**

- Administrative Expenses: Salaries and benefit costs increased slightly in 2003/2004 due to a higher percentage of Peel Board students bused. Administrative expenses are split based on student count- Peel Board students that were eligible for busing, as a percentage of overall students bused, changed from 59% in 2003/2004 to 62% in 2004/2005 then decreased again to 59% in 2005/2006.
- Home to School Expenses: Fuel escalator expenses have increased substantially since 2002. This is due to the fact that fuel prices have increased substantially and the existing base prices for the fuel escalation calculation reflect, for the most part, 1995 values. There has been an increased cost associated with busing students on half day Professional Activity (PA) days. This cost was previously charged by schools in their own budget. It has now been transferred from the school budgets to the Transportation Department budget.
- Revenue from Other Boards: This represents revenue received from the Orangeville Christian School. Amounts received are not significant.

## **Dufferin-Peel:**

- **Administrative Expenses:** Salaries and benefit costs decreased slightly in 2003/2004 for the opposite reason as Peel, as the percentage of students bused in the Dufferin-Peel Board during that year declined compared to other years.
- **Home to School Expenses:** Fuel escalator expenses have increased substantially since 2002. Similar to the explanation above for Peel, this is due to the fact that the base fuel costs, which the escalation clause is paid on, are based on fuel prices dating back as far as 1995. There has been an increased cost associated with busing students on half day Professional Activity (PA) days. Planning for transportation for these shortened days takes approximately 3-4 days of the Coordinator's time.
- **Exam Day Transportation:** Expenses are incurred for midday transportation for certain secondary schools during exam periods. This practice is not common across the Province and should be reconsidered.
- **Revenue from Other Boards:** This represents revenue received from the Catholic French Language Board (CSDCCS). This Board has stopped purchasing services from the Transportation Department as of the 2006/2007 school year.

### **3.5.2 Recommendations**

Given the magnitude of the gap between the transportation allocations and expenditures, the Boards must consider both short- and long-term opportunities to reduce the costs associated with transportation. Identifying practices that are inefficient or uncommon is crucial to controlling and reducing transportation expenditures.

In the short term, midday transportation during exam periods should be eliminated in the Dufferin-Peel Board. This is a unique practice for which viable alternatives exist that do not have the same adverse impact on transportation costs.

In the medium term, both Boards should undertake efforts to coordinate professional activity days. Greater coordination would reduce the administrative burden on Coordinators and improve their ability to dedicate time to identifying routing efficiencies and would also reduce the direct transportation expenditures associated with half day transportation. These efforts would have a positive impact on narrowing the gap between transportation allocations and expenditures.

In addition to immediate opportunities, the following recommendations are provided with the recognition that they can only be implemented once a true Consortium is formed.

#### *Cost Sharing Mechanism*

The current cost sharing policy should be reviewed once a Consortium is formed and as the other recommendations in this report are implemented. Currently, bus contract costs are split, for general needs transportation, based on the number of runs by a Board. For example, if the same bus performs 2 runs for Peel and 3 runs for Dufferin-Peel, the cost of the bus will be allocated 40% for Peel and 60% for Dufferin-Peel. The current bus contracts are paying a fixed fee per bus (see section 6.2.1). Since the Boards do not currently integrate their students on the same buses (see section 4.2.1), paying per run appears appropriate. However, the Boards need to consider that this cost sharing mechanism may not be equitable; if the Department's planning philosophy is to maximize the number of runs per bus without focussing on high capacity utilization (see section 4.3.1), the number of students on each bus may not be optimal. Thus, the board with the most number of runs may not be carrying the most number of students yet will still be paying the majority of the costs.

It is recommended that the Boards examine the integration of students on bus runs (See Section 4.3.2). This will require the Transportation Department to review their current cost sharing mechanism to determine if a weighted or un-weighted student method is more equitable and appropriate. In addition, once a Consortium is formed, the cost sharing policy should be formally documented and agreed upon in the Consortium Agreement. This cost sharing policy should be reviewed annually to ensure it continues to be appropriate in meeting the needs of both boards.

### *Billing*

The current practice of providing pre-payments to Operators and also receiving prepayments from Boards and then reconciling at month end is cumbersome. This practice causes inefficiencies as the payments and reconciliations are being performed more often than are necessary. It is recommended that for Operator contracts, the pre-payment to Operators at the beginning of the month be removed and that payments are only made monthly based on submitted invoices. Currently, the Financial Analyst is performing a reconciliation at month end. The process can be simplified where the Financial Analyst could simply perform a review of the invoice once received.

The Financial Analyst reconciles amounts owing between Boards on a monthly basis and cheques are issued between Boards accordingly. This process is heavily administrative as the Financial Analyst must allocate costs between Boards based on a cost sharing mechanism which requires first that the Financial Analyst download EDULOG data and sort by type of transportation. Additionally, the Financial Analyst is basing the full year's payment for bus costs on October's transportation data and is basing the full year's administrative cost based on the March student headcount.

If the Transportation Department were to become a Consortium that is a separate legal entity, it would have control over all accounting aspects related to transportation. The Consortium could develop a chart of accounts which specifically splits out costs by type (i.e. special needs versus general) and by Board and could manage the entire financial management process. If this were done, then the Financial Analyst would prepare the invoices for each Board and bill them accordingly. By centralizing the accounting function the administrative time spent by the Transportation Department and the Boards would be reduced.

### *Budgeting*

It is recommended that once a Consortium is formed, the responsibilities for transportation budgeting be moved from the Board level to the Consortium level. The Consortium CEO should be responsible for preparing the budget based on goals set by the oversight committee and the vision of the Consortium as well as reporting the budget to actual performance to the oversight body on a regular basis. Budgets would still be subject to approval by Boards/trustees.

## **3.6 Results of E&E Review**

The Transportation Department has been assessed as low in Consortium Management. An overriding factor in this assessment is the fact that the Transportation Department is not a true Consortium as per the Ministry's requirements. Specifically, there is no agreement in place between the Partner Boards to serve as the Consortium agreement, nor is there a joint oversight committee in place to monitor and guide the Consortium.

If the Transportation Department were to become a distinct entity with a clear goal of serving both Partner Boards equally through the direction and guidance of a governance body, it would be better able to conduct its daily business. Currently, inefficiencies exist because the Transportation Department is attempting to provide services to two independent Boards. Other than the fact that the transportation planning is performed on a combined system and database, there is little interaction or joint decision making between the Boards. Significant improvements could be made to the entire organization which would allow it to become more independent and therefore make decisions that respect the goals of both Boards while implementing the strategies needed to create efficiencies.

## 4. Policies and Practices

### 4.1 Introduction

The policies and practices review area focuses on established transportation policies and their implications for operational decision making. The analysis will focus on four key areas:

- Transportation Policies;
- Route Planning;
- Safety Programs; and
- Special Needs and Specialized Programs.

Each component has been analysed based on observations from fact (including interviews), together with an assessment of best practices leading to a set of recommendations. These results are then used to develop an overall E&E assessment of Policies and Practices as shown below:

<b>Policies and Practices – E&amp;E Rating:</b>	<b>Low</b>
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### 4.2 Transportation Policies

Transportation planning policies establish the foundation for the provision of transportation services and establish the parameters for the overall effectiveness and efficiency of the system. The key areas of assessment in this section are the completeness of established policies and the degree of policy harmonization between the Boards.

#### 4.2.1 Observations

##### *Policy Infrastructure*

Transportation policies form the foundation of the operating structure of every transportation department/consortium. Establishment of policies for the key aspects of the operation, including eligibility requirements; student rules and disciplinary procedures; bus stop location and review criteria; desired ride length; and special education transportation procedures are important because they provide a concise reference point for parents, Board staff, students, and bus company staff to refer to as different situations arise. Policies also have a direct impact on service costs. If policies do not allow for resources to be minimized, additional funding that could be dedicated to classroom activities must be diverted to provide for transportation. Finally, the degree of harmonization between Partner Board policies is also an important consideration because it establishes the planning constraints that transportation staff must operate within when developing bus routes.

The policies of both Boards are generally designed to promote high levels of service and maximize the flexibility available to students. Examples of the access and flexibility provided within current policies include:

- Alternate bus stop locations – Requests for regular, alternate bus stop locations will be granted at the discretion of the Transportation Manager.
- Authorization for single instance drop off – A one-time drop off at a designated location is available if a school’s administration decides to manage such a program. For participating schools, these daily changes are generally managed by school personnel via a formal application process and communication with the Driver. In addition to the potential for creating operational disruptions, this practice has the potential to create a safety concern by limiting the ability of the Transportation Department to track students from pick up to drop off.
- Courtesy riders – Students who are otherwise ineligible for transportation are offered the opportunity to ride the bus on a space available basis, at the discretion of school principals (see *Courtesy Riders*).

- Bus stop placement - Route stops are not removed from the routing network even when there are no students assigned to the stop. The school principals use existing stops (used by qualifying students or not) as courtesy stops.
- Late busing - To encourage full participation in after-curricular activities and assist students to get help from teachers after school, Dufferin-Peel may provide late bussing for high school students. Late bussing is provided when the minimum number of students requiring the service is equal to 15. Peel discontinued late bussing in 1996.
- Open enrolment - Students may apply to attend schools outside their school area, provided the school has space, as determined by principals and superintendents. While transportation is not directly provided, students may utilize the courtesy rider program where available. In the event that a bus services multiple schools, the principals involved jointly determine the distribution of available seating between schools using the following criteria: students residing in the schools' attendance area be given first priority, students residing outside the attendance areas of the schools be given second priority. Students attending classes outside their attendance area may be required to walk to the school they would normally attend in order to obtain transportation provided by the Board.

While each of these policies is intended to promote flexibility and/or access to educational opportunities, this flexibility comes at a cost. To the extent that flexibility limits the ability of the Transportation Department to maximize the number of students assigned to the bus and the number of times the bus can be reused, cost is inevitably increased.

In certain aspects of a transportation operation, harmonization of policies is critical to route planning:

- Harmonized home-to-school service eligibility distances allow Coordinators to plan equitably and save time. On paper, these policies are harmonized between the Boards. However, the practices of the Boards are inconsistent. Both Boards operate a courtesy rider program that allows schools (principals) to circumvent service eligibility policies, where space is available (see below). Furthermore, inaccuracies in student data impede the ability of Coordinators to ensure that service eligibility policies are being followed at the planning stage (see section 5.3.1).
- Walk-to-bus stop distance policies are shorter in Dufferin-Peel. However, inaccuracies in student data impede the ability of Coordinators to ensure that walk-to-bus-stop distance policies are being followed at the planning stage (see section 5.3.1)
- Ride time policies were consistent between the Boards. In most cases, the service being provided allowed for actual ride times that were significantly less than established maximums.
- Policies regarding transfer points (limited to a maximum of one per trip) and hazard area transport (as determined by the Transportation Manager, Municipal Safety Council, the appropriate police authority, or the municipal traffic or engineering department) are consistent across the Boards.

Thus, policies are not fully harmonized (see Appendix 2) and no timeframe for harmonization had been established at the time of the review. This situation has the potential to create both equity and management concerns because separate planning criteria must be established for each student. The harmonization of all policies should occur in order to allow the minimum amount of resources to be diverted from classroom activities for transportation.

In addition to the policies above, both Boards subscribe to a policy restricting the integration of students from different schools (both within and between the Boards) on school bus runs, except for a limited number of special needs vehicles. There are few planning practices which could impose such substantial limitations on route and capacity optimization. An inability to integrate students on runs prevents the consideration of a number of alternative routing strategies including combination and shuttle runs that may provide opportunities to increase effectiveness and cost efficiency.

#### *Courtesy Riders*

Both Boards have established courtesy rider policies (referred to as the "Empty Seat" or "Fill Up The Bus" policies) where students are assigned to existing regular home-to-school bus routes and stops where there is capacity remaining in mid-October. Coordination and administration of this program is performed at the schools for students who do not meet eligibility requirements. The parents make applications to the school principal, and the principal has the discretion to approve these

arrangements. This is a privilege that could be removed at any time (with one week's notice) should eligible students require transportation on that bus route.

The intention of a courtesy rider policy is to provide greater service levels to students where there appears to be existing capacity without adversely impacting the routing network. While the goals are laudable, courtesy riders introduce cost and complexity into an operation no matter how limited the policy or practice may seem. The impact of this program is even more pronounced when consideration of courtesy ridership becomes an element of the route planning efforts, rather than an extension. Many of the costs introduced by courtesy rider programs are administrative in nature and therefore less apparent than direct, out of pocket expenditures. Examples of these costs include staff time required to process rider applications, management and administrative time required to assess availability and determine who is eligible to participate, administrative time to address complaints or concerns about the system, and administrative time to accurately track which students are riding what bus each day. To the extent that providing for courtesy riders prevents the bus from being used somewhere else in the system and consequently requires the need for an additional contracted vehicle, there can also be a direct cost associated with this program.

The operational complexities introduced by this type of program make it difficult to accurately account for students in the event of an accident or incident on the bus. The existing courtesy rider program is managed at the school level and there is limited coordination with the Transportation Department on the number of students and the specific students riding a bus. While specific operating procedures at the schools were not evaluated as part of this review, it is clear that any incident would require an accurate list of students assigned to the bus by the Transportation Department to be reconciled with an accurate list of students assigned to the bus as part of the courtesy rider program before an accurate assessment of any situation could be made. The increased risk associated with not having one complete and consistent list of riders is the primary reason why a reassessment of this policy and its operating practices should be considered.

#### *Noon-hour Kindergarten Transportation*

Both Boards currently provide noon-hour transportation to support half-day kindergarten programs. This represents a significant cost that may be reduced if alternate forms of program delivery (e.g. all-day alternate-day kindergarten) are adopted in all or in part of the Boards' jurisdiction.

#### *Public Transportation*

When deemed appropriate by the Transportation Manager, Transportation Officers or the Financial Analyst provide tickets for public transportation to eligible students. Transportation Officers also have the ability to authorize the use of a taxi service in addition to authorizing public transit use. Students apply through their school and this request is sent to the Transportation Department for approval.

### **4.2.2 Recommendations**

#### *Policy Constraints and Harmonization*

The Peel and Dufferin-Peel Boards should immediately begin reconsidering the guidelines that have prevented integration of students within and between the Boards on individual runs. Limiting flexibility in route design by preventing integration significantly constrains the Transportation Department's ability to identify opportunities to reduce the cost of transportation services.

Furthermore, the Boards should ensure that policies and practices are harmonized and followed in practice, where those policies have a critical impact on routing efficiency. This would include home-to-school service eligibility distances and walk-to-bus-stop distances.

#### *Courtesy and Single Instance Drop Off Riders*

It is recognized that offering available seats to students otherwise ineligible for service may be an effective mode of providing additional transportation services. However, these programs are an administrative burden and generally constrain system efficiency. This is particularly detrimental when bus stops, where no eligible riders are assigned, are not purged from the system in order to accommodate courtesy riders. The courtesy rider and single instance drop off policies of both Boards also present a risk management concern that is not fully mitigated by any existing procedure. Under current procedures the schools are supposed to maintain the list of students who are participating in the courtesy rider program. However, these lists are infrequently, if ever, shared with Transportation

Department staff. In the event of an emergency a serious concern arises about the completeness and accuracy of rider lists and the reconciliation of those lists relative to prepared routes.

The courtesy rider program should be re-evaluated and procedures for reconciling students participating in the program should be established. The range of possible consideration should include the elimination of all courtesy ridership to the establishment of a formal procedure that notifies and reconciles route lists between schools and the Transportation Department.

#### *Maximum Ride Times*

In practice, ride times for Peel and Dufferin-Peel are lower than common practices across the Province, especially for rural secondary students, magnet schools and kindergarten. Concurrent with the establishment of a full consortium, the Boards should reconsider ride time policies to ensure that they are not restricting the ability of the Transportation Department to maximize asset utilization.

#### *Noon-hour Kindergarten transportation*

The majority of school boards in Ontario provide all-day alternate-day kindergarten for students in at least part of their jurisdictions. In order to reduce transportation expenditures and reduce young students' time on the bus, this model of kindergarten is provided in most rural areas. In light of the wide-spread use of all-day alternate-day kindergarten and the potential cost savings in transportation, it is recommended that the Boards examine the adoption of all-day alternate-day kindergarten programs, especially in rural areas. In addition to pedagogical considerations, this examination should take into account potential savings in transportation and potential reductions in kindergarten students' time on the bus.

### **4.3 Route Planning**

The ability to maximize the use of each school bus is the foundation of effective and efficient transportation services. Proper consideration of all of the elements required to deliver high quality and cost effective services can only occur if the transportation operation has established a planning cycle that is sufficiently forward looking. During the planning cycle, transportation managers are constantly trying to strike a balance between two opposing constraints, time required and distance to be travelled, to maximize asset utilization.

#### **4.3.1 Observations**

##### *Planning Cycle*

The Transportation Department has established an informal planning schedule that is dictated to some degree by data availability from the Boards. Route planning for the following year generally begins in March of the preceding school year with collection of student rollover data. Coordinators and Area Officers work to revise, add, or eliminate runs as required. The Planning Officer and the Transportation Manager then utilize the routing software to optimize the pairing of runs into routes. The routes are then submitted to Operators for review and comment. While the process tries to provide these routes prior to the start of school, concern was expressed that this is often not possible due to late receipt of, and revisions to, student data. Throughout the school year the Transportation Department attempts to provide Operators with route changes mid-week for changes intended to be implemented by the following Monday. As detailed in Section 6.4.1, interviews with Operators indicated a concern over the timeliness of this practice.

##### *Routing*

The routing scheme is dominated by two prevailing premises. The first premise is that the greatest value is placed on re-use of the bus rather than maximizing the number of students on the bus. The second premise is that students from different Boards should not ride on buses together, except in the case of special education. Each premise has a significant impact on the ability of the organization to realize routing efficiencies.

The first premise results in bus runs that are shorter in length, travel limited distances and collect a limited number of students. Analysis of afternoon routes indicates that approximately 50 percent of regular routes have two runs in the afternoon, not including noon-hour runs (or approximately four per day), 20 percent have three afternoon runs, and 2 percent have four runs. It should be noted that 28 percent of the regular routes serve single runs in the afternoon (or two runs per day). There are

41 different ending times between 2:00 PM and 4:00 PM, with the majority of schools ending at 3:00, 3:15, 3:30, and 3:45. The sheer volume of pairing possibilities and the relatively short run distances (13 kilometres, on average) would imply that opportunities for greater route pairings exist. Reducing the 30 percent of buses that currently only have one afternoon and one morning run by increasing the pairings would reduce the total number of buses required and would have a direct impact on the cost of services.

The second premise results in the need to traverse the same area multiple times to collect students that may be attending schools in the same area. This results in the need for more buses than would otherwise be required because buses must return to the same neighbourhood multiple times to collect less than adequate loads of students. A focus on the reuse of buses, while certainly a key element in achieving efficiency, has led to a very low use of available capacity. Route data provided indicated utilized capacity rates of 48 percent – more than one of every two seats being empty on any given route. When analyzing capacity in the morning and afternoon runs for 72 passenger buses (those with planned loads of 48 students or greater), overall *planned* capacity rates are 59 percent. This is well below industry common practices of 70 to 80 percent. Analysis of the same route set indicated average run lengths are 12.5 kilometres and 22 minutes with median values of 7.4 kilometres and 17 minutes. These values indicate that there are opportunities within the current system to consider lengthening runs with the goal of increasing capacity utilization and reducing the number of buses required. Efforts are necessary to re-evaluate the routing structure to evaluate the balance of between the focus on tiering and the capacity utilization.

Discussions with staff indicated two major planning concerns that impacted route development. The first concern was school site traffic. It was reported that access and egress to many of the sites is greatly limited by both local (to the school) and through traffic. In addition, Transportation Department staff work with local traffic enforcement as part of the bell time development process to reduce the impact of school traffic on through traffic. Consequently, the Transportation Department has limited the use of combination runs (a single bus serving multiple schools) to mitigate the possibility that runs will be late from one school to the next due to traffic.

The second factor impacting route planning is the use of holding schools during school construction or renovation. In nearly all cases transportation across multiple boundary areas is required for students attending holding schools. This results in students who may not be eligible for transportation in their home school area requiring transportation to the holding school. Additionally, these routes are typically longer which limits the number of tiering opportunities for buses assigned to these routes. Consequently, these routes are generally inefficient with limited opportunities for improvement.

#### *Bell Times*

The Transportation Department performs an annual assessment of bell times to evaluate opportunities to improve operational efficiency. This analysis is generally performed by the Transportation Manager and the Planning Officer utilizing the Route Optimization module of EDULOG. The Transportation Department makes recommendations to each Board regarding time changes, but the individual Boards have discretion over approving the actual time changes. Thus, adjusting bell times is an iterative process involving school Principals, Superintendents, and Transportation Department staff. This dispersed authority results in very limited Transportation Department control over actual operations and is a significant contributing factor to the low capacity utilization detailed earlier.

### **4.3.2 Recommendations**

#### *Routing*

Opportunity exists for the Partner Boards to elevate sharing of resources beyond the current level. Despite the Transportation Department's use of EDULOG's Route Optimization module to stagger school bell times, the fundamental philosophy in building stops, runs, and routes is based on segregating the systems of each Board. The integration happens at the route level but does not exist at the run and stop level. Such duplication is costly and it is recommended that the Transportation Department investigate avenues to assess potential saving if the sharing of resources is increased. The integration of special education transportation is an indication that this approach is possible on a more system wide basis.

As part of its analysis on student integration on runs, the Transportation Department should also revisit its existing routing philosophy regarding capacity utilization. A primary benefit of integrating the runs is the opportunity to put more students on any given run, which would improve the overall

use of seating capacity. Improving the use of seating capacity and eliminating the time required to return to the same neighbourhood multiple times should also provide the opportunity to reduce the number of buses required and thus reduce expenditures. This change must be integrated with the review of bell times recommended below to ensure that sufficient time exists to travel enough distance to pick up a more substantial load of students.

#### *Bell Times*

It is recommended that Peel and Dufferin-Peel Board administrators should make a greater effort to improve the coordination of bell time efforts with the Transportation Department. Reports indicate that some time requests are accepted while others are rejected. This approach results in a need to fully re-evaluate and re-implement any proposed bell time solution. The Transportation Department should be provided with a greater level of authority in established bell times in order to realize reductions in the number of transportation assets being utilized. In addition, the concentration of bell times around three specific intervals (47 percent of all schools dismiss at 3:00, 3:15, or 3:30) will need to be reviewed to ensure that sufficient time exists to accomplish two primary objectives: 1.) improve the use of seating capacity as described above; and 2.) improve the ability to pair multiple runs to the same bus. Accomplishing these goals will require the time flexibility that can only be provided through the bell time setting process.

## **4.4 Safety Policy**

The safety of transported students is paramount in any school transportation system. Developing a culture of safety requires that the transportation manager work closely with students, schools, service providers, and the community to establish specialized programs targeted to the needs of each specific group. Additionally, Driver training and student management procedures must be aligned to reinforce behaviour expectations and consequences for failure to comply with the expectations.

### **4.4.1 Observations**

#### *Bus Accidents*

The policy on bus accidents is that the Driver should stop and assess the situation, including the condition of the students. The Driver is required to advise the Operator of the situation. There is no mention of contact between the Operator and schools or the Transportation Department to further communicate the details of an accident to parents in the policy statement, however, operational practices require the Operator to record all accident information on an accident reporting form and communicate the information to the principal and superintendent.

An emergency procedure is also in place for field trips, which establishes the communication that should immediately follow an accident. As the Driver investigates the nature of the accident and sets out emergency flares, the teacher/supervisor makes contact with the police and the school. The school principal will then contact the superintendent, the Transportation Department and parents.

#### *Hazards*

As schools are constructed, the Transportation Department or local school principals identify areas that may benefit from a crossing guard to mitigate hazardous conditions. These areas are to be brought to the attention of local safety councils, which will perform a site inspection. An analysis is performed using the volume of walking students who would potentially use a crosswalk, in addition to available traffic gaps at the location of the potential crosswalk. If a crossing guard cannot sufficiently address safety concerns, buses may be used to safely transport students. If a crossing guard is warranted, the municipality oversees the implementation, funding and management of the resource.

#### *Student Identification and Missing Children*

Kindergarten students at both Boards and Grade 1 students at Dufferin-Peel are provided with identification tags and are required to wear them. The identification tags provide the student number and stop location which allows the Driver to assist the children in arriving at the appropriate stop. Drivers are asked to use their discretion to ensure that students are met by guardians, caregivers, familiar neighbours or relatives at their assigned bus stops. This could potentially open the Transportation Department to liability if it is the Driver's responsibility to match students with guardians. A program of this nature requires that students, guardians, schools, Drivers, Operators,

and the Transportation Department work together to ensure that policies are being enforced consistently and procedures are being followed on the ground.

In either Board, older students can be supplied with identification cards by the Transportation Department, and this can be a requirement for boarding school buses if the school chooses to use them. Cards issued each year are dated and provided in a different colour than the previous year. There is a significant administrative component to this program that has the potential to outweigh the program's benefits. In order for a program of this nature to be successful, schools must distribute cards to all eligible bus riders; students must retain and be prepared to show their cards; and Drivers must verify that students have cards and be prepared to deny service to students who cannot produce a valid identification card.

There is no written procedure for children who are missing on the way to or from school. However, there is an informal procedure where schools call the Operator or Driver to determine if the missing student boarded the appropriate bus. The school then contacts other Operators servicing that school to see if any students boarded a bus that was not their usual bus. Drivers in contact with that school will normally drive around and look for the lost student. If the student is not found within 15-20 minutes, the police are to be contacted.

#### *Student Training*

Safety and school bus evacuation training is coordinated with school principals and Operators and is supposed to be provided annually for students of all grades who are bussed to school. However, the practice is not actively monitored. The 'Young Rider' program is offered to all kindergarten students through schools, and is designed to introduce both the students and parents to school bus safety rules. This training consists of a safety video, a review of school safety procedures and a ride on a school bus.

School student safety patrols are established where school administration decides to implement the program. This program involves students from upper elementary grades whose purpose is to assist with the safety of younger students and act as eyes for the Driver. Students participating as patrollers in this program are trained at Peel Safety Village.

#### *Driver Training*

All Drivers are trained in emergency management and to assist students with an anaphylactic condition. Students who may require anaphylactic shock assistance are supposed to be identified on run reports provided to the Driver. However, practices do not consistently comply with the policy. Run sheets are often not updated and any student added to a bus as a courtesy rider may not be identified. Drivers are also provided with an individualized Emergency Response Plan for each student, but training for students on special needs transportation is not included in policy documents.

### **4.4.2 Best Practices**

It is recognized that the Transportation Department has demonstrated best practices in the following area:

- The identification card used for young riders provides additional support to these students by ensuring the Drivers can distinguish them from other more experienced riders; and
- Hazard conditions are evaluated with the assistance of local municipalities and safety councils. Efforts are made to mitigate the impact of these hazards on transportation requirements.

### **4.4.3 Recommendations**

#### *Policy Implementation*

Every transportation operation should have comprehensive safety policies in place. However, the actual implementation of policy is ultimately the most important requirement. Particular attention should be paid to accident reporting protocols and Driver training requirements. Student training records should also be maintained to ensure that the training is provided for all students.

## 4.5 Special Needs and Specialized Programs

Effective school transportation includes transporting students with special needs (mobility restrictions or behavioural issues due to cognitive conditions, attachment requirements and such) as well as transportation to specialized programs, which often involves transporting students from diverse locations to centralized program schools. Both of these types of transportation can put pressure on the efficiency of the system since they involve longer distances, lower demand densities, longer passenger ride times, and in the case of special needs transportation, accessible vehicles.

Transportation Consortia face a challenge in maximizing the efficiency of these systems in addition to attempts to integrate students and avoid having separate transportation systems. This section examines the policy approach to special needs and specialized transportation, and how well practice conforms to established policies.

### 4.5.1 Observations

#### *Placement of Specialized (magnet and special education) Programs*

The placement of magnet programs is currently performed without the input from the Transportation Department, as facility space is seen as the most significant planning obstacle. Transportation is provided to magnet programs in Dufferin-Peel and to French Immersion students in Peel.

#### *Eligibility for Special Needs Transportation*

Special needs transportation is provided to students who have a medically verified condition and is ultimately determined by the Board's identification, placement and review committees (IPRCs). Subsequent to this assessment, special education resource teachers (SERTs) will contact the Transportation Department to arrange transportation for students. Most students are eligible for transportation, and the level of service provided is decided by schools and is based on the information provided by SERTs. Students who are designated by SERTs as 'ride alone' require a separate vehicle and may or may not have a travel assistant. Even with a travel assistant, these students are not currently eligible for transportation on a general needs route because of physical limitations or behavioural problems.

Service for students who are in Section 23 programs is provided, with the majority of travel occurring between Peel and Toronto. SERTs and potentially the receiving health care centre provide specific requirements and details regarding service requirements. Five passenger vans and sedan taxis are used for Section 23 transportation.

Provincial schools provide a list of students who are currently enrolled in each school, and the Transportation Department creates a segregated route system almost exclusively using twenty passenger vehicles for daily travel students. Residential student transportation is organized provincially through the Ottawa-Carleton Transportation Department in cooperation with the Ministry.

Peel and Dufferin-Peel have investigated the use of specialized public transit in the past, but it was found that accessible vehicles were not available at the required times.

### 4.5.2 Recommendations

#### *Placement of Specialized (magnet and special education) Programs*

It is recommended that the Transportation Department be included in the process of locating specialized programs by providing feasibility studies on program placement in circumstances where this information is required. Coordination of transportation for both students with special needs and students attending specialized programs is a process that requires close communication with schools in order to develop an efficient service to suitably address student needs. In the event that building capacity is not at issue, it is possible to use the functionality of the existing routing software to evaluate student demand for specific programs and determine if the programs are properly located. It is recommended that resources be allocated to plan and monitor this type of service delivery to increase the opportunity of share rides, and to allow substantive increases to both effectiveness and efficiency.

#### *Integration*

It is recommended that the Transportation Department review the possibility of allowing for further integration between general and special needs student transportation. Some special needs students

could be considered for general needs routes, depending on the nature of their exceptionalities. Additionally, it may be advantageous to allow general education students to travel on special needs vehicles, where capacity exists. Areas that are difficult to traverse, particularly rural areas, may present an opportunity to utilize an integration strategy in combination with other routing strategies.

#### *Public Transit Vehicles*

It is recommended that the Transportation Department further investigate any opportunities to utilize the service of area paratransit providers, as there may be unexplored opportunities to fill the residual capacity that commonly occurs during the early morning and late afternoon on specialized transit. Previous consideration of this option was deemed to not be feasible, however it may present an option for future contracted services in limited cases.

## **4.6 Results of E&E Review**

Policies and practices in Peel and Dufferin-Peel have been assessed as low. The policies are not harmonized between the Boards, and where policies do exist they are not always followed in practice. Additionally, some policies are constraining planning options, specifically the non-integration of runs between Boards, and could be causing inefficiencies in routing.

Effective use of transportation resources is built on the idea that run design should maximize, to every extent possible, the number of students riding a bus and the number of times that every bus is used in a given day. Allowing for the integration of students from multiple Boards on any given bus will help address both issues. In the first instance it will allow for a single bus to travel through a neighbourhood and collect all students attending schools that are in a reasonable proximity to each other. This will increase the number of students on any given bus, thus increasing the use of available capacity. In addition, integration will reduce the number of times any specific bus has to travel to the same area, which reduces the overall time required to complete runs and increases the opportunities to pair runs between schools. The integration of students across runs, coupled with properly balanced school start and end times will have the greatest impact on the Transportation Department's ability to reduce the cost of transportation services.

Effective policies should ensure that students safely arrive at home or school, and that they are adequately tracked during the time that they are on a school vehicle. It is imperative that Peel and Dufferin-Peel improve the effectiveness of emergency procedures and student tracking.

## 5. Routing and Technology

### 5.1 Introduction

Routing and Technology encompasses the management, administration, and use of technology for the purpose of student transportation management. The following analysis stems from a review of the five key components of:

- Software and Technology Use;
- Digital Map and Student Database Management;
- System Setup and Use;
- System Reporting; and
- Special Needs Transportation Planning and Routing.

Each component has been analysed based on observations from fact (including interviews) together with an assessment of best practices leading to a set of recommendations. These results are then used to develop an E&E assessment for each component, which is then summarized to determine an E&E assessment of Routing and Technical efficiency as shown below:

<b>Routing and Technology – E&amp;E Rating:</b>	<b>Moderate - Low</b>
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### 5.2 Software and Technology Use

Modern student transportation routing systems allow transportation managers to make more effective use of the resources at their disposal. These systems allow for improvements in the management and administration of large volumes of student and route data. However, the systems must be fully implemented with well designed coding structures and effective mechanisms to extract and report data to all stakeholder groups. This section of the evaluation was designed to evaluate the baseline acquisition, setup, installation, and management of transportation-related software.

#### 5.2.1 Observations

##### *Routing Software*

The Transportation Department has purchased and has fully implemented the EDULOG routing software package. Both Boards used EDULOG's Routing and scheduling system before forming the Transportation Department. The long history with the system has resulted in a detailed understanding of system capabilities by transportation management and technical staff. The Planning Officer has extensive knowledge in the use for the EDULOG system and how to use higher order modules designed to achieve routing efficiencies. In practice, the Area Transportation Officers and the Area Coordinators plan the runs; however it is the Planning Officer and Transportation Manager who optimize the routing by combining the individual runs into route groupings.

##### *Maintenance and Service Agreements*

Maintenance and service agreements are in place to provide for customer service. Maintaining the currency of the system is critical to ensure that opportunities for efficiency can be identified and evaluated. The update process includes at least annual upgrades and fixes when they become available. System maintenance procedures are managed by the Data Analyst and include nightly batch system maintenance programs. The EDULOG server is hosted by Dufferin-Peel and is backed up daily with off-site storage. Data backup is also performed by the Transportation Department staff with EDULOG's system-based utility program. These backups allow for a timely restoration of base coding structures given the limited changes that occur to these data elements.

### *Distributing Data*

The EDULOG system is primarily used for the Transportation Department's in-house daily operations and for annual route planning. Bus run reports that contain location of stops and estimated times are distributed to schools and bus route reports that contain run staggering, number of eligible riders, and estimated time at stops are provided to the bus operators. Transportation data (eligibility code, AM and PM stop and run) are exported from EDULOG and imported into Peel's centralized student database. Transportation Department staff are responsible for all of the work associated with developing and producing these reports, which results in moderate to substantial levels of effort with very little added value.

### *Training*

During the conversion from DOS™-based platform to a Windows™-based platform, Transportation Department staff received training from the software vendor on the use of the new EDULOG.nt version of the software. Ongoing training is generally provided by senior staff. However, throughout the organization detailed knowledge of system functionality is uneven. Training presents the greatest opportunity for improvement in software use. The Planning Officer has the most comprehensive knowledge of the overall EDULOG system. The Data Analyst who is also the GIS data technician resolves technical issues of the EDULOG system and is responsible for maintaining the GIS data. The three Area Transportation Officers are knowledgeable about all basic system functionality and the use of software to identify school locations, insert school boundaries developed by the Planning Department, and establish school walk boundaries. The twelve Area Coordinators are responsible for daily maintenance of the student and transportation data using EDULOG's Transportation Module and are knowledgeable about how to add, move, and delete stops and how to modify routes and times to reflect real operating conditions.

### *Ancillary Technology*

The Peel Board has developed a web-based verification routine for the transmission of special education data to the transportation operation. No additional tools are utilized to support routing operations.

## **5.2.2 Best Practices**

It is recognized that the Transportation Department has demonstrated best practices in the following areas:

- Fully functional routing software has been purchased and implemented and efforts are being made to automate the transfer of student data from both boards for the purpose of developing routes and schedules; and
- Off site storage and backup of databases promotes the timely recovery of data in the event of a system failure and is a key element of disaster preparedness.

## **5.2.3 Recommendations**

### *Data Distribution*

It is recommended that the Transportation Department investigate the feasibility of creating a secure, web-based resource that would allow schools and Operators to print reports from EDULOG, as required. Developing and producing these reports offers very little added value and could be eliminated through the use of ancillary software modules available through EDULOG or from other third party vendors. This would allow the Transportation Manager to reallocate existing staff time from low value production work to more valuable analytical tasks focused on improving the efficiency of routing operations.

### *Training*

It is recommended that training efforts be focused on bridging the EDULOG system knowledge gap among staff through the design of training plans tailored to specific job responsibilities. For example, Area Transportation Officers and Area Coordinators could be provided training on the Run Optimization module. This would support the development of more efficient runs that can be then incorporated into the Route Optimization module currently being used by the Planning Officer. Elevating Area Officers

and Coordinators' software skills from the current daily maintenance level to the level-one planning mode will afford the Planning Officer opportunities to enhance the EDULOG system.

#### *Ancillary Technology*

It is recommended that the Transportation Department consider the use of an automated voice response system to allow for easier notification of school bus assignments to be provided to operators, schools, and parents. This recommendation is designed to increase the effectiveness of transportation staff by removing low value work and reallocating time to analytical tasks focused on cost saving and service improvements.

### **5.3 Digital Map and Student Database Management**

This aspect of the E&E Review was designed to evaluate the processes and procedures in place to update and maintain the student data and map data that forms the foundation of any student transportation routing system.

#### **5.3.1 Observations**

##### *Digital Map*

Prior to the creation of the Transportation Department, both Boards owned and utilized EDULOG for transportation. Upon creation of the Transportation Department, each Board's map was reviewed to determine the most complete and accurate map for use by the consolidated system. The Transportation Department again updated the map upon conversion to the current version of EDULOG and converted the current digital map from DMTI to GIS data and delivered it to the Transportation Department for use in March 2006. The map update process was difficult and drawn out and resulted in significant run design and school start issues. Transportation Department staff have been working on identifying and improving map accuracy but additional efforts are still required.

##### *Map Management*

Traffic attributes require careful monitoring and administration to promote accurate route timings. The default values have not been revised to reflect actual road timings especially in the northern area. The bus travel time estimation problem was compounded by a change in how stop load times are accumulated. Because the Transportation Department's traditional approach to developing routes and schedules does not rely on system generated run directions, the calibration process of on-the-ground travel speed, travel restrictions and other traffic attributes will continue to be a challenge.

##### *Default Values*

Default values have not generally been revised to reflect actual values for road speeds or load times. There are efforts underway to revise and update all road speed values and road length segments to bring greater accuracy to the map.

##### *Map Accuracy*

The map is reported to have highly valid addressing for transportation-related addresses, including both school and student locations in the more densely settled areas. Less dense areas in the northern portion of the coverage area have significantly less accurate address matching and have resulted in Area Coordinators and Area Transportation Officers manually developing bus runs and routes in this area. Interviews indicated that the establishment of the Data Analyst position has improved the ability of the Transportation Department to update and maintain the map. Since the initial GIS conversion the Data Analyst has been responsible for editing and updating the map. The Data Analyst has established effective working relationships with local planning organizations to receive advance hardcopy maps on new streets and residential developments. However, all staff indicated a need to improve the accuracy of the map including street locations and other attributes.

##### *Data Management*

Transportation operations cannot operate efficiently and effectively if baseline student data used to develop routes and schedules is not accurate. Significant concerns about the accuracy of Dufferin-Peel student data has led to the development of bus runs that include a significant amount of excess capacity to account for expected inaccuracies in the student data. This approach to addressing poor

student data availability is both expensive and operationally disruptive due to the significant volume of changes required following school start up and the intra-year difficulties of managing address or school changes. Dufferin Peel is in the process of implementing the Trillium database for student management; however this implementation was not complete at the time of the review. Consequently, student data updates are received much less frequently than from Peel. Transportation Department staff reported that student data is fully updated once per year with other periodic updates, when possible.

Student data uploads for Peel are performed on a weekly basis. The data is loaded via a batch update process from the Board's student database. Match rates are generally high due to efforts made with school-based staff to ensure complete, accurate, and timely entry of student data. Consequently, staff have a significant level of confidence in this data and Peel students can be incorporated into the routing network in an efficient manner.

#### *Coding Structures*

Baseline coding structures have been established for student types, program types, and vehicle types. These codes facilitate the basic reporting requirements to school Boards and bus contractors. Additional post editing is required to submit the annual Ministry survey but the coding structure is designed to efficiently extract the necessary data.

### **5.3.2 Recommendations**

#### *Map Management*

Calibration of bus travel time, using EDULOG generated run directions, is a critical challenge. As the school bus routing and scheduling software industry is heading toward an environment that places high priority on calibration of real-time data, it is recommended that the Transportation Department review map attributes to calibrate optimal run directions and load times at stop to increase system data precision. As mentioned before, the Transportation Department currently does not use EDULOG to generate optimal run directions and load time at stops to increase system data precision. Instead the length of runs (in time) is estimated with EDULOG's acceleration, cruising, and deceleration formula. This approach provides an adequate estimation of the overall bus run travel time (especially in urban street network), but does not allow users the opportunity to fine-tune traffic attributes at the street segment level that are specific to school buses (e.g. forbidden turns, turn penalties, turnaround locations, roadways that are not suitable for school buses), or the ability to denote road hazards such as level railroad crossings. Utilizing EDULOG-generated run directions to fine-tune and to de-bug the GIS traffic attributes would allow users to gain increased confidence in run times generated from the optimization modules.

#### *Completeness of Data Entry*

Significant efforts need to be made in conjunction with Dufferin-Peel to improve both the frequency and accuracy of student data updates. The Transportation Department will have difficulty realizing substantial cost savings until the accuracy of this data is improved. At that point Area Coordinators will be much better able to design routes that reflect true service demands and any excess capacity in the system, and the corresponding excess cost, can be eliminated.

Following improvements in data management at Dufferin-Peel, it is recommended that the Transportation Department transition to a daily update of the student data. The batch student updating routine is a scheduled routine in the EDULOG system and is capable of scheduling daily updates. Daily student updates are highly encouraged for large school districts so new students and changes that impact transportation can be more effectively managed by Area Coordinators as part of their daily assignments.

The Transportation Department maintains and uses eligible riders exclusively for planning but does not capture actual number of riders. The current system is sufficient for large scale system-wide planning, however does not have sufficient precision for optimization simulation at the area level.

The courtesy rider program should be re-evaluated and procedures for reconciling students participating in the program should be established. The range of possible consideration should include the elimination of all courtesy ridership to the establishment of a formal procedure that notifies and reconciles route lists between schools and the Transportation Department

### *Coding Structures*

It is recommended that the Transportation Department consider identifying actual riders in the system through a coding convention that will allow Area Coordinators to analyze ridership trends and the difference between planned and actual riders. Coding of actual transported students will allow the Transportation Department to plan using the number of actual riders (as opposed to only eligible riders) and thus elevate the level of route planning precision.

## **5.4 System Setup and Use**

The goal of every organization that acquires transportation software is to use it to better manage the vehicles and students within its charge. Accomplishing this requires an understanding of the functionality of the software and how it can support the administration of existing operations and the evaluation of new and different approaches that may reduce cost or improve service. This aspect of the review was designed to evaluate staff competencies using the software, the use and understanding of ancillary modules or third party tools, and whether the functionality of the chosen application is used to improve effectiveness and/or efficiency.

### **5.4.1 Observations**

#### *System Use*

The Transportation Department is to be praised for taking advantage of EDULOG's Route Optimization module. Much of the basic functionality of the system is well used throughout the organization. As was previously mentioned, Area Coordinators have more limited knowledge of the detailed functionality of the system but are very knowledgeable about how to use the software to make minor modifications to stop locations, stop sequence, and bus runs. Area Transportation Officers work closely with schools when changes to school boundaries or grade configurations are anticipated to evaluate the impact that any proposed changes would have on transportation requirements. The Planning Officer is extremely well versed in high-level EDULOG modules for developing proposals to make more strategic changes. Staff are sufficiently skilled to make strategic and tactical changes to the system in an effort to improve service levels and costs.

### **5.4.2 Best Practices**

It is recognized that Transportation has demonstrated a best practice in the following area:

- Use of the Route Optimization module, the most complicated module in EDULOG, is an effective method of attempting to control the overall need for resources within the transportation program.

## **5.5 System Reporting**

Adequate reporting allows for the early identification of trends that may be detrimental to operations, improves the analytical capacity of the organization, and allows for internal and external stakeholders to be more adequately informed about operations. The purpose of this aspect of the review was to evaluate what reports are typically generated, who receives these reports, and what capabilities exist to develop ad hoc reports.

### **5.5.1 Observations**

#### *Reporting*

There is very limited formalized reporting that occurs. The primary reports developed by the Transportation Department include run reports for schools and route reports for bus operators. The Transportation Department staff is knowledgeable and very competent in the extraction of data in multiple formats that would allow for analysis using standard third party productivity software. However there is no procedure for using the system reporting to conduct internal performance assessments.

### **5.5.2 Recommendations**

#### *Reporting Schedule*

It is recommended that the Transportation Department introduce a systematic approach to performance assessment as part of their annual operation activities. The Transportation Department

should identify and collect data elements conducive for performance analysis. The Transportation Department should evaluate each position in the organization to determine what data the individual requires, the schedule the data is required on, and establish a proactive reporting schedule to reflect these requirements. These reports could include: a daily student change log for each Coordinator (similar to the unassigned student report that exists); a weekly route change report for Coordinators; a quarterly performance operations report for the Transportation Manager that provides summary statistics and detailed data on issues such as capacity utilization, route pairing, average run times, and lateness; and an annual operational summary to both Boards that summarizes the key performance statistics mentioned above and that incorporates detailed cost measures such as the direct and indirect cost per bus, cost per student, and cost per kilometre. This reporting structure could then be used to guide the scope of the annual efficiency reviews conducted within the Transportation Department.

## **5.6 Special Needs Transportation Planning and Routing**

Special education presents unique challenges that often require operational strategies well outside the normal practices of any organization. This portion of the review was designed to evaluate the strategies and approaches used to provide transportation to special education students and the approaches used to minimize the cost and operational disruption associated with this type of transportation.

### **5.6.1 Observations**

#### *Coding of Special Needs Students*

Special needs students are appropriately coded in the transportation database. Through the use of the program coding functionality in EDULOG, the Transportation Department has identified and categorized special education students in a manner that allows for identification and analysis of transportation modes.

#### *Management of Routes*

Peel, as previously mentioned, has developed a highly effective method for managing changes to special education student data. This method allows for significantly improved data management relative to the process used for Dufferin-Peel students. Despite the relatively poor quality of the data of Dufferin-Peel, the Transportation Department has done well in designing and developing runs for the special education program. Before commenting any further on possible program efficiencies, it is necessary to note that the challenge in managing efficient special education transportation while meeting the demand of special need program needs requires extensive coordination and cooperation between program and transportation staff. Areas outside the realm of this review, including special need program policies and procedures, will have a significant impact and must be considered as part of the implementation strategy chosen by the Boards.

Analysis of special education ridership indicates that the integration strategy used (transporting students from both Boards on the same bus) has been an effective tool for promoting efficient resource use. The most frequently used asset is a 20 passenger bus. Currently, there are 499 of these vehicles in service and the majority of the buses serve two or more runs in the afternoon. The average load per bus is approximately 7 students, which would equate to a capacity utilization of 40 percent. Given the challenges of equipment requirements and run lengths, this level of capacity utilization is acceptable.

Lift vehicles and minivans (5 passenger) present the greatest opportunity to realize efficiencies in special education routing. The Transportation Department has established 112 routes in the afternoon complement of lift vehicles. Of this total, 37 serve a single run, 66 serve double runs, 8 have triple runs, and 1 has 4 runs with an average student load assignment of one to three passengers. In addition, there are approximately 180 five passenger vehicles in use. These five passenger vehicles are generally designed to service single student loads.

### **5.6.2 Best Practices**

It is recognized that Transportation has demonstrated a best practice in the following area:

- Efforts to utilize web-based technology to improve the management of Peel Board special education student data.

### 5.6.3 Recommendations

#### *Management of Routes*

It is recommended that the Transportation Department work with Dufferin-Peel to improve the manner in which student data is managed to eliminate the use of facsimile reports to update student records. Given that Dufferin-Peel is expected to utilize the same student information system as Peel, it is possible to develop a management mechanism similar to that used by the Peel Board. This approach would allow for increased staff efficiency and greater focus on the strategic rather than tactical management of special education transportation runs. It is highly likely that additional resources will be required to be dedicated to this effort. However, it is imperative that issues of data quality be addressed if routing efficiencies are to be achieved.

Additionally, it is recommended that the annual route development process focus on reducing the number of 5 passenger vehicles in use and improve the integration of students on lift buses. Single student transport methods (as the 5 passenger vehicles generally are) are very expensive, very inefficient modes of transport. While program requirements or behaviour management issues often dictate this mode, each case should be reviewed to determine if that student can be reallocated to an existing lift bus or 20 passenger unit. In addition, greater efforts to develop combination runs (where a single bus visits multiple schools) for students currently using 5 passenger vehicles should be considered. Given the existing demands on the Area Transportation Officers and Area Coordinators, it may be necessary to utilize additional temporary resources to perform this analysis. However, it is absolutely imperative that any outside resource operate in close cooperation with the Transportation Department to ensure the requisite local knowledge is most effectively utilized to develop the alternative routing scenarios.

### 5.7 Results of E&E Review

Routing and Technology use has been rated as moderate-low. The EDULOG routing software has been implemented and staff have worked diligently to improve the condition of the map and the accuracy of route times presented. In addition, the organizational design that separates *technical* system management from *functional* system use promotes the efficient use of EDULOG software. The Peel Board's development of a web-based management tool for special education also promotes routing and staff utilization efficiencies.

The Transportation Department has several very skilled users of the EDULOG routing software that has allowed for effective modeling of route pairing options. However, these options are constrained by policies and practices that limit integration of students on runs, places bell time decision making away from the consortium, and allows courtesy ridership in a way that may be adversely affecting capacity use. Actual courtesy ridership levels should be evaluated to determine if route planning strategies have allowed too many seats to be available for this service. By changing this approach it may be possible to reduce the number of buses utilized by reducing route times and reallocating existing seating capacity.

Difficulties with receiving complete, accurate and timely data from Dufferin-Peel also limits route planning effectiveness and must be remedied to allow for more effective route planning. In addition, use of skilled Area Coordinators to develop, produce and ship paper reports to schools and operators is an ineffective use of time. Acquisition and implementation of additional technology tools that would allow these individuals to apply their skills to evaluating run planning would provide greater opportunities to identify potential efficiencies in the operation.

## 6. Contracts

### 6.1 Introduction

Contracts refers to the processes and practices by which Consortia (or Partner Boards) enter into and manage transportation service contracts. The analysis stems from a review of the following three key components of Contracting Practices:

- Contract Structure;
- Contract Negotiations; and
- Contract Management.

Each component has been analysed based on observations from fact (including interviews) together with an assessment of best practices leading to a set of recommendations. These results are then used to develop an E&E assessment for each component, which is then summarized to determine an E&E assessment of Contracting Practices as shown below:

<b>Contracts – E&amp;E Rating:</b>	<b>Low</b>
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### 6.2 Contract Structure

An effective transportation contract establishes a clear point of reference that defines the roles, requirements, and expectations of each party involved and details the compensation for providing the designated service. Effective contracts also provide penalties for failure to meet established service parameters and may provide incentives for exceeding service requirements. Contract analysis includes a review of the clauses contained in the contract, ensuring that the terms are clearly articulated and a review of the fee structure is conducted.

#### 6.2.1 Observations

##### *Contracts*

The Transportation Department has established a standard contract for services that includes clauses pertaining to Term; Services to be rendered; Insurance requirements; Safety requirements; Payment terms; Termination; and Fuel adjustment. While these clauses are generally appropriate, none of the reviewed contracts are current. Given that the contract document is intended to be the binding service agreement between the Transportation Department and the Operators it is not clear what the obligations of either party are when the contracts are not current. In order to mitigate any potential risk it is important that the contracts be both complete and current.

Ensuring that vehicles are safe and Driver training is in place is a key aspect of contract management. The specific training and safety requirements included in the contract provide guidelines that the Operators must abide by. However, since there is no evidence that updated contracts are signed, it is unclear whether the Operators are aware of updates/changes to safety and training requirements. This risk is partially mitigated since most Operators serving the Peel and Dufferin-Peel area are larger companies that have established their own internal safety requirements and training programs that their Drivers undertake.

##### *Fees – Bus Contracts*

The rate structure of the bus contracts is based on a fixed fee per bus plus a premium for any routes that are greater than 100 kilometres per day for standard home to school service (regular and noon hour). Additional services such as charter services and overtime hours (greater than 3.5hrs.) are paid separately by the Board requesting service. The bus contracts and the subsequent rates, are based on operating for the full year (based on 190 days per year). The rate negotiated at the time the Operator began providing services is the same rate the Operator gets paid year over year. There are no regular increases.

The standard contract contains a fuel escalation clause that provides for an increase of 0.25% of the monthly rate for every \$0.01 per litre increase in the cost of fuel. Similarly, should fuel costs decrease, the same adjustment would apply. The monthly fuel costs are determined based on the cost of fuel on the first day of every month. The base cost of fuel was established in the last contract reflecting a rate adjustment. Fuel escalation costs represent approximately 11% of total contract costs.

The structure of the rates has a significant impact on routing. Since the Transportation Department pays a fixed fee per bus, one of the planning philosophies is to maximize the use of the bus (through multiple runs) rather than maximizing the number of students on each bus. See also Section 4.3.1.

#### *Fees – Taxis*

Fees for services are negotiated on a per situation basis. Generally, before a service is retained, two quotes are received from different taxi companies to try to minimize costs.

#### *Provisions for Temporary School Closures*

Bus Operators are paid in full for closures due to weather or road conditions where service is cancelled (e.g. snow days). In the case of a strike or labour disruption by the Boards, the Operators are paid on a declining basis as follows:

- 60% of the cost for the first 5 school days;
- 40% of the cost for the next 20 school days; and
- In excess of 20 days, the Boards and Operators shall agree on an appropriate payment.

### **6.2.2 Best Practices**

It is recognized that the Transportation Department has demonstrated a best practice in the following area:

- The Transportation Department regularly solicits multiple quotes for taxi services on an as needed basis ensuring that competitive prices are received and that no long term service obligations are established.

### **6.2.3 Recommendations**

#### *Use of Contracts*

Service contracts that clearly articulate the expectations and obligations of each party are the fundamental requirement for an effective consumer/service provider relationship. The lack of current and complete contract documentation increases risk exposure and reduces accountability for all parties to the agreement. Consequently, the Transportation Department should ensure that standard contracts are used for all service providers, that they are current, and that signed copies are retained prior to the start of the school year. This ensures that all Operators are legally bound by the contract and provides the Transportation Department with recourse should an accident or dispute arise.

#### *Fee Structure*

The current fee structure is such that an annual fixed rate per vehicle is paid for all routes up to 100 kilometres, with a clause for routes over 100 daily kilometres. Data indicates that less than 10% of routes are over this 100km threshold. In recognition of this fee structure, Coordinators attempt to maximize the use of buses by trying to fit in as many runs as possible within the 3 to 3.5 hour morning and afternoon windows. This may not be the most effective and efficient use of buses as there could be opportunities to maximize the utilization of the buses rather than maximizing the number of bus runs.

The structure of contracts should allow the Transportation Department to procure services in a manner that supports effective and efficient routing and provides high value for money. Ensuring value for money will benefit Boards. If the contract structure requires Operators to absorb the costs of increased vehicle use, it is possible that less funds would be available to reduce Driver turnover and retire older vehicles, and thus, Boards would not be getting a high value for money.

In order to ensure that the Boards are getting the best value for their contract dollars, the Transportation Department should improve the use of seating capacity on buses (see section 4.3.2)

and initiate a competitive process for the procurement of bus contracts (see section 6.3.2). Concurrently, the Transportation Department should re-examine the structure of their contracts to ensure that the contract structure supports the new, effective and efficient routing solution.

Also, the existing contract structure provides for Operator compensation when services are not rendered, specifically for snow days and other school closure events. Incorporating some protection for Operators, particularly in capital intensive business like school bus operations, is reasonable. However, it is unreasonable to expect full payment on days when services are not rendered. Therefore, the Transportation Department and each Board should review the standard contract clauses and revise the fee structure to ensure that a more equitable compensation structure is established when service is not rendered.

### **6.3 Contract Negotiations**

Contract negotiations are intended to provide an avenue by which the purchaser can ultimately obtain the best value for money for services purchased. The purchaser's goal is to obtain high quality service at market prices.

#### **6.3.1 Observations**

##### *Bus Operator Contracts*

In establishing the initial contract with each Operator there was no evidence of a competitive process being used; the Boards' current purchasing policies exclude transportation from using a competitive process. The Operators providing service to the Transportation Department have generally been doing so for many years. As a result, the contracts established with Operators are based mainly on historical practice. Authority for negotiating contracts has been delegated to the Transportation Manager who directly negotiates contracts as additional resources are required. This process has been most evident in the past few years as there has been a need for more buses. When the existing Operators chose not to provide the additional services, the Transportation Manager was able to approach other Operators who had already expressed an interest in serving this area and negotiate service arrangements. Additionally the Transportation Manager has been given the authority to serve as the initial point of contact for management of disagreements with Operators.

##### *Taxi Contracts*

Taxis are used typically for transporting students assigned to specialized programs or high needs children who cannot be integrated on a general needs bus. When a taxi is needed, the Transportation Department has a list of taxi companies with whom they arrange trips. No formal contracts are in place with any of the taxi companies for student transportation services, but multiple quotes are solicited for service to ensure competitive pricing.

##### *Other*

The Transportation Department purchases local transit passes for some students (total annual cost is approximately \$55,000 combined). There is very limited use of these transit passes. Per discussion with the Transportation Manager, it was suggested that for most areas, the cost of busing was less expensive than the cost of transit passes.

The Peel Board owns some vehicles which have been donated to particular schools. Generally, these vehicles are over 13 years old. The vehicles are used by the schools for extra curricular activities (e.g., class trips, sporting events, etc) but not for home to school transportation. However, the Transportation Department does pay approximately \$16,000 per year in maintenance costs to keep these vehicles running.

#### **6.3.2 Recommendations**

##### *Negotiation Process*

Currently, there is no formal process in place to negotiate contracts with Operators. Informally, the Transportation Manager discusses contracts annually with each Operator in an attempt to negotiate rates.

It is recommended that once the Consortium is formed, a formal process for contract negotiation be put in place. It is important that a negotiation process take place that is timely to ensure that by the start of the school year, all contracts are firmly in place (signed and collected by the Consortium) and the level of service, rates and expectations are clearly communicated between the Consortium and Operators. The following considerations should be included:

- Institute a competitive process for bus contracts – this process could include issuance of an RFP or tender which details all safety and training requirements that the Consortium believes will sustain a safe, reliable service. Ensuring detailed requirements that state the level of service expected is important in ensuring that the Consortium receives the value and service it desires and which will ultimately lead it to achieve its goal of providing safe student transportation services. Also, a competitive process will ensure that market rates are being paid;
- Institute safeguards into the process which reduces the risk to the Transportation Department. An example would be protecting against the risk of sole source exposure. This can be done by dictating that no Operator shall operate more than a certain percentage (e.g. 30%) of the combined Board's bus runs. This percentage should be determined based on local market conditions to ensure that there is competition in the market. This will help avoid a monopoly situation whereby one Operator may outbid all others in one year and drive the competition out of the area only to subsequently increase costs and leave the Consortium with no other options for service. Competition in itself will help to drive efficiencies in the market;
- Ensure signed contracts are in place with successful bidders – contract terms should be renegotiated at least every 3 years. Renegotiating contracts on a regular basis ensures that the terms and rates remain competitive and up to date.

The negotiation process above should be followed for both bus and taxi services. Signed contracts should be in place for all persons or companies providing transportation including taxis and parents.

## 6.4 Contract Management

Contracting practices do not end after a contract is signed. Ongoing monitoring of compliance and performance of contracted service is an important and valuable practice to enhance service levels and ensure that contractors are providing the value for money that was agreed upon. Monitoring should be performed proactively and on a regular and ongoing basis in order to be effective.

### 6.4.1 Observations

#### *Monitoring*

Generally, there does not appear to be a formal process in place to pro-actively monitor Operator performance. Transportation Department staff however, have developed a very effective log system that tracks Operators in terms of their ability to provide on time services. This log is important as it acts as a service indicator which can be used to determine which Operators are providing the services in a reliable manner.

In other areas of contract management, such as route and vehicle safety monitoring, the Transportation Department is reactive in its approach to parent and school complaints in managing the performance of Operators.

#### *Fleet Management*

Fleet age requirements are generally designed to promote the use of safe, reliable, economical vehicles that are equipped with current safety and environmental technology. Typically these requirements are established in contract documents or in policy statements. The Transportation Department's standard contract does not include a fleet age provision and neither Board has established policy requirements for vehicle age. However, the Transportation Manager indicated that all operators are informed annually of a requirement that all vehicles used do not exceed the limit of 12 years of age. Operators are then required to provide the Transportation Department with a fleet list which is reviewed to ensure that the age requirement is met. Reasonable exceptions are made when the bus being used is a spare vehicle that is intended to be used only temporarily.

## *Bus Industry*

The E&E Review Team met with local Operators to discuss the major issues they face with regard to providing safe student transportation services. The major issues can be summarized as follows:

**Communication:** There is a perceived lack of communication between the Transportation Department and Operators. This appears to be due, in part, to the structure of the Transportation Department and the responsibilities given to the principals. Of particular note was the perceived lack of timeliness in changes to routing. Operators feel that they do not have sufficient time to react to route changes because changes are not received until the week prior to the change occurring. Of particular concern to Operators is when route changes impact Driver assignments. Concern was expressed that there was limited time to learn the revised routes and the impact that this has on service quality and effectiveness.

**Cost of Operating:** Concerns over increasing costs of providing services are a major issue among local Operators. Operators are spending more money on training (due to legislative requirements), equipment replacement, increasing insurance costs, advertising and recruiting costs. Additionally, Operators are being paid different rates depending on when they negotiated their contracts. This is causing frustration as the long time service providers feel that they are not being compensated as well as new service providers even though essentially the same service is being delivered.

**Charter Services:** The Transportation Department planning philosophy to maximize the use of the buses requires vehicles to operate longer hours. Operators feel that this limits their ability to provide outside school charter services.

**Driver Turnover:** In the Peel and Dufferin-Peel area increased Driver turnover is a major issue for Operators. Drivers are put under a significant amount of pressure dealing with behavioural issues from children on the bus while at the same time trying to provide a safe service in a busy environment. Operators are frustrated as they claim they cannot afford to pay their Drivers more money, yet at the same time ask them to provide a high quality service. This is leading to increased Driver turnover and increased costs to Operators for training and recruitment.

### **6.4.2 Recommendations**

#### *Monitoring*

The Transportation Department's tracking of Operators in terms of timeliness of routes is a positive first step in monitoring Operator performance and can be thought of as one of the primary key service indicators which the Operators should be measured against. The Transportation Department however is reactive in its approach to monitoring Operators in terms of service and compliance with legal requirements and standards. Effective monitoring can only occur on a pro-active basis, ensuring that the service being provided adheres to the Transportation Department's expectations and terms of their agreement.

It is recommended that the Transportation Department, in both its current structure and more specifically once a Consortium is formed, develop a plan to monitor its contracted services. The key elements to this plan should be:

- Operators should be required to demonstrate that they have complied with all laws and regulations prior to the start of the school year. This can be done by having the Consortium request copies of insurance, licenses, etc. to have on file by late August;
- Operators should be required to demonstrate that they have provided their Drivers with appropriate safety and first aid training prior to the start of the school year. Again, Operators can provide copies of certifications or proof of training for each Driver to the Consortium with regular updates as additional training is received;
- Consortium staff should take a proactive approach and perform random audits to ensure:
  - Routes are being followed appropriately;
  - Buses being operated meet safety requirements as stated in contracts; and
  - Only assigned students utilize bus services.
- Records of these random audits and monitoring activities should be maintained by the Consortium as evidence that monitoring does occur.

### *Fleet Age*

It is recommended that the Transportation Department implement a strict policy on the age of vehicles and include these requirements in the standard contract. It is important to set standards and policies with regard to the age of vehicles as there is a higher risk that older vehicles will require more maintenance and won't include many of the safety features of new buses. Monitoring of compliance with age limits should be included as part of ongoing safety monitoring procedures.

## **6.5 Results of E&E Review**

The Transportation Department has been assessed as low in terms of their transportation contracting practices. The low rating is due to the absence of current contract documentation; lack of a structured negotiation process; and low level of monitoring and contract management. The Transportation Department does have a standard contract template; however it does not appear to be updated with the Operators. In order to become highly effective, the Transportation Department should implement a formal negotiation process including a competitive process which is fair and transparent; transition to a contract structure that confers an appropriate level of risk to both the Operators and the Transportation Department; and implement a formal monitoring process by which Transportation Department staff proactively monitor service delivery and contract requirements.

## 7. Funding Adjustment

The Ministry has asked the E&E Review Team to apply its Funding Adjustment Formula to each Board that was subject to an E&E Review in Phase 1. Note that where Boards are incurring transportation expenses in multiple Consortia sites, the Board's adjustment will be prorated for the portion attributed to the Consortium under review. For example, if 90% of Board A's expenditures are attributed to Consortium A, and 10% of expenditures are attributed to Consortium B, the funding adjustment resulting from Consortium A's review will be applied to 90% of Board A's deficit or surplus position.

The Ministry's funding formula is as follows:

Overall Rating	Effect on deficit Boards <sup>9</sup>	Effect on surplus Boards <sup>9</sup>
High	Reduce the gap by 100% (i.e. eliminate the gap)	No in-year funding impact; out-year changes are to be determined
Moderate-High	Reduce the gap by 90%	Same as above
Moderate	Reduce the gap by 60%	Same as above
Moderate-Low	Reduce the gap by 30%	Same as above
Low	Reduce the gap in the range of 0% to 30%	Same as above

Based on the Ministry's funding formula, in conjunction with our E&E assessment of the Transportation Department, it is anticipated that the following funding adjustments will be made for each Board:

### Peel District School Board

Item	2006/2007 <sup>10</sup>
Transportation Surplus (Deficit)	\$(9,814,086)
E&E Rating	Low
Funding Adjustment based on Ministry's Funding Adjustment Formula	Increase by 30% of deficit
Total Funding adjustment	\$2,944,226

### Dufferin-Peel Catholic District School Board

Item	2006/2007
Transportation Surplus (Deficit)	\$(6,662,430)
% of Deficit attributed to the Transportation Department (rounded)	94%
Revised Deficit to be assessed under the Transportation Department	\$(6,271,510)
E&E Rating	Low
Funding Adjustment based on Ministry's Funding Adjustment Formula	Increase by 30% of deficit
Total Funding adjustment	\$1,881,453

<sup>9</sup> This refers to boards that have a deficit/surplus on student transportation

<sup>10</sup> Based on budgeted figures received by the Ministry - source: Data form D 208C

# Glossary of Terms

Act	<i>Education Act</i>
Assessment Guide	The guide prepared by the E&E review team and the Ministry of Education which will be used as the basis for determining the overall effectiveness and efficiency of each Consortium
Boards or Partner Boards	The Peel District School Board and the Dufferin-Peel Catholic District School Board who have formed the joint student transportation department
CEO	Chief Executive Officer
Common Practices	Refers to a set of planning parameters that have been reported by Ontario school Boards as the most commonly adopted planning policies and practices. These are used as references in the assessment of the relative level of service and efficiency.
Consortium	As defined in the Ministry of Education's numbered memorandum 2006: SB13, dated July 11, 2006
Coordinators	As shown in Figure 7
CPR	Cardiopulmonary Resuscitation
CSA	Canadian Standards Association
CSDCCS	Conseil Scolaire de District Catholique Centre-Sud
CVOR	Commercial Vehicle Operator's Registration
Data Analyst	As shown in Figure 7
Deloitte	Deloitte & Touche LLP (Canada)
Driver	Refers to Bus Drivers, see also Operators
Dufferin-Peel	The Dufferin-Peel Catholic District School Board
EDULOG	Student transportation software used by the Transportation Department
E&E	Effectiveness and efficiency
Effective	Having an intended or expected effect; the ability to deliver intended service
Efficient	Performing or functioning in the best possible manner with the least waste of time and effort; the ability to achieve cost savings without compromising safety
E&E Reviews	As defined in Section 1.1.4
E&E Review Team	As defined in Section 1.1.5
Evaluation Framework	The document, titled "Evaluation Framework For the Transportation Department" which supports the E&E Review Team's Assessment; this document is not a public document
Evaluation Work Sheets	As defined in Appendix 2 of the Evaluation Framework
Financial Analyst	As shown in Figure 7
Funding Adjustment Formula	As described in Section 1.3.6
HR	Human Resources
IPRC	Identification, Placement and Review Committees
IT	Information Technology
JK/SK	Junior Kindergarten/Senior Kindergarten
Management Consultants	As defined in Section 1.1.5
Memo	Memorandum 2006:SB13, dated July 11 issued by the Ministry
Ministry	The Ministry of Education of Ontario

MPS	Management Partnership Services, the routing consultant, as defined in Section 1.1.5
MTO	The Ministry of Transportation of Ontario
Operators	Refers to companies that operate school buses and the individuals who run those companies. In some instances, an Operator may also be a Driver.
OSBA	Ontario School Bus Association, the provincial association to which some Operators may be affiliated
Overall Rating	As Defined in Section 3.2 of the Evaluation Framework
PDPV	Persons with Disabilities Passenger Van
Peel	The Peel District School Board
Planning Officer	As shown in Figure 7
Rating	The E&E Assessment score on a scale of High to Low, see Section 1.3.4
Report	The report prepared by the E&E Review Team for each Consortium that has undergone an E&E Review (i.e. this document)
SBO	Senior Business Official at a school Board
Secretary	As shown in Figure 7
SERT	Special Education Resource Teachers
Service Purchasing Boards	Refers to School Boards who purchase student transportation services for their students through the transportation department.
Transportation Consortium #12	The name provided by the Dufferin-Peel and Peel Joint Student Transportation Department in their Consortium Plan submission
Transportation Department	The Dufferin-Peel and Peel joint student transportation department formed in 1994, which manages student transportation services on behalf of the Peel and Dufferin-Peel Boards
Transportation Manager	As shown in Figure 7
Transportation Officer	As shown in Figure 7
Transportation Peer Reviewer	As defined in Section 1.1.5

# Appendix 1: Financial Review – by School Board

## Peel District School Board

Item	2004/2005	2005/2006	2006/2007 <sup>11</sup>
Allocation <sup>12</sup>	\$26,201,362	\$28,103,676	\$29,098,548
Expenditure <sup>13</sup>	\$35,344,935	\$37,443,698	\$38,912,634
Surplus (Deficit)	\$(9,143,573)	\$(9,340,022)	\$(9,814,086)

## Dufferin-Peel Catholic District School Board

Item	2004/2005	2005/2006	2006/2007 <sup>11</sup>
Allocation <sup>12</sup>	\$15,536,409	\$16,459,877	\$16,878,655
Expenditure <sup>13</sup>	\$20,135,917	\$21,303,755	\$23,541,085
Surplus (Deficit)	\$(4,599,508)	\$(4,843,878)	\$(6,662,430)
Total Expenditures related to Dufferin County	N/A	\$1,250,000	N/A
As % of total Expenditures of Board <sup>14</sup>	N/A	6%	N/A

<sup>11</sup> Based on budgeted figures received by the Ministry - source: Data form D 208C

<sup>12</sup> Allocations based on Ministry data – includes all grant allocations for transportation (Section 9 0008C, Section 13 00006C, Section 13 000012C)

<sup>13</sup> Expenditure based on Ministry data – taken from Data Form D: 730C (Adjusted expenditures for compliance) +212C (Other revenues) + 798C (Capital expenditures funded from operating)

<sup>14</sup> Rounded to nearest whole number

## Appendix 2: Common Practices<sup>15</sup>

	JK/SK	Gr. 1-4	Elementary Gr. 5-6	Gr. 7-8	Secondary Gr. 9-12
<b>Home to School Distance</b>					
Common Practice	1.0	1.6	1.6	2.4	4.0
Policy – Peel/Dufferin-Peel	1.0	1.6	2.0	3.2	4.8
Practice – Peel/Dufferin - Peel			<b>Note 1</b>		
<b>Home to Bus Stop Distance</b>					
Common Practice	0.8	0.8	0.8	1.0	1.6
Policy – Peel	1.0	1.6	1.6	1.6	1.6
Policy – Dufferin Peel	0.4	0.8	1.6	1.6	1.6
Practice – Peel/Dufferin-Peel			<b>Note 2</b>		
<b>Arrival Window</b>					
Common Practice	18	18	18	18	25
Policy – Dufferin-Peel	20	20	20	20	30
Practice – Peel/Dufferin-Peel	15	15	15	15	30
<b>Departure Window</b>					
Common Practice	16	16	16	16	18
Policy – Dufferin Peel	15	15	15	15	20
Practice – Peel/Dufferin-Peel	15	15	15	15	20
<b>Earliest Pick Up Time</b>					
Common Practice	7:30	7:30	7:30	7:30	7:00
Practice – Peel/Dufferin-Peel	7:00	7:00	7:00	7:00	6:25
<b>Latest Drop Off Time</b>					
Common Practice	5:30	5:30	5:30	5:30	6:00
Practice – Peel/Dufferin-Peel	4:50	4:50	4:50	4:50	4:50
<b>Maximum Ride Time</b>					
Common Practice	60	60	60	60	75
Practice – Peel/Dufferin-Peel			<b>Note 3</b>		
<b>Seated Students per Vehicle</b>					
Common Practice	69	69	69	52	52
Policy – Peel/Dufferin-Peel	65	65	65/55	55	48
Practice – Peel/Dufferin-Peel			<b>Note 4</b>		

NOTE 1 – Practice differs from policies. The boards' courtesy rider program greatly reduces the operational effectiveness of planning to defined service eligibility policies (see section 4.2.1).

NOTE 2 - Differences in policies and inaccuracies in Dufferin-Peel student data (see section 5.3.1) make it difficult to determine practices regarding the enforcement of home-to-bus stop distances. There is indication that the Dufferin-Peel policy is followed, in practice, for students of both boards.

NOTE 3 - In practice, maximum ride times were reported to be significantly less than the provincial common practices. This was especially true for kindergarten students, rural students, and students attending magnet programs (see section 4.2.1).

NOTE 4 - Due to the boards' courtesy rider programs, and the fact that planned loads are generally counted only once a year (at the beginning of the year), on-the-ground load factors are not available (see section 4.2.1). However, analysis of planned load factors indicates that planned capacity rates are well below industry common practices (see section 4.3.1).

<sup>15</sup> Common Practices refers to a set of planning parameters that have been reported by Ontario school Boards as the most commonly adopted planning policies and practices. These are used as references in the assessment of the relative level of service and efficiency. See Glossary of Terms.

## Appendix 3: Document List

1	Ministry of Education Board Profile
2	2005/2006 Ministry of Education Survey Results
3	Investigation Report to the Minister of Education Province of Ontario
4	Student Transportation Organizational Chart
5	Transportation Department Staff List
6	Transportation Department Staff Job Descriptions
7	Sample invoices
8	Peel and Dufferin-Peel Student Transportation start up packages
9	Reconciliation of Joint Transportation Expenditures – September 2005 to August 2006
10	Transportation Department Cost Allocations
11	Transportation policy – Peel
12	General Administrative Procedures – Dufferin-Peel
13	Annual Transportation Planning Schedule
14	Sample Bus Safety Forms
15	Student Transportation Inclement Weather Procedures 2006/2007
16	Sample Bus Operator Agreement
17	Vehicle Count Sheet 2006/2007
18	Transportation Effectiveness and Efficiency Review Guide

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