Student Transportation

Routing and Funding Impact Analysis

Calgary Board of Education

July 31, 2017

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Mr. Dany Breton
Superintendent, Facilities and Environmental Services
Calgary Board of Education
1221 8th Street SW
Calgary, AB T2R 0L4

Dear Mr. Breton,

School Bus Consultants, LLC (SBC) is pleased to submit the results of its evaluation of the impact that Bill 1 will have on the current routing network and resulting transportation costs/funding differentials. Our analysis is based on several in-depth conversations that were held with senior Calgary Board of Education and Transportation Services staff and on the analysis of provided data. The goal of this analysis is to provide an independent evaluation of the various cost and service impact scenarios that were developed by Transportation Services staff. This evaluation includes the verification of cost impacts based on the home to school distance of each student within the current database. In addition to the analyses, SBC will be ready to provide an analysis of the routing solutions once route planning and implementation for the 2017/2018 school year is complete, as well as assisting in the development of revised policy statements to support stakeholder communications.

We understand and appreciate the time sensitive nature of SBC providing a verification of your initial cost impact scenarios to support your ongoing planning activities as well as for stakeholder communications. Please do not hesitate to contact us with any questions that you may have or if we can be of any further assistance.

Sincerely,

Philip Mcconnell

Philip S. McConnell
School Bus Consultants, LLC.

Introduction

As per the Alberta *School Act* and Student Transportation Regulations, boards of education are required to provide home to school transportation for all students who reside 2.4 km or more from their designated regular program school. Under the new Alberta legislation, Bill 1 – An Act to Reduce School Fees, the permissible fee structure arising will significantly impact how the Calgary Board of Education (CBE) is able to fund student transportation. A key impact of Bill 1 is that it prohibits the fees that were allowed by public school authorities for instructional supplies and materials, as well as *transportation related* fees for students residing beyond 2.4 km from and attending their designated regular program school or for students attending special education programs regardless of the distance from the school.

For those students attending their designated regular program school and living within the existing transportation service area but under 2.4 km from the school, or for students attending a program of choice, a fee for service remains allowable under Bill 1 with increases limited to less than five per cent over existing fees. Those students using Calgary Transit (CT) to their designated regular program school living beyond 2.4 km will be rebated up to $549 of the up to the $700 yearly cost of a bus pass or $770 for modified calendar schools.

Due to loss of off-setting revenue (as generated by current transportation fees) and the significant impact directly related to the cost of providing transportation to those students who previously paid for CT, CBE senior administration and Transportation Services have proactively begun to quantify the costs and service impacts that will result. School Bus Consultants, LLC (SBC) was asked to verify the validity of Transportation Services' methodologies for the determination of the cost and service impacts as a result of changes being made by the CBE to close the financial gap between funding and the cost of providing service as well as to reflect the changes as a result of the implementation of Bill 1.

It should also be noted that prior to the passage of Bill 1, the CBE had been moving to implement efficiencies as a result of their long-term transportation strategy announced in June 2016. While as per the funding framework and supported by Bill 1, the CBE is required to provide transportation for students attending regular program or special education program and residing more than 2.4 km from the school, the CBE believes in providing choice and as a result is offering an enhanced level of service to students in alternative programs and those residing within 1.6 km for elementary students and 1.8 km for junior high students. The proposed transportation plan seeks to provide transportation service in a manner that moves towards meeting the long-term transportation strategy while supporting the initiatives behind Bill 1 at the same time providing some options to those who fall outside the government mandated transportation services.

The following technical brief describes the results of our evaluation, including any potential recommendations to help refine or facilitate the process, as the CBE works to implement the changes for the start of the 2017/2018 school year.

Analytical Process

In addition to the multiple conversations held with CBE staff, the analytical process began with obtaining 2016/2017 data that reflects the system as it is currently implemented. This data was necessary to obtain a current baseline performance understanding of the system to use as comparison against potential changes. The following briefly summarizes the data that was received and the analyses that were performed:

- Student address data (based on a unique student number to protect each student's identity). The data was necessary to establish a baseline understanding of the current system and to verify the CBE calculated number of students that live within or beyond the 2.4 kilometer distance from their designated school.

- Current bus run data in conjunction with school location and bell time information. The analysis of this data provides an additional understanding of the bus runs as currently planned and how the change in service eligibility may impact the overall asset utilization of the system.

In addition to the establishment of baseline performance metrics, SBC analyzed the work performed by Transportation Services that formed the basis of their estimated cost impact under various scenarios. These analyses included:

- Impact studies based on changes in bell times;
- The further implementation of congregated stops including the addition of Language Alternative Programs;
- Savings generated by the increased utilization of Calgary Transit where families will be paying for this service rather than accessing yellow buses;
- Efficiencies garnered through effective run planning;
- Natural changes or decreases in the number of runs; and
- An analysis of the financial comparison worksheet as calculated by Transportation Services .

We begin this presentation with a brief discussion as to how the system is currently designed to provide services. A key starting point is the area of school start and end times or bell times, as the strategic setting of bell times is a key and fundamental element of any high performing student transportation system.

Key Findings and Recommendations

Baseline Observations

For the purpose of this analysis a comprehensive operations review was not warranted, however the establishment of basic performance metrics was necessary to help validate the savings and operational costs of the changes being made by the CBE in support of Bill 1 and to ensure sustainability of transportation services going forward. The following briefly summarizes how the system currently operates including an understanding of run times and capacity utilization. These two metrics are key to understanding how service quality may be impacted as alternative bell times and run pairings are considered.

Student Count

Based on an extraction of student data from the BusPlanner software, there are approximately 26,000 students considered for transportation services. Of these riders, approximately 2,400 are students with complex learning needs or those with mobility issues preventing other transportation modes who are currently

eligible for transportation services and will remain eligible under the proposed funding changes. Of the remaining 23,600 students, approximately 5,300 students reside more than the 2.4 km eligibility distance and would be eligible for free transportation under the parameters of Bill 1. Service for approximately 1,300 Alternative Program students is being provided by Calgary Transit leaving approximately 17,000 students receiving service under the current fee structure.

Although there is a difference of approximately 700 students that live within the 2.4 km eligibility distance between our calculations and those performed by Transportation Services , the difference is attributable to:

- Students that are currently being transported to a school other than their designated school including up to 600 conditional riders, who pay to ride when they are otherwise not entitled to do so, whatever the distance to their designated school may be (riding with siblings accessing CLN transportation, not attending their designated school); and

- Students who have moved between the transportation count (March 2017) vs SBC count (June 2017).

While additional quantitative analyses would be desirable to further understand the difference, the data within BusPlanner does not readily provide whether a student is attending their designate" school or another school based on district need or other circumstances. These metrics are illustrated in the following:

Figure 1: Rider Count

| Ride Data/ Estimated Riders with a Fee	
Category	# Students
Riders with fee 2016/17	26,000
Less: Students accessing CLN transportation	-2,400
Less: Students who live more than 2.4 km and attend Regular Programs	-5,300
Less: Alternative Programs to Transit	-1,300
Estimated Riders with fee 2017/18	**17,000**

Figure 2: Riders by Program and Distance
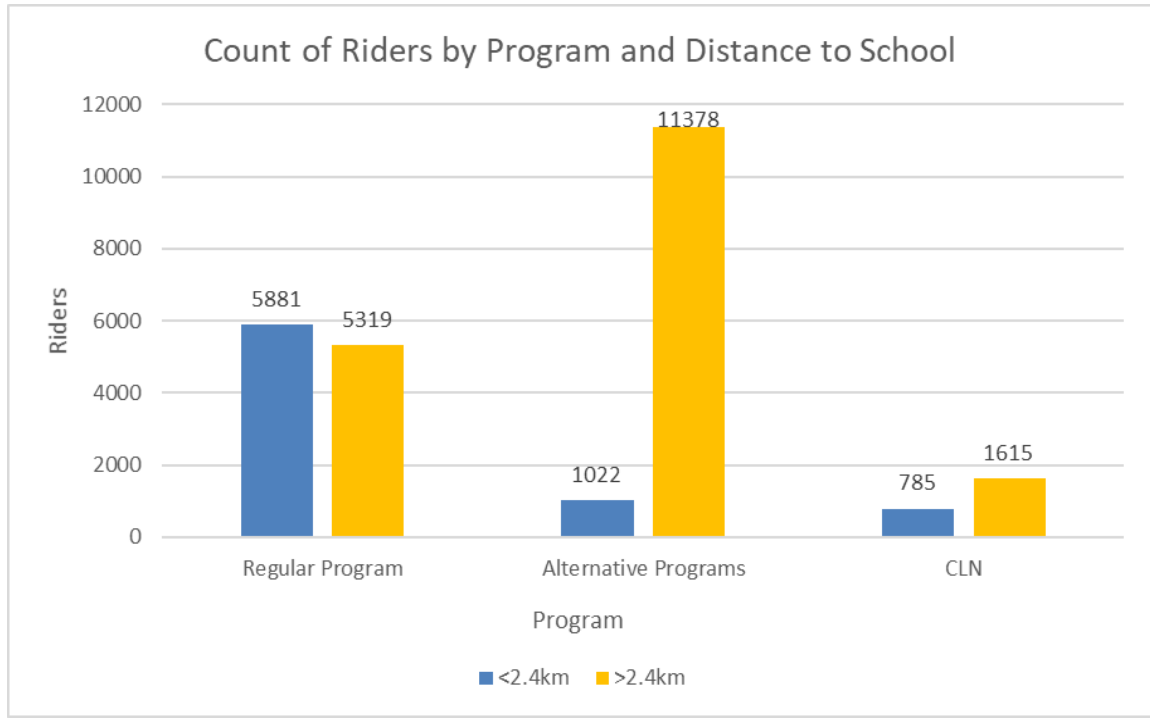
It should be noted that while **Figure 2** delineates the number of special education program students who live accessing CLN transportation who live within a 2.4 km distance, these students are being transported based on their unique medical, emotional or program needs irrespective of the distance to their assigned program or school.

Average Run Times

Figure 3 helps to illustrate the average run times across the system for both the morning and afternoon time panels. This metric was important to understand as time and distance constraints have a direct impact on any system's ability to benefit from routing strategies such as bell time tiers and combination runs. As **Figure 3** also helps to illustrate, the average run times are reasonable for both regular transportation (includes both Regular Programs and Alternative Programs) and complex learning needs transportation. Using the morning time panel and focusing on regular transportation, a relatively low average run time of 28 minutes provides an initial indication that an opportunity appears to exist to pair runs to reduce the number of buses within the system while still maintaining an acceptable level of service. This assumption is supported by the following capacity utilization analysis.

Figure 3: Average Run Times
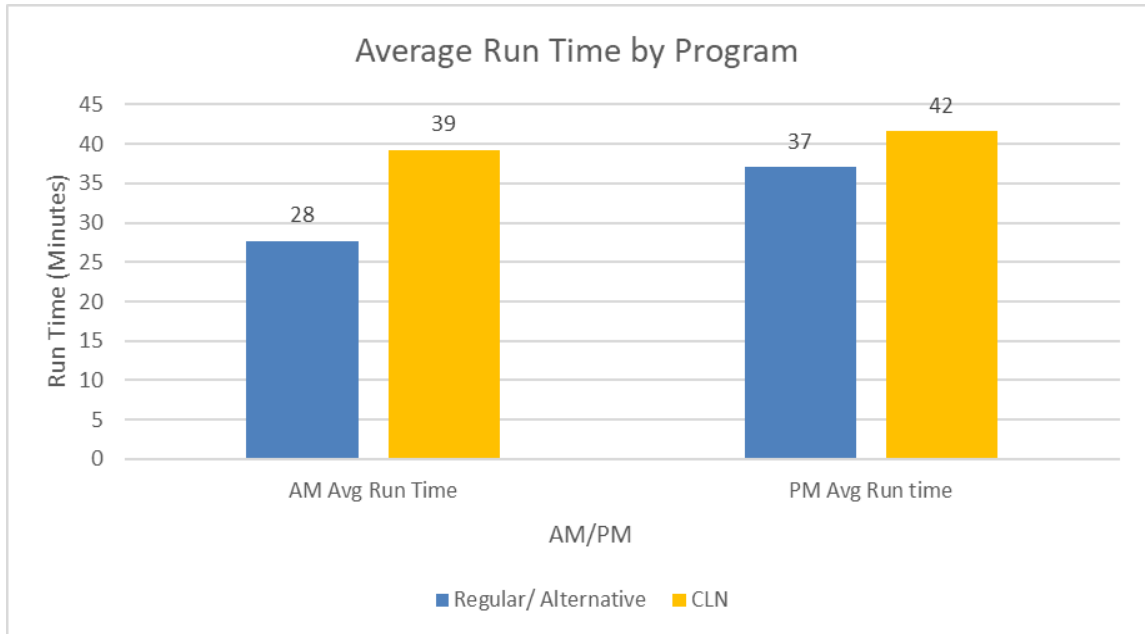
Capacity Utilization

In conjunction with average run times, understanding the overall seating capacity across the system helps provide further understanding of the potential for routing efficiencies. **Figure 4** helps to illustrate that the average simple capacity utilization of the regular transportation runs, including both regular and alternative programs, is less than 36 per cent for both the morning and afternoon time panels. While this result compares to an expected range of 60 to 70 per cent, it is likely lower than actual due to a sizeable number of students not assigned by BusPlanner to a specific run. In any case, this result in conjunction with the analysis of ride times provides an indication that the potential for combining two shorter runs into a single run to reduce the overall number of buses in the system appears both feasible and prudent.

Figure 4: Average Capacity Utilization
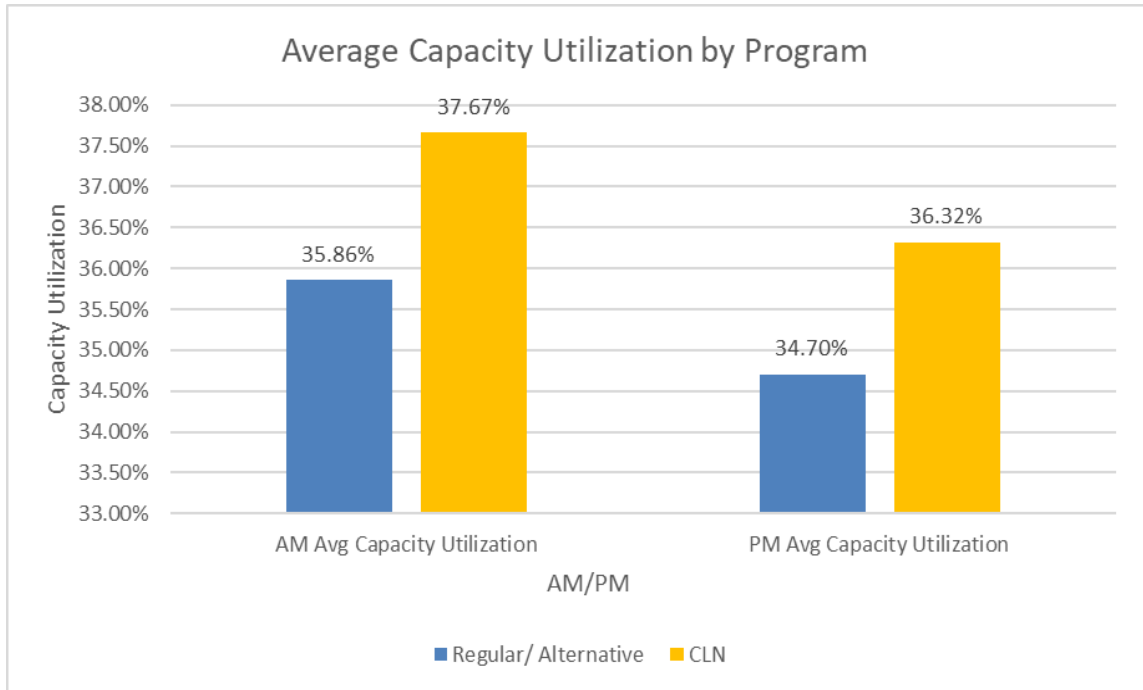
The remainder of this report examines the specific strategies that the CBE has developed to reduce operational costs.

Impact of a Strategic Alignment of Bell Times

Estimated cost savings - $3,535,000

Background

Early in 2016, SBC was asked to perform a comprehensive evaluation of the transportation operation that included a focus (at that time) on the organizational structure, the use of technology, and route planning and management. The overall key objective was to help the CBE develop and communicate a more sustainable transportation model within the constraints of available funding. Key findings within this area included:

- *The average number of routes per bus was lower than desired:*

  Each bus route has effectively two peak periods throughout the day: the morning and afternoon. During each of these periods, effective operations utilize buses as often as possible. A highly-optimized morning shift will have buses scheduled to deliver three different groups of students to three different schools. This is not always possible however, due to bell schedules or distances. In the case of CBE, the average bus is driving 1.5 routes. Rather, effectively half of the buses are driving one route, while the other half are driving two.

- *Buses per 100 students is higher than more efficient systems:*

  This metric is a composite indicator that looks at both seating capacity utilization and the number of times a bus is used throughout the routing scheme. Like golf, the lower scores for this metric are better as it indicates that given a fixed number of students, fewer buses are required to transport them. A value of between 1.0 and 1.3 for regular routes is indicative of an efficient operation. Typically, the lower numbers are seen with three tiered systems, where buses are utilized three times within a contiguous shift of work. In CBE's case, this metric can be correlated to the average riders per bus and the number of routes per bus. The CBE result of 1.8 buses per 100 students is indicative of a system whose bell times are not fully aligned to support more effective use of the fleet assets. Given the relatively short rides times of 31 minutes, it appears that there may be opportunities for greater efficiencies through a more strategic staggering of bell times, without a great impact on the level of service.

While it was noted that at the time there was no immediate opportunity to garner additional savings or efficiencies, it was recommended that the CBE consider looking into the impact that bell times has on the number of buses required as new school facilities opened or other changes occurred. Based on the fact that in addition to Bill 1, the CBE has recently opened 18 (2016/17) new schools and will be opening four more schools in 2017/18, SBC agrees that this is an opportune time to garner savings from a more strategic setting of bell times and route efficiencies to enable greater use of each bus where possible.

Analysis - Bell Time Alignment

As part of the Metro Funding Formula for Alberta, the CBE receives, on average, $549 per transported student. If each bus costs approximately $55,000, then with this funding, each bus needs to transport at least 100 students in order to cover the cost of the bus. With ridership in the 36-37 student range as previously

mentioned, each bus needs to complete three morning and three afternoon runs to break even. To achieve this level of bus utilization, a strategic alignment of bell times will be necessary.

To determine the potential savings that may be possible through an improved alignment of bell times, Transportation Services staff began with a school-by-school review of the current bell times with the following objectives:

- Reduce the number of routes that transport fewer than 30 students;
- Increase the number of school time tiers that each bus can serve with a goal of up to three tiers for busses serving their regular program, community schools; and
- For students attending Alternative Programs, utilize congregated stops.
- Whenever possible, align complex learning needs and regular programming school times, when students attend the same school.

The results of this review determined the potential number of schools to consider for bell time changes within the following time increments:

Table 1: Bell Time Changes

Number of Schools	Time Increment
111	No change in bell times
62	1 to 15 minutes
31	16-30 minutes
13	31-45 minutes

Based on direction received from CBE senior administrators, and to minimize the impact on the school community, it was decided that bell times would only be changed for 93 schools, thus limiting the impact to a maximum change of 30 minutes. For multiple schools, the change of bell times to promote the tiering of bus runs extended the educational day resulting in instructional minutes in excess of what is allowed under the collective agreement for teachers and in relation to the instructional minutes required under the *School Act*.

Schools with bell times that resulted in excess instructional minutes would be recommended for an early out on Fridays to conform to Alberta Education hours of instruction requirements. In addition to the initial group of schools, 24 schools would be recommended for an early out day after a transitional year, as these schools are closer to the number of minutes required. A review of the current routing network finds that the concept of an early dismissal day is not a new concept and is not expected to add additional costs.

Through the alignment of bell times, the number of buses that perform more than a single morning and afternoon route will increase by 65, at $55,000 per bus, resulting in a net savings of an estimated $3,535,000. While additional savings of up to $2,090,000 may be possible, it would require a change in bell times for an additional 13 schools with a change in bell times ranging from 31 up to 45 minutes. These schools will be

considered for a bell time change starting in the 2018/2019 school year to achieve this savings; they have been given a year's notice of the impending change to assist parents with planning.

To understand if the proposed school pairings make logistical sense, SBC performed a random analysis of several of the tiered schools to determine the following:

1. Distance between the schools that were paired;

2. The difference between the morning and afternoon bell times; and

3. The amount of "work time" that a bus would have between tiers.

Table 2 uses the planned pairing of William D. Pratt and Royal Oak Schools as an example. The relatively short distance between the schools and a "work time" of over 60 minutes indicates that this pairing would be a logical choice and would support a single bus serving students to each school on a multiple tier schedule.

Table 2: School Pairing and Work Time Illustration

First School	First AM	First PM	Second School	Second AM	Second PM	Distance Between (KM)	Difference AM	Difference PM	AM Work Time	PM Work Time
William D. Pratt	8:00	14:30	Royal Oak	9:10	15:50	0.7	1:10	1:20	1:10	1:20
Arbour Lake	8:00	14:30	Hawkwood	9:10	15:45	2.4	1:10	1:15	1:10	1:15
Hidden Valley	8:30	15:00	Citadel Park	9:10	15:50	6.7	0:40	0:50	0:40	0:50
McKenzie Lake	8:00	14:30	Mountain Park	9:10	15:50	2.4	1:10	1:20	1:10	1:20
William Reid	8:05	14:35	Elboya	9:10	15:50	2.2	1:05	1:15	1:05	1:15
Westgate	8:00	14:30	Glamorgan	9:10	15:50	4.8	1:10	1:20	1:10	1:20
Varsity Acres	8:00	14:30	Dalhousie	9:10	15:50	3.0	1:10	1:20	1:10	1:20
Thomas B. Riley	8:00	14:30	Marion Carson	9:10	15:50	5.9	1:10	1:20	1:10	1:20
F.E. Osborne	7:55	14:38	Marion Carson	9:10	15:50	0.1	1:15	1:12	1:15	1:12

Key conclusions and recommendations:

SBC agrees without question that the key starting point for cost reductions is to develop a more strategic alignment of bell times than existed for the 2016/2017 year, when bell times remained relatively untouched. It should be noted and recognized that Transportation Services management and planning staff naturally have the most comprehensive knowledge of the routing network and the constraints and complexity of changing bell times to promote improved utilization of the fleet. That being said, SBC reviewed the methodology followed by Transportation Services resulting in the following conclusions and recommendations:

1. While SBC concurs with the methodology utilized to determine bell time alternatives to support a better utilization of the fleet resulting in a reduction in buses and cost savings, definitive savings will not be able to be determined until runs are actually designed and students assigned to stops and runs and timing checked with day to day usage.

2. To provide some level of flexibility, the CBE should consider the adoption of policy that allows for the periodic adjustment of bell times (within a variable of five to ten minutes) of either an individual school or multiple schools to enable lean and improved tiering of bus runs. This concept is common in many of the large urban Canadian school authorities, especially cities that are experiencing population growth and the opening of new school facilities.

3. To limit the impact on parents, students, and staff, bell time changes could be restricted to fall within the am start time range of 7:50 to 9:18 and the pm end time range of 2:25 to 4:04. These start and end time ranges are well established across the CBE and under which the majority of CBE schools currently operate.

Capacity Utilization Improvements

Background

While the strategic alignment of bell times is necessary to reduce the overall number of buses, a high utilization of seating capacity is also a key strategy in reducing the number of fleet assets required. Both time and distance are constraints that limit how full a bus can be loaded and still be able to meet the planned arrival times for each of the schools it serves. The methodology to understand the potential savings through improved seating capacity first considered looking at routes that were less than 30 minutes in length and also those that could benefit from the use of congregated stops where such are allowed.

Currently some Alternative Programs use congregated stops with longer travel distances to a bus stop. Congregated stops are used when very few students in a community reside far from the school and from each other, making regular transportation travel distances financially unfeasible. The use of congregated stops can have a positive impact on a transportation services levels and especially ride times. While the use of congregated stops can result in an increased distance to the stop for some students, the overall number of stops that each bus makes is reduced which in turn results in a decreased ride time.

When route times are reduced to a significant point, a bus is then able to perform work on more than one-time tier, resulting in a more efficient overall use of the fleet and a reduction in costs.

Analysis - Congregated stops

Approximately 51 routes that serve students attending alternatives programs would either be eliminated or paired to achieve the estimated savings of $1,955,250. Of the 52 routes that are being considered, 17 routes would be eliminated altogether at an average cost of $55,000 with the remaining 34 routes reduced to .5 of the day or a reduction of an average of $27,500.

Analysis – Regular transportation and complex learning needs transportation efficiencies

For regular transportation routes, including both regular and alternative programs, an estimated 15 routes would either be eliminated or paired to achieve the estimated savings of $464,667. Of the 15 routes that are being considered, 4 would be eliminated altogether at an average rate of $55,000 with the remaining 11 routes reduced to .5 or less of the day.

To understand the potential for savings from routes serving students with complex learning needs, Transportation Services performed an analysis of one of the five September 2016 administrative areas of the city and extrapolated these potential savings across the district. Based on this analysis, Transportation Services estimates a total savings of approximately $1,813,500. Given that students accessing these routes change daily, based on medical and other issues, this projected savings seems reasonable.

To further verify this potential, SBC analyzed the current routing network and found that for regular transportation runs, there are approximately 385 regular transportation runs not including runs serving complex learning needs students) across the system that transport 30 or less students with run times under 30 minutes. The results of this analysis are illustrated in the following **Figure 5**:

Figure 5: Regular Transportation Runs With 30 Riders or Less by Run Time

Count of Regular Runs with 30 or less riders by Run Time
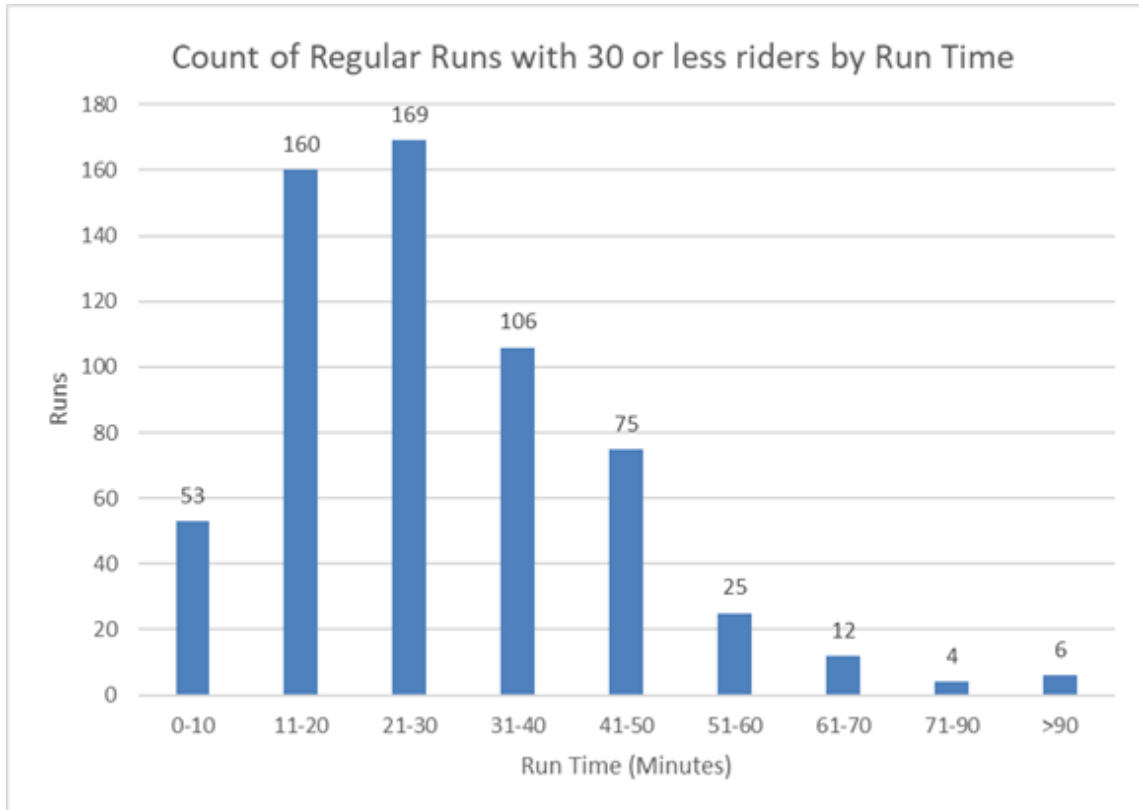
Impact of Natural Changes

Estimated cost savings - $2,223,250

"Natural" changes or decreases in service demand have also occurred due to several key factors including:

- The opening of 4 new schools for 2017/18 as well as those opened in 2016/17 results in a reduction in the number of students required to attend a school outside of the 2.4 km walk zone;

- A reduction in the number of students that were grandfathered at a particular school and have progressed to another grade level or graduated; and

- Changes that have occurred in program location that have also reduced the need for transportation.

Of the total 63 runs that are being considered, 20 routes would be eliminated at the average rate of $55,000 per route while 43 routes would be reduced at .5 or greater portion of the route and would be paired with other runs in the system.

Key conclusions and recommendations:

Based on the analysis of the total runs within the system and as summarized in the following **Table 3**, it appears that through the use of congregated stops and the combining of shorter runs, real potential for savings is likely and that the projected or estimated savings are possible and reasonable.

Table 3: Savings Summary

Strategy	Estimated Savings or Adjustments
Bell Times	$3,535,083
General education efficiencies	$464,667
Complex learning needs efficiencies	$1,869,500
Natural or common changes that occur year-to-year	$2,223,250
Move to Calgary Transit	$1,732,500
Sub-total potential savings	**$11,780,350**
Less anticipated growth	*$828,500*
Less increased CalgaryTransit cost	*$24,500*
Less cost of school within a school until open	*$36,100*
Net Savings	**$10,891,150**

While the methodology and estimates appear to be reasonable, it should be noted and understood that until the route planning process is completed and actual run pairings are made, the true level of savings will not be known. The following recommendations should be considered to reduce the potential impact of the pending funding change and also due to the timeframe that is available to support an effective route planning process:

1. To offset potential savings shortfalls, a five to 10 per cent contingency fund should be established.

2. Based on the preceding analyses, with approximately 300 runs across the system with shorter ride times and lower capacity utilization, opportunities to implement additional efficiencies should be further evaluated after registrations are confirmed and the routes and runs are fully planned and implemented for the 2017/2018 school year.

Calgary Transit

Estimated cost savings - $1,732,500

Background

The CBE and Calgary Transit have a long history of partnering to provide cost effective services for CBE secondary students. Approximately 11,000 secondary students have utilized CT services (where available) reducing the number of school buses and corresponding cost of providing yellow bus service. To capitalize on areas where CT service has become available, Transportation Services planners have identified additional schools that could be served by CT routes reducing further reducing the number of bus runs.

Analysis – Expanded use of Calgary Transit

Approximately 11 yellow bus routes that serve regular education routes and 47 routes that serve alternative programs would either be eliminated or paired to achieve the estimated savings of $1,955,250. Of the 58 routes that are being considered, five of the routes would be eliminated altogether at an average rate of $55,000 with the remainder or 53 of the routes reduced to .5 of the day or a reduction of an average of $27,500. Additionally, and based on the provided data, increased use of CT service would occur at the following alternative program schools:

Table 4: Expanded Use of CT

School	Number of Students
Branton	315
Senator Patrick Burns	368
Robert Warren	183
Bob Edwards	130
Sir Wilfrid Laurier	338
Total	1,334
Rounded	1,300

Key conclusions and recommendations:

The data to perform a qualitative analysis of this future reduction is not readily available and will need to be evaluated further once registrations for transportation arising from family decisions and the resulting route planning process have been completed at the end of October 2017. Discussions with Transportation Services staff indicate a high level of empirical knowledge of both the services currently being delivered and the potential for transition to CT as the service provider.

Financial Comparison

Background

Based on the work as described in the preceding sections, Transportation Services compiled a *Financial Comparison* worksheet that was designed to summarize and illustrate the financial impact that can be expected as a result of changes being made to provide a sustainable transportation service model as well as to reflect the changes arising from Bill 1. The financial analysis was based on the following student ridership information as provided by Transportation Services:

Table 5: Student Count Estimates

Ride Data/ Estimated Riders with a Fee	
Category	# Students
Riders with fee 2016/17	26,000
Less: Complex Learning Needs	-2,400
Less: More than 2.4 km, Reg. Program Transportation	-4,600
Less: Alternative Programs to Transit	-1,300
Estimated Riders with fee 2017/18	**17,700**

Utilizing the above student count, the preceding analyses, and based on conversations with Transportation Services and CBE leadership, SBC evaluated and formatted the following **Figure 6** to confirm the accuracies of the calculations.

Analysis – Financial Comparison

Figure 6 is the result of SBC's evaluation of the Financial Comparison as calculated by Transportation Services.

Figure 6: Current to "Bill 1 Impact" Comparison

CBE Student Transportation - Current and Projected	Current	Bill 1 Impact	Expected Change	School Year 2017/18
			Increase/ (Decrease)	
Funding - Current and Projected				
Government grants	$ 34,546,000	Decrease in Government Grants	$ (280,000)	$ 34,266,000
Grants in lieu of fees	$ -	Funding in lieu of current fees	$ 7,870,000	$ 7,870,000
				$ -
		Total Bill 1 Funding Impact	$ 7,590,000	
Total Available Funding - Current and Projected	$ 34,546,000			$ 42,136,000
Expenses - Current and Projected				
Estimated Current Expenses	$ 51,854,000			$ 51,854,000
Waivers & uncollectables	$ 1,447,000	Potentially less riders receiving waivers	$ (438,985)	$ 1,008,015
		Net Efficiencies (bell times, routing, impacted schools etc.)	$ (7,066,400)	$ (7,066,400)
		Congregated Stops for all alternative programs 1.6/1.8 km	$ (1,955,250)	$ (1,955,250)
		Calgary Transit subsidy @ $549 Financial qualified	$ 6,039,000	$ 6,039,000
		CLN Savings	$ (1,813,500)	$ (1,813,500)
		Total Estimated Adjustments	$ (5,235,135)	
Total Current Expenses	$ 53,301,000	Projected Expenses		$ 48,065,865
Funding Gap - Current and Projected				
Current and projected expenses	$ 53,301,000			$ 48,065,865
Current and projected funding	$ 34,546,000			$ 42,136,000
Current and projected funding gap	$ (18,755,000)			$ (5,929,865)
Fees offset	$ 8,509,000	Reduction in fee offset due to less riders paying fees	$ (2,579,500)	$ 5,929,500
Total Funding Gap Less Fees	$ (10,246,000)	Total Funding Gap Less Fees		$ (365)
Total Current Deficit	$ (10,246,000)	Projected Deficit		$ (365)

As **Figure 6** helps to illustrate, the suggested changes including changes in bell times, congregated stops, and additional use of Calgary Transit, greatly reduces the cost of providing transportation from $51,300,000 to $48,065,865, or a reduction in expenses of $5,235,135. In addition to a reduction in overall expenses, the current deficit or funding gap of $10,246,000 is projected to be eliminated.

Final Conclusions and Recommendations:

Based on discussions with senior CBE administrators and Transportation Services managers, SBC finds that the scenarios for the reduction of costs due to a move to a more sustainable model of transportation services as well those changes in fee income resulting from the implementation of Bill 1 are reasonable and prudent and should be considered for implementation.

As the definitive cost of service and the resulting potential deficit and or surplus cannot be determined until student stop and run assignments are finalized, the following key recommendations should be considered:

1. The key recommendation is that to offset potential savings shortfalls, at least a five to 10 per cent contingency fund should be established. Based on projected funding of $42,136,000, expenses of $48,065,865 and an offset from fees of $5,929,500 it appears that services can be provided without a substantial deficit. That being said, a minimum of a five percent contingency fund or $4,800,000 should be reserved in the event that the extrapolated level of cost savings is not achievable. This contingency cannot be budgeted for within the proposed Transportation Services plan and still provide service within a cost neutral budget, nor is there a logical place to develop this kind of savings. A deficit arising from contingency is still a possible outcome.

2. While the proposed scenarios support the reduction in costs necessary to operate absent a substantial deficit, the disparity between the level of funding and actual cost of transporting students with complex learning needs will continue to impact the system in terms of service and costs. As observed in 2016, the actual average cost of providing complex learning needs transportation was approximately $7,600 per student and this amount was found to be reasonable. However, this cost was well above the $3,374 allocated to boards serving metro areas. With 2,400 students accessing CLN transportation, there is a significant ongoing and unavoidable deficit of up to $10,000,000 for CBE in this area of transportation.

3. It should be acknowledged that Transportation Services is in their first year in the transition to the BusPlanner software and they should be recognized for the amount of effort that has been required to transition to a new routing software system.

4. During this year, Transportation Services has also experienced a change in management, late opening of a large number of new schools, considerable time spent in the analysis of the impact of Bill 1 while also planning for the next school year under the various changing parameters. As the planning process continues under new eligibility criteria, Transportation Services should consider fully utilizing the capabilities of BusPlanner to track students by the type of service provided and distance from designated school to enhance the planning and reporting capabilities of the department as these new and future changes in planning parameters are implemented.

5. While the methodologies being considered to provide services within available funding appear to be viable, it should be noted that additional changes to service parameters would likely result in a deficit. Examples include a limitation on the fees that can be charged for CT services or limitations in the implementation of congregated stops.

6. Significant changes to the fee differential for students in regular vs alternative programs, as well as the relative accessibility of transportation to Alternative Program school sites arise from both Bill 1 funding parameters and the need to reduce costs by moving to congregated stops for all Alternative Programs. There are various implications to this discrepancy which SBC has not fully considered or evaluated under the scope of this project.