TRANSPORTATION COMMITTEE
OPEN MEETING

Date : Tuesday, July 19, 2016, 12:00 p.m.
Location : Second Floor Committee Room, City Hall, Fredericton

1. Committee Membership

   Councillor Henri Mallet, Chair
   Councillor Kevin Darrah, Vice Chair
   Councillor Stephen Chase, Member
   Councillor Bruce Grandy, Member
   Councillor John MacDermid, Member

2. Agenda

   2.1 Noise By-law Exemption Request

   Exemption request under By-law No. S-13 for work associated with the Princess Margaret Bridge
   Administrative Report by:
   • Jon Lewis, Traffic Engineer

   2.2 Safety Benefits of Regent / Prospect Upgrades

   Powerpoint Presentation by:
   • Jon Lewis, Traffic Engineer

   2.3 Dial-a-Bus (Para Transit)

   Service Review and Policy Recommendations (Black Belt Project)
   PowerPoint Presentation by:
   • Darren Charters, Manager, Transit and Parking Services
OPEN OR CLOSED SESSION:
This issue is to be considered at an open session.

ISSUE:
A Council exemption to By-law No. S-13 has been requested by the Department of Transportation and Infrastructure (NBDTI) for construction work associated with the Princess Margaret Bridge.

BACKGROUND:
As part of the construction work associated with seismic rehabilitation and warranty repairs on the Princess Margaret Bridge in Fredericton, NBDTI has requested that Council provide an exemption from the Noise By-law for the duration of this project in 2016 and 2017.

DISCUSSION:
Although the contractor for this project does not currently have overnight work scheduled, NBDTI and City of Fredericton Staff are of the opinion that an exemption should be granted so that if the project experiences unforeseen delays (weather, constructability issues), the Contractor has the ability to extend working hours into the overnight hours and to Sundays.

Given that much of the work being completed will be well separated from dense residential areas. The nuisance impact of overnight noise would be minimal.

If it is determined that the Contractor is required to schedule work during the overnight hours or on Sundays, thus invoking the exemption, City staff shall be given a minimum of 1 week’s notice in advance of construction activity occurring during the overnight hours or on Sundays. This would allow time for City Staff to notify local residents and businesses of the potential overnight work.

COUNCIL POLICY:
This matter is being submitted to Transportation Committee for consideration in accordance with Policy No. COR-POL-033, Legislative Development and Interpretation.

FINANCIAL CONSIDERATION (Immediate Impact on Approved Budget):
LEGAL CONSIDERATION:

Section 1.01 of By-law No. S-13, A By-law Respecting Disturbance by Noise, states as follows:

1.01 No person shall make, or permit to be made, any noise within the City of Fredericton likely to cause a public disturbance or otherwise disturb inhabitants of the City of Fredericton.

This provision would include noise emanating from construction equipment and machinery; however, Section 1.03 of the by-law includes provisions for specific exemptions:

1.03 This by-law shall not apply to:

a) pneumatic hammers, construction equipment and machinery, or vehicles of business and trade between 6:00 am and 9:00 pm from Monday to Saturday, inclusive.

or

f) any person, association, organization, corporation, or event that has obtained an approval authorized by City Council so long as that person or party is acting within the terms of such approval.

SUSTAINABILITY DUE DILIGENCE:

This section should identify and explain the issue's impact on the economy, the environment and our community, as follows:

- **the economic impact**: The ability for the Contractor to work at night would increase the probability of the project being completed on-schedule. Potential construction delays would have a negative economic impact by lengthening potential traffic delays.

- **the environmental impact**: N/A

- **the social impact**: Construction noise during the overnight hours may be a nuisance for some local residents.

COMMUNICATION PLAN:

As per the discussion above, the need for communications will be triggered approximately one week out from when the need for overnight work is identified. This would allow time for the appropriate communications for residents/businesses to be prepared, translated and distributed.

SPOKESPERSON:

Jon Lewis, P.Eng. – Traffic Engineer

OPTIONS:

Option 1
Transportation Committee supports the granting of an exemption to By-law No. S-13, A By-law Respecting Disturbance by Noise, Section 1.03 (f), to permit the New Brunswick Department of Transportation and Infrastructure, their officers, agents, contractors, servants, employees, workers, and all other persons acting under its authority or with its permission to carry out repairs on the Princess Margaret Bridge during the overnight hours and on Sundays from August 15, 2016 to October 31, 2017.

Option 2

Transportation Committee can give other direction to staff.

**RECOMMENDATION:**

It is recommended that the following resolution be forwarded to City Council for consideration:

BE IT RESOLVED that the Council of the City of Fredericton hereby grants an exemption to By-law No. S-13, A By-law Respecting Disturbance by Noise, Section 1.03 (f), to permit the New Brunswick Department of Transportation and Infrastructure, their officers, agents, contractors, servants, employees, workers, and all other persons acting under its authority or with its permission, to carry out repairs on the Princess Margaret Bridge during the overnight hours and on Sundays from August 15, 2016 to October 31, 2017.

**Prepared by:**

___________________
Jon Lewis, P.Eng.
Traffic Engineer

**Approved by:**

___________________
Dylan Gamble, P.Eng.
Director of Engineering & Operations
Safety Improvements Associated with Regent Street Upgrade

Transportation Committee
July 19th, 2016

Presented by:
Jon Lewis, P.Eng.
Traffic Engineer
Outline

• What is Being Done
• Collision History at this Intersection
• Safety Benefits of Upgrades
• Expected Reduction in Collisions and Personal Injuries
Regent / Prospect Intersection

- Double left turn lane from Regent NB towards Prospect
- Double left turn lane from Vanier Highway towards Regent SB
- New Right Turn Channelization
- Dairy Queen
- CBC
- Irving
- City Motel

- Dual Left Turn Lanes from Regent NB onto Prospect;
- Dual Left Turn Lanes from Vanier Highway;
- Improved Right Turn Channelization Islands; and
- Renewal of existing above ground and below ground Infrastructure
- Limited traffic flow through construction site
- Cost-Shared project between DTI and the COF
- Project Administered by COF
Regent / Prospect Intersection

- There are obvious traffic flow benefits....

- But what about Safety Benefits???
Collision History at this Intersection

- Over the Past 8 Years:
  - 83 Angled Collisions
  - 31 Rear-End Collisions

**Highest Collision Location in Fredericton**
How to reduce angled Collisions?

– All left turn movements will be permitted during protected phase only
  • Dual left turn lanes allow capacity to make this possible
  • Left turn permitted on arrow only (dedicated signal head for left turn)
  • No left turn on green ball
How to reduce angled Collisions?

– Left turning traffic no longer choosing gap through higher speed opposing thru traffic; and

– Left turning traffic no longer turning left thru crosswalks during walk phase.

– Based on Documented Research: Expect Reduction of **70-80%** in left turn collisions

– Reduce 7 to 8 collisions per year on average

– (2 to 3 Injuries per year)
How to reduce rear-end Collisions?

- New Design for the Right Turn Islands;
- Similar to Union / Cliffe, Smythe / Prospect and Smythe / Bishop
  - Much Improved sightlines between vehicle conflict points; and
  - Much improved sightlines between vehicles and pedestrians.
How to reduce rear-end Collisions?

- Based on Documented Research (City of Edmonton): Expect Reduction of 75% in rear-end collisions
- Reduce 2 to 3 collisions per year on average (1 Injury per Year)
Signal Visibility Improvements

– Reflective signal backboards are also being added to the intersection to improve visibility to the signal heads in a distracting urban area.
Summary

– Intersection Upgrades have been designed to reduce most common collision configurations at this intersection;

– Given the major upgrades being completed, and experience in other jurisdictions, we expect to see a reduction in approx. **9 to 11 collisions a year** at this location (3 to 4 injuries per year) based on existing volumes.

– Traffic volumes growing....collision benefits grow over time.
Regent Street Construction Project

Two construction projects will take place along the uptown portion of Regent Street, from June 1 to August 31, 2016, that will significantly impact traffic.

By completing the work at the same time, the impact on motorists and businesses in the area will be limited to one construction season, overall construction costs will be reduced, and ultimately, traffic flow will be improved.

- The REGENT STREET UNDERPASS (just south of the Record & Post Recorder) will be replaced, diverting traffic to a temporary structure on the west side.
- The Regent Street and Prospect Street Intersection, as well as the section of Regent Street north from the intersection to Priestman Street. East/west traffic will continue to flow through the intersection, as will traffic up the hill to the intersection. Traffic delays can be expected.
- ACCESS TO ALL AREA BUSINESSES WILL BE MAINTAINED DURING CONSTRUCTION.
- Transit to the area will be impacted. Modified routes will be announced at a later date.

The Regent/Prospect intersection is Fredericton’s busiest intersection with about 47,000 vehicles crossing it each day. As a result, these projects will have a very big effect on uptown traffic. Lengthy traffic delays could occur if motorists do not change their habits. Options include:

- reducing or combining trips to and through the uptown area
- using alternate routes
- car pooling
- using alternative transportation (transit, walking, biking)
- working flex-time
- taking vacations

It’s recommended that motorists plan their route uptown ahead of time and allow extra time for travel regardless of which route they choose. Over the coming weeks, meetings will be held for the public and with the businesses in the area to discuss the project further.

Watch for more details over the coming weeks.

www.fredericton.ca/REGENCYCONSTRUCTION
Questions?

www.fredericton.ca/REGENTCONSTRUCTION
Para Transit (Dial-a-Bus) Project

Transportation Committee July 19, 2016
By: Darren Charters, P.Eng.
Overview

– Project History
– The Business Case
– System Overview
– Project Findings
– Project Recommendations
– Policy Change Highlights
Project History

• Why was project completed?
  – Too many calls where we were unable to book trips.
  – Issues with service brought to our attention by Dial-a-Bus Committee
  – Last review of service completed in 2011 by consultant (not all recommendations were adopted)
Project History

• Why was project completed?
  – Now have the tools to properly assess the service internally.
  – Lean 6 Sigma techniques could analyse the service in great detail and determine waste and improvement strategies.

• Black belt project assigned to Scott Brown in 2015
Project History

• Project Team
  – Scott Brown – Facilitator (Black Belt)
  – Darren Barker – Fredericton Transit Foreman
  – Don Barry – Fredericton Transit Operator
  – Doug Bridgman – Easter Seals New Brunswick
  – Julie Brown-Snook – Fredericton Transit Admin
  – Bob Cormier – Finance & Money Belt
  – Megan Barker - Finance
  – Michelle Horncastle – Recreation Division
  – Julia Latham – Easter Seals New Brunswick
  – Kelli Mills - Facilitator (Green Belt)
The Business Case

• Problem Statement
  – Fredericton Transit’s Dial-A-Bus transit system is under performing and is not being used to its full potential. Data indicates that our system is operating at 1.1 passengers per revenue hour (2015) but the target is 2.0 passengers per revenue hour. There is also a high cancellation rate from users at the last minute which decreases our passengers per revenue hour. Cost of the Service is high.
The Business Case

• Project Goals
  1. Improve the service for our customers
  2. Make the service more cost effective
System Overview

Dial–a-Bus (Para Transit) Service

- This service is available to any person whose mobility or cognitive ability prevents them from using regular fixed route transit services in the City of Fredericton. **Only residents of the City of Fredericton are eligible for registration.** Neither age nor financial need is considered reason for Dial-a-Bus (Para Transit) eligibility.
System Overview

- Fredericton Transit operates two accessible buses (one spare)

- Capacity of
  - Four (4) wheelchairs or fifteen (15) seated passengers
System Overview

• Supplemental service provided by taxi company

  – For semi ambulatory passengers (those who are able to get in to and out of a standard vehicle such as a taxi)

  – This is an important part of service that allows non ambulatory (those who are not able to get in to and out of a standard vehicle such as a taxi) more access to COF accessible buses.
Dial-a-bus usage

Dial-a-bus usage (based on kms operated)

- Dial-a-bus #1: 47.80%
- Dial-a-bus #2: 45.40%
- Dial-a-bus Spare: 6.80%

Fredericton
Trip Data

Total Trips Taken
(Nov 2014 to Oct 2015)

- Dial-a-bus: 5360
- Taxi: 5549
- Taxi Accessible: 765

Total Trips: 11674
Service Challenges

• Cancellations – Short notice, does not allow time to re-schedule
Cancelled Trips

Overall cancellation rate for the service is 21-22%.

- Dial-a-bus: 28%
- Taxi: 14%
- Taxi Accessible: 3%

Dial-a-bus has the greatest cancellation rate at 28%.
Other Jurisdictions Cancellations

• Halifax - 10% cancellation rate
  – 233,423 trips taken
  – 25,215 cancelled
  – 258,638 booked

• Saint John - 7% cancellation rate
  – 23,131 trips taken
  – 1789 cancelled
  – 24,920 booked

Info from CUTA Specialized Transit Services Fact Book – 2014 Operating Data.
Percentage of Cancellations for 2016

- January: 23.00%
- February: 25.00%
- March: 30.00%
- April: 20.00%
- May: 19.00%
- June: 10.00%
System Challenges

• Cancellations – Short notice, does not allow time to re-schedule
• Weather - contributes to higher cancellations
• Client pick-up/drop-off times, and the location within the City. Can be challenging to schedule.
• Client Demands, there is unevenness at times.
Client Users (Pick up and drop off)

As shown the clients are scattered throughout the City, drop off locations vary as well.
System Challenges

- Cancellations – Short notice, does not allow time to re-schedule
- Weather - contributes to higher cancellations
- Client pick-up/drop-off times, and the location within the City. Can be challenging to schedule.
- Client Demands, there is unevenness at times.
- Cost of Service
## Dial-a-bus Costs

<table>
<thead>
<tr>
<th></th>
<th>Cost for Service per Trip (Fredericton Transit)</th>
<th>Cost for Service per Trip (Contractor)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administration</td>
<td>15,000</td>
<td>1</td>
</tr>
<tr>
<td>Depreciation on vehicle</td>
<td>$9,600.00</td>
<td>$28,800.00</td>
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<tr>
<td>Repairs &amp; maintenance</td>
<td>$3.00</td>
<td>$14,594.35</td>
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<tr>
<td>Insurance</td>
<td>$2,909.00</td>
<td>$8,727.00</td>
</tr>
<tr>
<td>Fuel</td>
<td>2</td>
<td>$27,736.31</td>
</tr>
<tr>
<td>Fuel spare</td>
<td>1</td>
<td>$892.56</td>
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<tr>
<td><strong>Total Cost annually for three Dial a buses</strong></td>
<td><strong>$80,750.23</strong></td>
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</table>

**Operator 1**
- $64,761.00

**Operator 2**
- $64,761.00

**Evening Weekend Operator**
- $26,910.00

**Coverage vacation** (10 weeks vacation)
- $12,454.00

**Coverage sick**
- $4,846.00

**Simpli Transport fees**
- $4,068.00

**Total cost to operate**
- $273,550.23

**Cost per trip**
- $51.04

**Minus revenue ($3.00 per trip)**
- $16,080

**Adjusted Total cost to operate**
- $257,470.23

**Cost per trip**
- $48.04

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Cost to operate dial-a-bus is five (5) times greater than the private vendor.
Break down of costs per trip (Dial-a-bus)

Cost per Trip

Cost per Trip is $48.04
($51.04 cost to operate - $3.00 revenue from client)
What we thought, and what we now know

What we thought

• We thought we had around 850 users of the system.
  • Of which 800 were registered users, and 50 Attendants

• We thought we had 224 active users
  • Of which 100 are non-ambulatory, and 124 are semi ambulatory

• We thought we had 576 registered users who did not use the service.

What we now know

• We have 221 registered users of the service

• We have 126 active users
  • Of which 57 are non-ambulatory, and 69 are semi-ambulatory.

• We have 95 registered users who did not use the service in the past year.
Ridership Data

- Confirmed that overall cancellations continue to be problematic at 22%.
- Subscription users cancel 10% more often than clients that book in advance.
- Subscription users make up 13% of the registered users, although make up 22% of the active users.
- Subscription users use 60% of the trips booked.
- 57% of the registered users utilized the service in the past 12 months.
Options for Service Delivery

• Create a hybrid model of delivering service by City/Vendor (Vendor outside regular hours)

• Contract out the Service to a private vendor in its entirety.

• Continue Status Quo
Hybrid Solution

• Caution, why a hybrid solution may not provide a better service to the clients.

• You cannot eliminate the most expensive overhead items, meaning cannot increase service delivery.

• Reduction per trip is only between $6-$7 per trip.

• Possibility it may not change the service delivery during the day.

### Dial-a-bus costs

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- Say you could reduce by 20%: $8,941.78
- Eliminate: $26,910.00
- You would only reduce the service by: $35,851.78

### Revised cost of trip

$41.35
Potential cost saving to fully contract out service

<table>
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<tr>
<td>City Dial-a-bus</td>
<td>$257,470.23</td>
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<tr>
<td>Contractor</td>
<td>$74,967.00</td>
</tr>
<tr>
<td><strong>Maximum</strong></td>
<td><strong>$332,437.23</strong></td>
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Assumption in price point based on other jurisdictions in our area.

Projected costs (New Service model)

| Contractor (Non-Ambulatory) | 6125 | 52% | $16.30 | $99,837.50 |
| Contractor (Semi-Ambulatory)| 5549 | 48% | $8.15  | $45,224.35 |
| 11674 Trips                 |      |    |        | $145,061.85 |

Potential Savings **$187,375.38**

Maximum
Contracting Option

• Other cities offer service in this manner
• Saint John, Moncton, Riverview and Dieppe all have contracted service.
  – Service works very well.
Concerns with Contracting Option

- Quality of service (condition of vehicles, customer complaints, scheduling, safety)
- Stability of private business
- Increased trips resulting in an increased operating cost.
Options for Service Delivery

• Create a hybrid model of delivering service by City/Vendor (Vendor outside regular hours) **Recommended option**

• Contract out the Service to a private vendor in its entirety. **Further explore based on monitoring service, and service cost delivery, mitigate risks.**

• Continue Status Quo **Not an option**
Project Recommendations

• Change name of service from Dial-a-Bus to Para Transit
• Schedule multiple clients at same time, decrease costs & improve trip availability (ongoing).
• Establish defined pick up “windows” for clients (complete).
• Dial-a-bus user survey (complete)
• Meet with stakeholders for input (complete)
  – (Mobility New Brunswick, Para Transit Committee)
• Re-new registration every 3 years
Project Recommendations

• Prepare tender for supplemental service, for both semi-ambulatory and non-ambulatory clients (to operate evenings and weekends).

• Adjust operator hours based on demand (next bid period)

• Investigate right sizing vehicles (future)

• Develop accessible fixed route system (ongoing)
  – Registered Dial-a-Bus users would travel for free

• Update user policies and procedures (complete)
Para Transit Policy and Procedures (Highlights)

• “No Show” or Late Cancellation Policy (with consequences)
• Inclusion of those with cognitive challenges
• Passenger pickup window (15 mins)
  – Allows for more riders at one time
• Operator responsibilities (curb to curb service only)
• Trip priority criteria (Employment, Education, Medical)
  – Social trips are given a lower priority
• Registration/application appeal process
• Accommodation of scooters
In Summary

– Excellent project completed by an excellent team
– Proposed changes will improve service, decrease costs
– Change management will be critical to success
– Project has been well supported by stake holder groups
Questions?