

Minutes for BRS-Transit meeting
Monday, 25 November 2019 @ 3:30-5:00pm

Location: Committee Room B at City Hall

Present: Cory Shrigley, Allison Gray, Paul Bracken from Transit; Peter Gallén, Robert Clipperton, Doug Rudolph, Bob Eaton from BRS.

MEETING ADMINISTRATION

- 1) Cory was appointed Chair of this meeting, while Peter will provide the minutes.

USSU ITEMS

- 2) USSU was not present at this meeting.

TRANSIT ITEMS

- 3) Service Standards document:
 - a. 'Tier 1, 2 and 3 Service Levels' shown in the 2020-2021 Preliminary Budget are excerpts from a new, more comprehensive Service Standards document.
 - b. The complete Service Standards document is expected to be published in January 2020.
- 4) Update on pilot route along cultural/entertainment corridor (see October minutes):
 - a. The pilot project will be introduced in December and January to stakeholders along the route for review and comments.
 - b. The pilot route will run from May to August in 2020 and regular fares apply.
 - c. A trip around the one-way circular route takes 20 minutes and the service will run Tuesday to Sunday from 10:00AM to 10:45PM in order to catch departing theatre goers.

BRS ITEMS

The main agenda item for this meeting was an update about Transit's Bus Fleet with Maintenance Manager Paul Bracken. BRS was particularly pleased to get straight answers to a number of technical issues.

- 5) Transit's current and future Fleet:
 - a. The current fleet consists of 141 diesel buses in regular service (official total is still 145).
 - b. The average fleet age has gone down from 14.5 years to 7.7 years
 - c. The buses in the fleet are manufactured by New Flier (in Winnipeg, MN), Nova Bus (in St-François-du-Lac, QC) and Vicinity (designed in BC; manufactured in China), all of which are equipped with Cummins diesel engines.
 - d. Transit is preparing for the introduction of electric buses into its fleet by attempting to run a leased electric bus in regular service for one full year before the next major addition to the fleet in 2022-2026. The bus lease is currently on hold due to bids coming in at higher than anticipated costs; applicable federal grants are being sought to make up the funding deficit.

6) Challenges:

Since transit fleets and climate conditions in Regina and Edmonton are very similar to Saskatoon's, Paul is in close contact with his counterparts, Barry and Norm, at these transit properties.

a. Bus shortage:

- i. Peak service requires the daily fielding of 102 fully operational buses, with the attempt to have an additional 5 fully functional buses as spares to provide replacement for those having to be taken out of service due to 'break-downs'.
- ii. Bus 'shortages' (as occasionally announced in TransitApp) are caused by a bus not being available, or an operator not being available for scheduled service:
 1. The younger average age of the fleet has helped the situation, while the environmental protection equipment on the diesel engines has exacerbated the problem
 2. In 2018, Transit had a bus shortage on 18 days, while shortages have already occurred on 33 days in 2019 (of which 12 took place last February when three weeks of -40°C temperatures wreaked havoc on the DPF-system).
- iii. Electric buses will have less engine problems, while battery life and other technical issues may come to the fore. Electric buses in St. Albert, AB have shown greater reliability than diesel buses in winter conditions.
- iv. Maintenance: Transit recently reached the desired target of 6 buses per mechanic.

c. Kneeling

- i. BRS has repeatedly questioned the refusal to use the kneeling mechanism on Transit's buses in temperatures below -20 degrees Celsius, and BRS's sources have indicated that such restrictions have not been imposed on similar buses operated by other transit properties. Although not achieving the desired result, BRS finally got the technical explanation for the restriction:
 1. It needs to be recognized that the air-system that operates the kneeling mechanism on a bus is an integral part of the same air-system that also operates the brakes, the suspension and the doors on the bus. A malfunction anywhere in the air-system can cause the bus to become inoperable.
 2. Specifically regarding the kneeling of buses, moisture and other contaminants in the air system can cause rapid dump valves to freeze in colder temperatures, thus preventing the front suspension from rising up again, which would render the bus inoperable.
 3. The reason that Transit has deliberately chosen to instruct Operators not to kneel buses in colder temperatures, is that inadequate resources to properly maintain an aging fleet in the past has so contaminated the entire air-system on Transit's older buses that Transit wants to minimize

all actions that could jeopardize the vital air-systems that may render the bus to become inoperable. It should be noted that the ramp still remains operational during colder temperatures.

4. Removing the hazard of freeze-up in the air-system could be alleviated, but it would require replacing the entire air-system on 80 buses in the current fleet at great expense. The problem will go away by itself over time through attrition of the older buses plus proper maintenance of the newer fleet.
- ii. In response to Transit's inquiries, other operators in Western Canada responded as follows with regard to kneeling in cold weather:
 1. Airdrie: "No policy; however, as a general practice we advise the contractor (contracted drivers) to limit the use of the kneeling function on the heavy buses. We transport very few mobility devices or customers who require the kneeling function on our regional services. I would say that helps greatly."
 2. Edmonton: "Very little changeovers in the winter due to kneeling as we have a policy of not kneeling the buses when the temperature drops below a certain temperature."
 3. St. Albert: "We have a severe weather protocol in dealing with blizzard conditions but do not have a policy on kneeling the buses in cold weather. Our mission is to continue to promote to the Driver workforce, to only kneel when absolutely required. Our change-overs for problems is limited in this respect, guess we are lucky."
- e. Diesel engine issues:
 - i. Cummins bus engines are the only diesel engines that meet current North American environmental emissions standards. Thus even though Transit's Nova busses are manufactured by a Canadian company owned by Volvo, which is a noted European bus and diesel engine manufacturer, all buses in North America are equipped with Cummins engines.
 - ii. The Diesel Particulate Filter (DPF) system on the Cummins engines, which removes soft soot pollutants from the exhaust, is the prime cause of most 'engine problem notices' or 'shut down the engine alerts' to the operator, or the more drastic 'automatic engine shut-downs', which make the bus inoperable.
 - iii. Hard-earned experience has resulted in recent improvements to the reliability of the diesel engines; for example certain filters on the DPF-system are now cleaned only twice before always being replaced.
- f. Trapeze TransitMaster:
 - i. TransitMaster, Saskatoon Transit's new Intelligent Transportation System (ITS), is a highly sophisticated and very technical software package that requires customized, detailed data entry that matches local conditions in the field.

- ii. Transit has three staff working on implementation issues for TransitMaster: a transit planner, a data-analyst and an IT-person. Past inconsistencies in data entry are now being resolved by writing SOPs plus strict separation of tasks between the three staff members.
 - iii. Known hardware issues that will not be immediately resolved include the obsolete fare boxes; the expectation is to have them replaced in two years.
 - iv. BRS provided the following observations on errors in the on-board information system: internal bus displays remain dark; incorrect times are shown on the internal display; 'stop-requested'-notices on the internal display prevent/delay the display of the next approaching stop; and incorrect external voice announcements have been heard (e.g., the outside speaker announcing one stop after another along the route while the bus remains at the end-stop).
- g. TransitApp:
- i. Transit noted that the accuracy of the information in TransitApp will improve when more frequent time-points are entered into TransitMaster. Transit intends to proceed slowly before eventually entering every bus stop as a time-point until they are sure that the data entered agrees with the situation on the road.
 - ii. BRS indicated that TransitApp sometimes seems to fail to correctly show the next scheduled bus; Transit was interested in timely and detailed feedback when that occurs. BRS also noted that the next outbound bus on route #8+ is not necessarily shown at the top in TransitApp.

7) Particular issues:

- a. Bus seating: In order to provide more passenger capacity as well as additional space for strollers, Transit is considering a revised interior design for their next bus purchase that would feature longitudinal seating with flip-up seats in the low-floor portion of the bus.
- b. Winter tires: BRS was pleased to hear that Transit already employs winter tires on the driving axle.
- c. Bus cleaning & inspections:
 - i. A full circle check of the bus (tires, windshield wipers, lights, blinkers, etc.) is completed at least every 24 hours. If still within those 24 hours, a basic 6 point check is conducted any time there is a driver change.
 - ii. Upon arriving at the garage, operators fill out a service request sheet, if required.
 - iii. Up to five people per shift are engaged in daily cleaning of the buses from 3:30PM to 5:30AM: floors swept/mopped/vacuumed as needed, stanchions wiped down, seats vacuumed, and posters replaced.
 - iv. The interior of each bus is fully detailed every three months

NEXT MEETING: Monday, 16 December 2019, 3:30 – 4:30 pm at City Hall (confirmed). Topic: discussion about issues around Transit Fares with Transit Researcher Deepak Santhanakrishnan.