

Our File/N/Réf. 47-35-00
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DATE: 18 January 2000

TO/DEST: Co-ordinator, Transit Services Committee

FROM/EXP: General Manager

SUBJECT/OBJET: **CALCULATING RIDERSHIP FOR OC TRANSP**

DEPARTMENTAL RECOMMENDATION

That the Transit Services Committee receive this report for information.

BACKGROUND

Generally in the transit industry, overall ridership is measured through analysis of fare revenues. This is also true for OC Transpo where monthly ridership reports are prepared based on the numbers of passes sold, the amount of cash and number of tickets collected in the fare box.

The monthly ridership is adjusted to account for the number of weekdays, Saturdays and Sundays in the month in question. This adjustment makes it possible to compare ridership from year to year when the composition of day types in the month varies. Ridership is always stated in terms of "linked trips". If a rider pays one fare but requires a transfer to complete his trip, this is counted as one ride, not two.

In addition, OC Transpo has an Automatic Passenger Counting System (APC) which keeps track of boardings and alightings by route, stop, time period and day type. This collects data on a sample basis, with about 10% of the fleet equipped and, at the end of each booking period, provides average weekday, Saturday and Sunday ridership for the period. The main use for APC data is for detailed service planning and scheduling, but it is available to provide a backup to the financial data.

A summary of monthly ridership for 1997, 1998 and 1999, calculated from fare revenues and adjusted for the numbers of weekdays, Saturdays and Sundays in each month is shown as Exhibit 1. The monthly fare revenues are summarized in Exhibits 2 and 3 for the same period.

DISCUSSION

Monthly Passes

The fare system consists of five pass types: Transpass, Unipass, Student Transpass, Student Unipass and Seniors. For each of these, based on surveys, a ridership factor is assumed and the number of passes in that category is multiplied by the factor to establish monthly ridership. To ensure long-term consistency of the ridership data, these factors are rarely changed. In fact, the last changes were made to these factors in 1992. The current values are:

Adult Transpass	54.37
Adult Unipass	49.05
Student Transpass	61.83
Student Unipass	61.83
Senior Pass	45.91

Cash and Tickets

Cash and ticket revenues are counted in OC Transpo's Treasury on a daily basis. The fare boxes are unsophisticated; there is no means of distinguishing the revenues from any particular till.

Cash revenues are based on the actual bank deposits of fare receipts, and tickets are weighed on highly accurate scales.

The question that needs to be answered is: how many rides does a particular amount of cash or number of tickets represent? To answer this, surveys are used, the most recent being in March 1996 after the peak/off-peak fare was removed and the new child fare was introduced.

We are assuming 3% of cash/ticket fares are Express, 79% are regular and 18% are child fares. This gives an average daily ticket fare of \$1.3875 and average daily cash fare of \$2.1075.

DayPass and Annual Passes

The DayPass, priced at \$5 if pre-purchased or \$6 if purchased on the bus, is assumed to be equivalent to five rides. This has yet to be confirmed by survey, but is reasonable given the relative pricing of the DayPass and tickets. For Sundays and holidays, when the DayPass can be used for families with as many as six members, a higher factor of 8.75 is used. This was determined based on the relationship of the price to ticket fares, and compared for reasonableness with the Toronto Transit Commission's experience with their Family Pass.

Other

Canada Post: For many years, OC Transpo has had a contract with Canada Post in which Canada Post reports, on a monthly basis, the number of letter carriers who have been assigned to use OC Transpo. Canada Post pays a per-person monthly rate to OC Transpo; as a result, uniformed letter carriers board buses without paying a fare. Currently, 90 letter carriers use OC Transpo. The number of letter carriers is multiplied by a factor which reflects the number of trips taken per month.

STO passes and transfers used on OC Transpo buses: As part of the integration of service between STO and OC Transpo, holders of STO passes and transfers can board OC Transpo buses without paying an additional fare. In the late 1980s, surveys were carried out to quantify the approximate number of such riders. It is estimated that approximately 1.4 million holders of STO passes and transfers board OC Transpo buses annually.

Transfers between OC Transpo buses: Although it is now possible to make more than one trip with a transfer, we have not made any adjustment to ridership statistics to account for this. In the spring, we plan to carry out surveys to determine the DayPass usage, to see if the cash/ticket usage has changed and to look at the effect of time-period transfers.

When analyzing its average fares, OC Transpo uses two different calculations. “Average fare” simply reflects the division of total revenues by total riders. To derive a more accurate portrayal of the average fares which are actually paid by its customers, “average paid fare” is calculated after removing the Canada Post revenues and riders and the STO riders from the totals.

*Approved by
Gordon Diamond*

EXHIBIT 1
OC TRANSPO ADJUSTED RIDERSHIP

	1997	1998	Percentage Change 1998 vs 1997	1999	Percentage Change 1999 vs 1998
Jan	6,533,860	6,309,946	(3.43)	6,558,755	3.94
Feb	6,397,792	6,512,811	1.80	6,534,324	0.33
Mar	6,303,460	6,429,861	2.01	6,584,471	2.40
Apr	6,064,658	6,102,713	0.63	6,151,661	0.80
May	5,603,789	5,668,705	1.16	5,925,588	4.53
June	5,042,125	5,243,886	4.00	5,804,505	10.69
July	4,652,898	4,771,879	2.56	5,250,789	10.04
Aug	4,387,263	4,469,308	1.87	4,939,033	10.51
Sept	6,207,926	6,216,654	0.14	6,704,873	7.85
Oct	6,379,743	6,399,156	0.30	6,869,211	7.35
Nov	6,498,026	6,478,776	(0.30)	6,931,290	6.98
Dec	5,923,914	5,827,460	(1.63)	6,480,262	11.20
TOTAL	69,995,454	70,431,155	0.62	74,734,762	6.11

MONTHLY PASS SALES

Exhibit 2

	<u>Adult Passes</u>			<u>Student Passes</u>			<u>Senior Passes</u>			<u>Total All Passes</u>		
	<u>1997</u>	<u>1998</u>	<u>1999</u>	<u>1997</u>	<u>1998 *1</u>	<u>1999 *1</u>	<u>1997</u>	<u>1998</u>	<u>1999</u>	<u>1997</u>	<u>1998 *1</u>	<u>1999 *1</u>
January	43,236	40,681	40,851	35,976	32,623	33,703	7,268	6,560	6,445	86,480	79,864	80,999
February	39,935	41,410	41,597	36,325	34,980	33,775	6,556	6,549	6,438	82,816	82,939	81,810
March	39,603	41,215	42,496	34,292	33,948	33,336	6,795	6,767	6,558	80,690	81,930	82,390
April	38,621	39,770	39,529	31,550	30,341	29,555	7,100	6,936	6,767	77,271	77,047	75,851
May	41,470	42,685	38,832	20,221	19,917	25,110	7,241	7,113	6,955	68,932	69,715	70,897
June	40,115	41,443	37,946	11,206	12,322	23,020	7,228	6,950	7,897	58,549	60,715	68,863
July	35,194	36,212	32,031	9,260	9,798	17,953	7,020	6,886	7,897	51,474	52,896	57,881
August	32,445	33,154	30,824	5,411	5,593	12,525	7,007	6,852	7,824	44,863	45,599	51,173
Sept	36,047	36,204	37,242	32,595	30,596	35,694	7,312	7,105	8,173	75,954	73,905	81,109
Oct	39,835	39,579	40,705	34,108	32,701	36,913	7,294	7,194	8,367	81,237	79,474	85,985
Nov	41,412	40,995	42,375	33,347	34,426	38,045	7,324	7,152	8,287	82,083	82,573	88,707
Dec	38,178	37,168	39,126	27,239	24,225	32,545	7,003	6,981	8,042	72,420	68,374	79,713
Total	466,091	470,516	463,554	311,530	301,470	352,174	85,148	83,045	89,650	862,769	855,031	905,378

Note: 1. Includes Annual Student Passes, which were introduced on September 1, 1998.

MONTHLY CASH & TICKET REVENUES

Exhibit 3

(After all adjustments for day types)

	<u>CASH</u>			<u>TICKET</u>			<u>DAY</u>	<u>PASS</u>	<u>Total Cash, Ticket & Day Passes</u>			
	<u>1997</u>	<u>1998</u>	<u>1999</u>	<u>1997</u>	<u>1998</u>	<u>1999</u>			<u>1997</u>	<u>1998</u>	<u>1999</u>	
January	1,592,481	1,715,624	901,705	749,789	1,052,872	1,972,209			2,342,270	2,768,496	2,873,914	
February	1,565,026	1,527,051	785,509	940,348	1,138,777	1,864,793			2,505,374	2,665,828	2,650,302	
March	1,700,843	1,659,214	908,767	1,110,405	1,329,593	2,126,759			2,811,248	2,988,807	3,035,526	
April	1,606,905	1,557,958	848,445	1,034,156	1,170,734	1,911,354			2,641,061	2,728,692	2,759,799	
May	1,675,696	1,068,570	912,965	1,066,193	1,627,383	1,939,503			2,741,889	2,695,953	2,852,468	
June	1,794,132	1,041,903	932,871	1,180,765	1,922,945	2,018,384		34,249	2,974,897	2,964,848	2,985,504	
July	1,822,246	1,013,564	955,696	1,175,355	1,849,938	2,017,355		68,129	2,997,601	2,863,502	3,041,180	
August	1,853,626	1,052,296	969,157	1,181,546	1,977,501	2,112,272		57,362	3,035,172	3,029,797	3,138,791	
Sept	1,821,453	1,005,893	948,193	1,167,381	2,025,296	2,105,702		40,212	2,988,834	3,031,189	3,094,107	
Oct	1,743,430	949,620	915,714	1,089,723	1,872,270	1,952,189		34,877	2,833,153	2,821,890	2,902,780	
Nov	1,749,675	908,350	872,310	1,149,916	1,859,782	1,967,821		29,855	2,899,591	2,768,132	2,869,986	
Dec	1,712,921	923,007	902,027	1,190,937	2,068,621	2,019,248		30,494	2,903,858	2,991,628	2,951,769	
Total	20,638,434	14,423,050	10,853,359	13,036,514	19,895,712	24,007,589	0	0	295,178	33,674,948	34,318,762	35,156,126