

APPENDIX E: VICTORIA REGIONAL TRANSIT SYSTEM FALL 2013 SERVICE PERFORMANCE REPORT

Introduction

This report presents the ridership performance review for the Victoria Regional Transit System at the system and route level over the period of September to December 2013 against the performance design guidelines developed through the service review process.

Performance Guidelines

What they are and what they define: Performance Guidelines define numerical thresholds and targets for a particular system and its routes and services.

Why they matter: Working in tandem with Service Design Standards, Performance Guidelines are tools that evaluate existing services, identify trends in performance and, based on this evidence, determine how service and supporting features (fares, marketing, facilities, etc.) should be adjusted to improve the effectiveness and efficiency of the system to optimize resources.

For a service to be efficient and productive, a balance should be achieved between oversupply and overcrowding. A number of measures can establish this equilibrium such as:

- Implement transit priority
- Change service span
- Alter frequency
- Change bus stop spacing
- Reduce/increase coverage
- Bus route changes
- Targeted marketing/Corridor branding
- Vehicle type allocation



When performance falls below the set guidelines, recommendations to the Commission will focus on the utilization of the above tools to maximize efficiency.

Performance Measures

Performance measures have been chosen that evaluate the effectiveness of service planning investments on a system and route level.

System level: The measure used for the system guidelines is:

Average boardings per revenue hour - Measures the total volume of ridership as compared to the supply of transit service.

Cost per passenger trip – Measures the average cost to provide service per passenger trip

Cost recovery – A measure of the financial performance of the transit system usually expressed in terms of total operating revenue/total operating expenses.

Passengers trips per capita – Measures the ratio between transit trips and the population of the service area

Route level: The measures used for the route level guidelines are:

Average boardings per revenue hour - Measures the total volume of ridership as compared to the supply of transit service.


Average boardings per trip - Measures the total number of people that board a vehicle on a specific trip.

Route level performance guidelines have been classified into four categories (rapid transit, frequent transit, local transit and targeted transit) to acknowledge different performance expectations based on a route's objective.

Performance Targets

Table 9 and 10 outline the performance targets set for the system and route level. As well as monitoring existing performance against these guidelines, historical trends will also be monitored to determine if the system or routes are becoming more or less efficient over time. Significant variance (+/ – 25%) from the target will place a route on an action list for further investigation and will require more detailed analysis. Routes that fall below the 25% variance will be candidates for corrective adjustments and routes that fall above the 25% variance will be candidates for service improvements. BC Transit will report on an annual basis how the system and routes are performing and this will help guide planning decisions

 Investigate for corrective action

 Investigate for service improvements.

System Level

The purpose of monitoring system wide performance is to identify trends in system performance and compare the performance of the transit system with other peer transit systems. These measures are designed to monitor the pulse of the Victoria Regional Transit System as a whole and guide service planning decisions. This can be particularly useful when identifying system wide impacts of major investments in the transit network such as, development of the rapid and frequent transit networks.

Table 9: System Level Performance Guidelines

System	Measure
Boardings per revenue hour	50
Cost per passenger trip	4.5
Cost recovery	30%
Passengers trips per capita	65

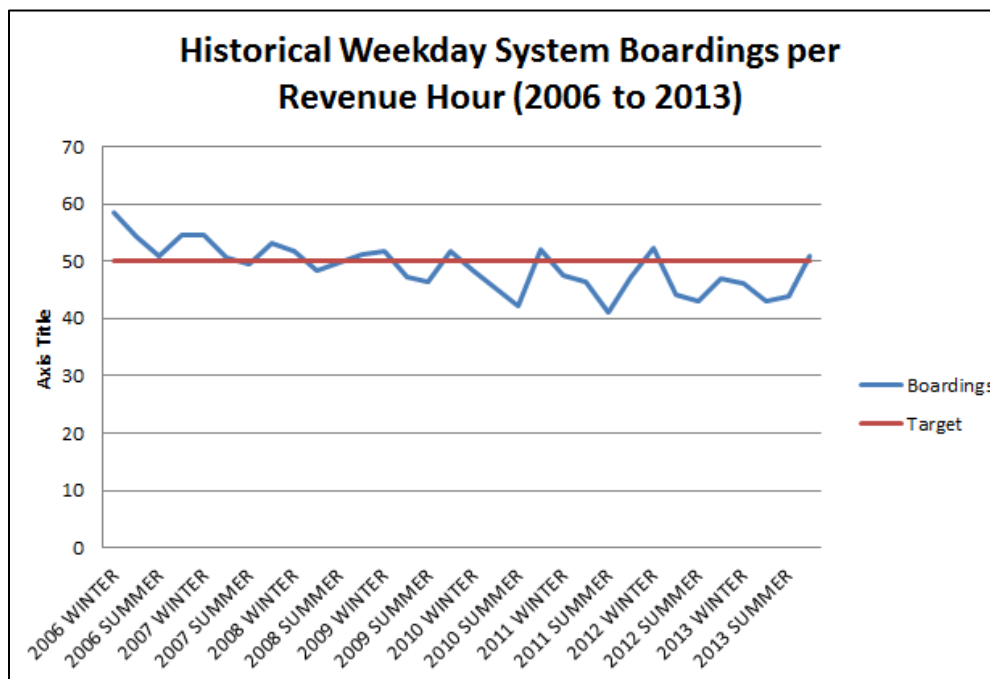
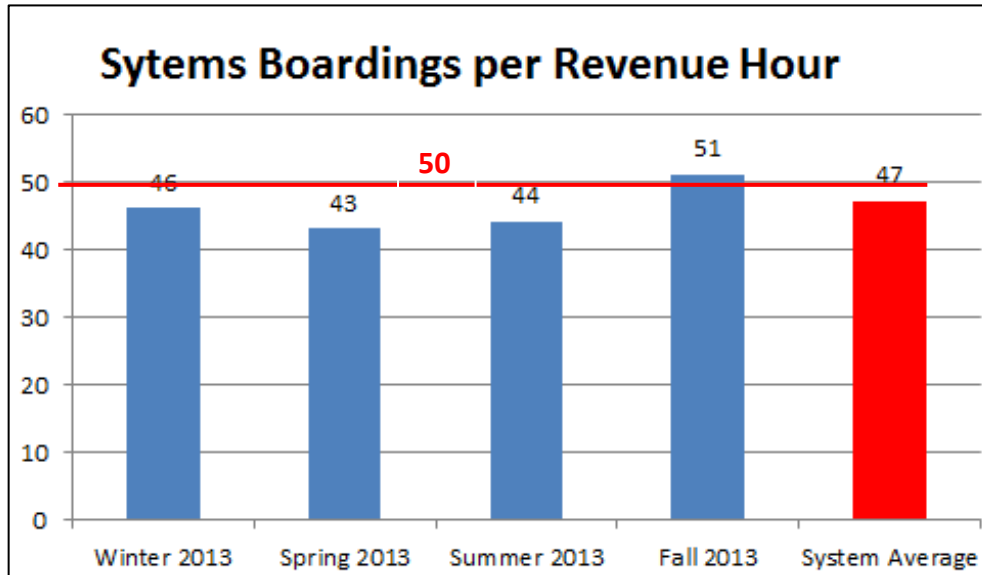
Route Level

Analysis on a route-by-route basis gives a detailed indication of how individual components of the transit system are performing. A route-by-route analysis allows observations of the impact of service changes and investments made in the past and identifies future opportunities for strategic investment or re-investment.

Table 10: Route Level Performance Guidelines

	Boardings per Trip	Boardings per Revenue Hour
Rapid Transit	40	55
Frequent Transit	40	55
Local Transit (High Demand)	25	40
Local Transit (Coverage)	10	20
Targeted Transit	40	60
Community Coverage	-	5

Transit System Performance Results



* A number of factors have contributed to the declining trend in weekday boardings including:

- Some recent investments in service have been directed towards lower performing types of services such as evening service, an expansion of community bus in suburban and rural areas, as well as expansion of conventional service on the Peninsula
- More resources (service hours) are required to undertake the same amount of trips due to slower travel speeds and as a result fewer passengers are carried per revenue hour
- A labour disruption in 2012

System Performance- Sept 03 to Dec 05, 2013 Period

Weekday System Performance

System Level	Trips Operated	Revenue Hours	Passenger Boardings	Boardings per Trip	Boardings per Revenue Hr
Target					50
System Total	3,157	2,040.72	103,595	32.8	51
Urban Total	2,372	1,461.33	84,931	35.8	58
Western Total	462	311.57	10,930	23.7	35
Peninsula Total	323	267.82	7,734	23.9	29
Suburban Total	785	579.39	18,664	23.8	32

Saturday System Performance

System Total	Trips Operated	Revenue Hours	Passenger Boardings	Boardings per Trip	Boardings per Revenue Hr
Target					50.0
System Total	1885	1508	1174	62795	54
Urban Total	1409	1084	846	51670	61
Western Total	296	224	175	6241	36
Peninsula Total	180	201	152	4884	32
Suburban Total	476	424	327	11125	34

Sunday System Performance

System Total	Trips Operated	Revenue Hours	Passenger Boardings	Boardings per Trip	Boardings per Revenue Hr
Target					50.0
System Total	1,489	915.03	44,087	29.6	48
Urban Total	1,103	653.73	35,701	32.4	55
Western Total	234	137.36	4,608	19.7	34
Peninsula Total	152	123.94	3,778	24.9	30
Suburban Total	386	261.30	8,386	21.7	32

Route Performance Results

Weekday Route Performance

Rapid Transit Routes

Rapid Transit	Trips Operated	Revenue Hours	Passenger Boardings	Boardings per Trip	Boardings per Revenue Hr
Target				40.0	55.0
15 - Downtown/UVic Express	124	43.67	2,963	23.9	67.8
16 - Uptown/UVic Express	77	28.28	2,431	31.6	86.0
50 - Langford Exch/Downtown	172	126.13	6,488	37.7	51.4
70 - Swartz Bay/Downtown Express	58	53.58	1,939	33.4	36.2

----- Investigate for corrective action

----- Investigate for service improvements

Frequent Transit Routes

Frequent Transit	Trips Operated	Revenue Hours	Passenger Boardings	Boardings per Trip	Boardings per Revenue Hr
Target				40.0	55.0
4 - UVic/Downtown	198	100.08	7,299	36.9	72.9
6 - Esquimalt/Royal Oak	234	181.12	11,497	49.1	63.5
11 - UVic/Tillicum Mall	145	132.87	7,184	49.5	54.1
14 - UVic/Vic Gen	209	176.55	9,996	47.8	56.6
26 - UVic/Dockyard	100	72.42	5,398	54.0	74.5
27 - Gordon Head/Downtown	117	67.72	4,542	38.8	67.1
28 - Majestic/Downtown	123	69.05	4,629	37.6	67.0
30 - Royal Oak Exch/James Bay	92	67.12	3,431	37.3	51.1
31 - Royal Oak Exch/James Bay	93	65.67	4,038	43.4	61.5

----- Investigate for corrective action

----- Investigate for service improvements

Targeted Transit Routes

Targeted Transit	Trips Operated	Revenue Hours	Passenger Boardings	Boardings per Trip	Boardings per Revenue Hr
Target				40.0	60.0
17 - Cedar Hill Sch Special	2	1.07	65	32.5	60.7
18 - Cedar Hill Sch Special	1	0.37	18	18.0	48.6
19 Hillside	2	0.93	73	36.5	78.5
29 - UVic	2	0.83	52	26.0	62.7
33 - UVic	5	3.12	218	43.6	69.9
51 - Langford Exch/UVic	13	9.10	495	38.1	54.4
76 - Swartz Bay/UVic	2	1.50	90	45.0	60.0

----- Investigate for corrective action

----- Investigate for service improvements

----- Estimates due to # of trips sampled

Local Transit Routes

Local Transit - Urban	Trips Operated	Revenue Hours	Passenger Boardings	Boardings per Trip	Boardings per Revenue Hr
Target				25.0	40.0
2 - Oak Bay/Willows - Downtown	123	43.05	2,248	18.3	52.2
3 - Gonzales/Beacon Hill	73	41.27	1,666	22.8	40.4
7 - UVic/Downtown	121	62.18	3,852	31.8	61.9
8 - Interurban/Oak Bay	46	35.37	1,926	41.9	54.5
21 - Interurban/Downtown	92	48.68	2,576	28.0	52.9
22 - Vic General/Hillside Mall	71	55.00	2,128	30.0	38.7
24 - Admirals Walk/Cedar Hill	44	29.52	1,061	24.1	35.9
25 - Admirals Walk/Maplewood	42	34.73	1,063	25.3	30.6
39 - Royal Roads/UVic	60	39.93	2,328	38.8	58.3
61 - Sooke/Downtown	63	54.12	1,959	31.1	36.2
72 - Swartz Bay/Downtown via Fifth	81	92.18	2,979	36.8	32.3
75 - Saanichton/Royal Oak/Downtow	74	62.08	2,107	28.5	33.9

----- Investigate for corrective action

----- Investigate for service improvements

Local Transit - Coverage	Trips Operated	Revenue Hours	Passenger Boardings	Boardings per Trip	Boardings per Revenue Hr
Target				10.0	20.0
1 - Richardson/Downtown	10	3.03	68	6.8	22.4
10 - Jubilee/Dockyard	65	29.23	750	11.5	25.7
12 - University Heights/UVic	40	10.15	611	15.3	60.2
13 - Cadboro Bay/UVic	12	2.90	96	8.0	33.1
32 - Cordova Bay	31	10.32	365	11.8	35.4
35 - Ridge	18	5.10	359	19.9	70.4
49 - Langford Exchange	12	1.40	26	2.2	18.6
53 - Atkins	27	9.68	112	4.1	11.6
52 - Colwood	64	35.73	807	12.6	22.6
54 - Metchosin	10	9.45	107	10.7	11.3
55 - Happy Valley	7	6.83	78	11.1	11.4
56 - Florence Lake	23	14.10	224	9.7	15.9
57 - Millstream	20	15.55	262	13.1	16.8
58 - Langford Meadows	20	7.55	121	6.1	16.0
59 - Triangle Mountain	9	4.95	89	9.9	18.0
60 - Wishart	9	4.95	73	8.1	14.7
63 - Otter Point	4	2.20	24	6.0	10.9
64 - East Sooke	9	9.83	65	7.2	6.6
81 - Swartz Bay/Brentwood	33	23.83	332	10.1	13.9
83 Sidney/Royal Oak	17	15.95	77	4.5	4.8
85 North Saanich	9	6.20	50	5.6	8.1
86 Deep Cove/McTavish Exch	4	1.30	10	2.5	7.7
88 Sidney/Airport	45	11.20	150	3.3	13.4

----- Investigate for corrective action

----- Investigate for service improvements

----- Estimates due to # of trips sampled

Saturday Route Performance

Rapid Transit Routes

Rapid Transit	Trips Operated	Revenue Hours	Passenger Boardings	Boardings per Trip	Boardings per Revenue Hr
Target				40.0	55.0
15 - Downtown/UVic Express		:	:	:	:
16 - Uptown/UVic Express		:	:	:	:
50 - Langford Exch/Downtown	116	79.55	4,526	39.0	56.90
70 - Swartz Bay/Downtown Express	22	21.27	933	42.4	43.86
----- Investigate for corrective action				----- Investigate for service improvements	

Frequent Transit Routes

Frequent Transit	Trips Operated	Revenue Hours	Passenger Boardings	Boardings per Trip	Boardings per Revenue Hr
Target				40.0	55.0
4 - UVic/Downtown	102	46.98	3,900	38.2	83.01
6 - Esquimalt/Royal Oak	153	110.78	7,011	45.8	63.29
11 - UVic/Tillicum Mall	103	86.50	4,947	48.0	57.19
14 - UVic/Vic Gen	113	88.12	5,644	49.9	64.05
26 - UVic/Dockyard	113	72.05	6,222	55.1	86.36
27 - Gordon Head/Downtown	82	48.05	3,591	43.8	74.73
28 - Majestic/Downtown	84	47.43	3,788	45.1	79.87
30 - Royal Oak Exch/James Bay	68	47.28	3,037	44.7	64.23
31 - Royal Oak Exch/James Bay	70	44.65	3,129	44.7	70.08
----- Investigate for corrective action				----- Investigate for service improvements	

Targeted Transit Routes

Targeted Transit	Trips Operated	Revenue Hours	Passenger Boardings	Boardings per Trip	Boardings per Revenue Hr
Target				40.0	60.0
17 - Cedar Hill Sch Special		:	:	:	:
18 - Cedar Hill Sch Special		:	:	:	:
19 Hillside		:	:	:	:
29 - UVic		:	:	:	:
33 - UVic		:	:	:	:
51 - Langford Exch/UVic		:	:	:	:
76 - Swartz Bay/UVic		:	:	:	:
----- Investigate for corrective action				----- Investigate for service improvements	
----- Estimates due to # of trips sampled					

Local Transit Routes

Local Transit - Urban	Trips Operated	Revenue Hours	Passenger Boardings	Boardings per Trip	Boardings per Revenue Hr
Target				25.0	40.0
2 - Oak Bay/Willows - Downtown	85	28.38	1,837	21.6	64.73
3 - Gonzales/Beacon Hill	38	20.12	774	20.4	38.47
7 - UVic/Downtown	86	43.20	2,428	28.2	56.20
8 - Interurban/Oak Bay	40	27.47	780	19.5	28.39
21 - Interurban/Downtown	28	11.37	426	15.2	37.47
22 - Vic General/Hillside Mall	61	43.28	1,462	24.0	33.78
24 - Admirals Walk/Cedar Hill	32	19.93	421	13.2	21.12
25 - Admirals Walk/Maplewood	33	22.22	1,413	42.8	63.59
39 - Royal Roads/UVic	16	5.07	200	12.5	39.45
61 - Sooke/Downtown	36	21.17	712	19.8	33.63
72 - Swartz Bay/Downtown via Fifth	69	77.43	2,837	41.1	36.64
75 - Saanichton/Royal Oak/Downtow	37	30.20	814	22.0	26.95
Local Transit - Coverage	Trips Operated	Revenue Hours	Passenger Boardings	Boardings per Trip	Boardings per Revenue Hr
Target				10.0	20.0
1 - Richardson/Downtown		:	:	:	:
10 - Jubilee/Dockyard	56	22.37	400	7.1	17.88
12 - University Heights/UVic	20	4.67	140	7.0	29.98
13 - Cadboro Bay/UVic	6	1.52	20	3.3	13.16
32 - Cordova Bay	20	5.00	100	5.0	20.00
35 - Ridge		:	:	:	:
49 - Langford Exchange		:	:	:	:
52 - Colwood	55	28.33	370	6.7	13.06
53 - Atkins	23	8.92	78	3.4	8.74
54 - Metchosin	7	7.62	110	15.7	14.44
55 - Happy Valley		:	:	:	:
56 - Florence Lake	14	7.70	150	10.7	19.48
57 - Millstream	15	9.75	102	6.8	10.46
58 - Langford Meadows	17	6.12	85	5.0	13.89
59 - Triangle Mountain	7	3.37	63	9.0	18.69
60 - Wishart	6	2.90	45	7.5	15.52
63 - Otter Point		:	:	:	:
64 - East Sooke		:	:	:	:
81 - Swartz Bay/Brentwood	14	10.92	155	11.1	14.19
83 Sidney/Royal Oak	8	4.78	30	3.8	6.28
85 North Saanich		:	:	:	:
86 Deep Cove/McTavish Exch		:	:	:	:
88 Sidney/Airport	30	7.25	115	3.8	15.86

----- Investigate for corrective action
 ----- Estimates due to # of trips sampled

----- Investigate for service improvements

Sunday Route Performance

Rapid Transit Routes

Rapid Transit	Trips Operated	Revenue Hours	Passenger Boardings	Boardings per Trip	Boardings per Revenue Hr
Target				40.0	55.0
15 - Downtown/UVic Express		:	:	:	:
16 - Uptown/UVic Express		:	:	:	:
50 - Langford Exch/Downtown	104	68.97	3,497	33.6	50.7
70 - Swartz Bay/Downtown Express	21	19.12	937	44.6	49.0
----- Investigate for corrective action				----- Investigate for service improvements	

Frequent Transit Routes

Frequent Transit	Trips Operated	Revenue Hours	Passenger Boardings	Boardings per Trip	Boardings per Revenue Hr
Target				40.0	55.0
4 - UVic/Downtown	88	40.75	2,473	28.1	60.7
6 - Esquimalt/Royal Oak	110	79.58	5,287	48.1	66.4
11 - UVic/Tillicum Mall	77	63.75	3,518	45.7	55.2
14 - UVic/Vic Gen	102	78.33	3,987	39.1	50.9
26 - UVic/Dockyard	87	53.75	3,804	43.7	70.8
27 - Gordon Head/Downtown	66	42.45	3,307	50.1	77.9
28 - Majestic/Downtown	66	41.67	2,733	41.4	65.6
30 - Royal Oak Exch/James Bay	54	34.78	1,880	34.8	54.1
31 - Royal Oak Exch/James Bay	54	34.10	2,069	38.3	60.7
----- Investigate for corrective action				----- Investigate for service improvements	

Targeted Transit Routes

Targeted Transit	Trips Operated	Revenue Hours	Passenger Boardings	Boardings per Trip	Boardings per Revenue Hr
Target				40.0	60.0
17 - Cedar Hill Sch Special		:	:	:	:
18 - Cedar Hill Sch Special		:	:	:	:
19 Hillside		:	:	:	:
29 - UVic		:	:	:	:
51 - Langford Exch/UVic		:	:	:	:
76 - Swartz Bay/UVic	3	2.00	125	41.7	62.5
----- Investigate for corrective action				----- Investigate for service improvements	
----- Estimates due to # of trips sampled					

Local Transit Routes

Local Transit - Urban	Trips Operated	Revenue Hours	Passenger Boardings	Boardings per Trip	Boardings per Revenue Hr
Target				25.0	40.0
2 - Oak Bay/Willows - Downtown	65	20.90	901	13.9	43.1
3 - Gonzales/Beacon Hill	34	16.92	491	14.4	29.0
7 - UVic/Downtown	65	30.78	1,321	20.3	42.9
8 - Interurban/Oak Bay	26	15.05	845	32.5	56.1
21 - Interurban/Downtown	26	11.08	394	15.2	35.6
22 - Vic General/Hillside Mall	56	37.20	1,595	28.5	42.9
24 - Admirals Walk/Cedar Hill	21	12.70	291	13.9	22.9
25 - Admirals Walk/Maplewood	20	13.98	285	14.3	20.4
39 - Royal Roads/UVic	15	4.75	125	8.3	26.3
61 - Sooke/Downtown	24	14.42	449	18.7	31.1
72 - Swartz Bay/Downtown via Fifth	52	58.80	1,844	35.5	31.4
75 - Saanichton/Royal Oak/Downtow	32	22.82	677	21.2	29.7
Local Transit - Coverage	Trips Operated	Revenue Hours	Passenger Boardings	Boardings per Trip	Boardings per Revenue Hr
Target				10.0	20.0
1 - Richardson/Downtown					
10 - Jubilee/Dockyard	25	10.48	220	8.8	21.0
12 - University Heights/UVic	30	7.00	120	4.0	17.1
13 - Cadboro Bay/UVic		:	:	:	:
32 - Cordova Bay	16	3.73	55	3.4	14.7
33 - UVic		:	:	:	:
35 - Ridge		:	:	:	:
49 - Langford Exchange		:	:	:	:
52 - Colwood	40	20.17	292	7.3	14.5
53 - Atkins	10	3.58	25	2.5	7.0
54 - Metchosin	6	5.90	78	13.0	13.2
55 - Happy Valley		:	:	:	:
56 - Florence Lake	13	6.62	77	5.9	11.6
57 - Millstream	12	7.32	46	3.8	6.3
58 - Langford Meadows	14	5.05	79	5.6	15.6
59 - Triangle Mountain	6	2.90	34	5.7	11.7
60 - Wishart	5	2.43	31	6.2	12.8
63 - Otter Point		:	:	:	:
64 - East Sooke		:	:	:	:
81 - Swartz Bay/Brentwood	14	11.95	130	9.3	10.9
83 Sidney/Royal Oak	6	3.45	30	5.0	8.7
85 North Saanich		:	:	:	:
86 Deep Cove/McTavish Exch		:	:	:	:
88 Sidney/Airport	24	5.80	35	1.5	6.0

----- Investigate for corrective action
 ----- Investigate for service improvements
 ----- Estimates due to # of trips sampled

COMMUNITY COVERAGE ROUTES

There are no existing routes categorized as community coverage routes but through the service review process some existing local routes will not meet the targets for their category and will be reclassified as Community Coverage Routes. It is recognised that some community routes may provide a distinct social benefit to a localised community and consideration will be given to the demographics and underlying reason for the routes existence prior to any recommendations for service removal.

Appendix

Key Assumptions

Data

Ridership information used was collected from the fall of 2014 through automated passenger counters which are in place on more than 140 of the buses assigned to the Victoria Region's conventional fleet. This system counts the number of persons boarding and disembarking from a vehicle. A person may board more than one bus to complete a single trip when transfers are involved.

External Factors

In addition to service changes there are a number of external factors that may affect transit ridership. Some of these include fare increases, changing fuel prices, changing macro-economics and changes in land use.

GLOSSARY

Boardings

The number of times passengers board public transportation vehicles. Passengers are counted each time they board vehicles no matter how many vehicles they use to travel from their origin to their destination and regardless of whether they pay a fare, use a pass or transfer, ride for free, or pay in some other way. Also called unlinked passenger trips.

Peak Hours

Refers to weekday a.m. and p.m. service during commute hours to carry a maximum number of passengers. An example of commute or peak hours could be defined as time between 6:00 a.m. and 9:00 a.m. in the morning, and between 3:00 p.m. and 6:00 p.m. at night.

Revenue Service

The time when a vehicle is available to the general public and there is an expectation of carrying passengers. These passengers either directly pay fares, are subsidized by public programs, or provide payment through some contractual arrangement. Revenue service includes layover / recovery time. Revenue service excludes deadhead.