5. Service Standards

Service performance standards are necessary to ensure that all services are fulfilling their roles in the transit network. Performance should be measured regularly in order to determine changes in performance over time, and to allow prompt changes to be enacted if necessary. Performance standards help ensure that BCT services are useful to customers as well as cost-effective for the agency.

5.1 Performance Monitoring System

A performance monitoring system will allow BCT to identify high- and low-performing routes that may be candidates for restructuring. Low-performing routes may consume resources which could be better utilized in more dynamic areas of the system, while high performance may point to the need for increased investment.

The performance monitoring system is based on three performance metrics.

- **Passengers per Revenue Hour** – This measures ridership as a function of the amount of service provided.
- **Subsidy per Passenger** – This measures the cost of providing service to individual passengers, after fare revenue.
- **Passenger Miles per Route Mile** – This takes into account the distances which passengers travel as well as boardings, which make longer-distance services like express or limited-stop routes more competitive with local services.

The performance monitoring system involves:

- Identifying the system average of each metric;
- Determining how far each route falls from the system average in terms of standard deviation;
- Combining the results from the three metrics into a single performance index.

Within the performance monitoring system, each metric is given equal weight. The process is shown in Table 5.1.

Performance Monitoring Schedule
Service performance should be reviewed on a consistent basis. The performance ranking as shown in Table 5.1 should be updated quarterly, during BCT's regular Quarterly Reports. This provides the ability to view change over time, see how newly-implemented services are progressing, and address unproductive services at regular intervals throughout the year.

Table 5.1

Route	Values: Passengers per Rev. Hour	Values: Subsidy per Passenger	Values: Passenger Miles per Route Mile	Distance From Mean: Passengers per Rev. Hour	Distance From Mean: Subsidy per Passenger	Distance From Mean: Passenger Miles per Route Mile	Combined Score	Adjusted Combined Score[1]
1	53.3	$ 1.09	2228.4	1.03	0.43	2.68	4.14	10.72
2	38.9	$ 1.74	1054.2	-0.09	-0.04	0.56	0.44	7.02
3	17.1	$ 4.90	139.3	-1.77	-2.32	-1.08	-5.18	1.40
4	21.5	$ 3.71	229.6	-1.43	-1.46	-0.92	-3.81	2.77
5	26.1	$ 2.84	305.7	-1.08	-0.83	-0.78	-2.70	3.88
6	27.0	$ 2.73	543.8	-1.01	-0.76	-0.36	-2.12	4.46
7	45.3	$ 1.40	889.9	0.41	0.21	0.27	0.88	7.46
9	35.3	$ 2.03	560.9	-0.37	-0.25	-0.33	-0.94	5.64
10	46.7	$ 1.36	973.4	0.52	0.24	0.42	1.17	7.75
11	36.8	$ 1.89	672.4	-0.25	-0.14	-0.12	-0.52	6.06
12	38.0	$ 1.82	409.7	-0.15	-0.09	-0.60	-0.84	5.74
14	50.8	$ 1.21	1055.6	0.84	0.35	0.57	1.75	8.33
15	18.7	$ 4.54	166.9	-1.65	-2.06	-1.03	-4.75	1.83
16	18.6	$ 4.52	231.3	-1.66	-2.05	-0.92	-4.62	1.96
17	21.5	$ 3.66	201.8	-1.43	-1.42	-0.97	-3.83	2.75
18	53.6	$ 1.09	2316.2	1.05	0.44	2.83	4.32	10.90
20	28.9	$ 2.56	321.7	-0.86	-0.63	-0.76	-2.24	4.34
22	37.1	$ 1.89	1085.2	-0.22	-0.14	0.62	0.25	6.84
23	14.2	$ 6.62	177.8	-2.00	-3.57	-1.01	-6.58	0.00
28	37.2	$ 1.90	664.4	-0.21	-0.15	-0.14	-0.50	6.08
30	50.5	$ 1.21	742.9	0.81	0.34	0.00	1.16	7.74
31	39.4	$ 1.79	755.3	-0.05	-0.07	0.02	-0.09	6.49
34	53.9	$ 1.11	1010.9	1.07	0.42	0.48	1.98	8.56
36	40.8	$ 1.62	1412.7	0.06	0.05	1.21	1.32	7.90
40	43.5	$ 1.45	933.7	0.27	0.17	0.35	0.79	7.37
42	39.9	$ 1.73	649.3	-0.01	-0.03	-0.17	-0.20	6.38
48	25.1	$ 3.10	192.6	-1.15	-1.02	-0.99	-3.16	3.42
50	50.8	$ 1.15	1364.3	0.84	0.39	1.12	2.35	8.93
55	42.6	$ 1.59	450.7	0.20	0.07	-0.52	-0.25	6.34
56	18.9	$ 4.21	277.2	-1.63	-1.82	-0.84	-4.29	2.29
57	18.1	$ 4.66	67.3	-1.70	-2.15	-1.21	-5.06	1.52
60	50.8	$ 1.20	1057.5	0.83	0.36	0.57	1.76	8.34
62	30.9	$ 2.45	362.7	-0.71	-0.55	-0.68	-1.94	4.65
72	63.5	$ 0.81	1914.5	1.82	0.63	2.11	4.56	11.15
81	41.0	$ 1.57	654.1	0.08	0.08	-0.16	0.00	6.59
83	24.9	$ 3.22	325.5	-1.17	-1.11	-0.75	-3.03	3.55
88	27.0	$ 2.91	244.5	-1.01	-0.89	-0.89	-2.79	3.79
101	18.8	$ 4.36	180.8	-1.64	-1.93	-1.01	-4.59	1.99
102	20.2	$ 4.28	223.6	-1.53	-1.88	-0.93	-4.34	2.24
441	34.9	$ 2.10	537.3	-0.40	-0.30	-0.37	-1.07	5.52
Average	40.0	$ 1.69	741.6				0.00	6.58
Std Dev	12.9	$ 1.38	555.6					

[1] To create the adjusted combined score which must not include negative values, the absolute value of the lowest-ranked route's combined score (Route 23) is added to the combined score.

5.2 Performance Standards

Each route is ranked based on its adjusted combined score and compared to the score average. The routes are then assigned to one of four categories, as shown in Table 5.2.

Table 5.2

Route	Score	Action
72	11.15	150 percent or higher of score average: Very high performance which may benefit from increased frequency, service span, or upgrade of service type. Actions are suggested in section 5.3.2.
18	10.90	
1	10.72	
50	8.93	75 to 150 percent of score average: Average or high performance which requires no immediate action.
34	8.56	
60	8.34	
14	8.33	
36	7.90	
10	7.75	
30	7.74	
7	7.46	
40	7.37	
2	7.02	
22	6.84	
81	6.59	
31	6.49	
42	6.38	
55	6.34	
28	6.08	
11	6.06	
12	5.74	
9	5.64	
441	5.52	
62	4.65	50 to 75 percent of score average: Average to low performance; candidate for monitoring or some remedial action to improve performance.
6	4.46	
20	4.34	
5	3.88	
88	3.79	
83	3.55	
48	3.42	
4	2.77	50 percent or lower of score average: Poor performing routes which are candidates for restructuring. Remedial actions are suggested in section 5.3.1.
17	2.75	
56	2.29	
102	2.24	
101	1.99	
16	1.96	
15	1.83	
57	1.52	
3	1.40	
23	0.00	
Average	**6.58**	

Since this ranking system is based on route performance relative to peer routes, levels may shift depending on overall system performance. For example, if low-performing routes are discontinued and overall performance improves, formerly average-performing routes may shift into lower categories. Due to this sliding scale, the COA recommends that each route be reviewed using the tools detailed in Section 5.3 rather than mandating specific courses of action.

Based on this system, three routes fall into the top category – 72 on Oakland Park Blvd., 18 on SR 7, and 1 on US 1 south of Broward Central Terminal. Ten routes fall into the lowest category, and should be evaluated to make sure that they are serving appropriate roles in the network. The performance of these routes was taken into account when developing the Preferred Service Plan (Section 7).

Minimum Thresholds

While the performance monitoring system takes into account relative route performance, BCT should set certain minimum thresholds for performance which need to be met in order to service to continue. Setting minimums establishes a system baseline, and prevents highly unproductive services from consuming resources needed elsewhere. These minimum standards are:

- 15 passengers per hour OR
- $5.00 per passenger boarding

Routes (or route segments) which do not meet either of these minimum standards should undergo review with the intention of discontinuing or substantially modifying service. Based on data provided in Table 5.1, Route 23 falls below the minimum threshold for subsidy per passenger boarding ($6.62).

5.3 Action Plan

Each section below spells out an action plan for routes falling into the categories described above. Routes in the lowest and highest categories warrant more intensive actions, while routes towards the middle are adequately fulfilling their roles in the network. Routes at the cusps of each category may be more subject to the actions in the neighboring category based on the best judgment of BCT service planners, such as those at the high end of the Yellow category or those at the low end of the Orange category above.

5.3.1 Low-Performing Service (75 percent or lower of score average)

Routes which rank within the lowest category (50 percent or less of score average) must be reviewed to determine their potential for improvement. Remedial actions include any and all of the following, including discontinuation, based on the best judgment of BCT service planners.

- **Segment Level Analysis**: A segment level analysis of a low-performing service may highlight a specific portion of the route that significantly reduces the overall performance, causing it to perform below the standard for its service class. If a low-performing segment is identified, it can be modified to attempt to raise productivity for the route as a whole. If the results of a segment level analysis turn out to be inconclusive, however, modifications to the entire route should be considered.

- **Targeted Marketing:** Marketing tactics can help to raise the public awareness of a route in need of remedial action. Poor ridership may be a result of a lack of public knowledge of a route, and

investing in marketing can reverse this trend. This is especially the case for concentrated market groups like employment centers, shopping districts, schools, hospitals, agencies, and other major destinations.

- **Rider Outreach:** Onboard surveys and rider interviews are methods for gaining valuable information on how a route can be improved. These methods can reveal information about popular destinations that a route may bypass, or other aspects of a service that may be holding back ridership growth.

- **Change in Service Levels:** Adjusting the available service levels of a low-performing route may help to tailor the transit product to its market, and subsequently increase productivity. Exploring other external funding methods could effectively decrease overall subsidy. Once minimum policy service levels are reached and service continues to perform below minimum standards, then discontinuation should be considered.

- **Subsidy Reduction:** Subsidy-reducing actions are intended to be used for routes that fall above the 10 percent subsidy per boarding standard for their service class. Exploring cost sharing and other external funding methods could effectively decrease overall subsidy, assuming strong support for the route from a third-party funding source. Another aspect of subsidy reduction is to examine ways to reduce the resource costs. For smaller services often the difference between meeting and failing minimum performance standards is one vehicle resource. Shortening the route to cover only the critical segments or eliminating unnecessary delay (e.g., deviations, too many stops, and traffic congestion) should be considered by BCT.

- **Discontinuation:** Discontinuation is the final option for dealing with a low-performing route, and can be applied to a route segment or the route as a whole. If none of the aforementioned remedial actions are successful in raising productivity above the minimum standard for its service class, discontinuation is necessary to preserve resources. The effects on the routes' transit-dependent riders will be considered when discontinuation is an option.

5.3.2 Average to Low-Performing Service (50 to 75 percent of score average)

Routes in this category, while demonstrating adequate performance, are towards the lower end of overall productivity and may benefit from some remedial action to improve performance. They must also be monitored to show change over time, to see if they improve or slip into the lowest category of service.

- **Actions**: Segment-level analysis will help to determine whether the route performs consistently throughout its length, or is the product of higher and lower-performing segments. Segments falling into lower or higher categories are subject to the actions detailed in Sections 5.3.1 and 5.3.4. Relevant actions to improve performance for the route as a whole include targeted marketing, rider outreach, and change in service levels. Routes in this category are not subject to more drastic actions, such as discontinuation.

5.3.3 Average to High-Performing Service (75 to 150 percent of score average)

5.3.3 Average to High-Performing Service (75 to 150 percent of score average)

Routes in this category are adequately fulfilling their roles in the transit network, and no remedial action is required. These routes will be monitored on an ongoing basis to determine whether their performance improves, decreases, or stays steady. While no particular action is necessary, ranking in this category does not preclude investment in increased service levels or upgrades in transit operating environment.

- **Actions**: Routes in this category perform well as a whole; however, their average performance may point to routes which perform equally throughout their length, or those which may contain segments of very high and also low performance. Routes in this category should undergo a segment-level analysis to determine whether they are average overall, or include segments which fall into the more extreme categories. Segments which would be considered low or very high performers are subject to the actions detailed in sections 5.3.1 and 5.3.4. Routes with uneven performance may require implementation of short lines, or additional services which only serve the more intense part of the route alignment.

5.3.4 Very High-Performing Service (150 percent or higher of score average)

While remedial actions of lower volume routes largely concentrate on reducing investment, high-performing routes or route segments suggest the need for greater investment. Actions for high performing routes include:

- **Increase service levels:** Increasing frequency can help make service more attractive to a wider pool of potential customers, including those that currently drive. High frequencies provide dependable service with minimal waits, encouraging passengers to arrive randomly without consulting a schedule. Also to maintain a high quality of service, it is important to prevent overcrowding on vehicles. Increasing service levels can help achieve both of these objectives.

- **Upgrade transit operating environment:** Providing additional customer and operational amenities can go a long way in improving customer satisfaction. Adding operating improvements such as signal priority, bus bulbs, or bus lanes can improve performance by making service faster and more reliable. Providing additional amenities at route stops such as bus shelters, benches, and real-time bus information can also heighten the perception of higher-quality service.

- **Introduce additional service types (Rapid Bus):** High-performing corridors may warrant the upgraded service quality of Rapid Bus service with local underlays. Rapid bus service is increased service levels and upgraded transit operating environment into one package. Fast, frequent, reliable service on high-volume corridors is one of the best ways to encourage people to ride transit instead of drive.

This category of routes is the top performing tier of the entire BCT system and essentially the system's flagship service. It is very important to maintain a high-quality level of service as well as to continue further investment. It is important to monitor these routes and make investments in key areas that are aimed at further improving overall service.