ATTACHMENT A

Bus Operations Performance Measurements

Report



Fourth Quarter Fiscal Year 2018-19

About This Report

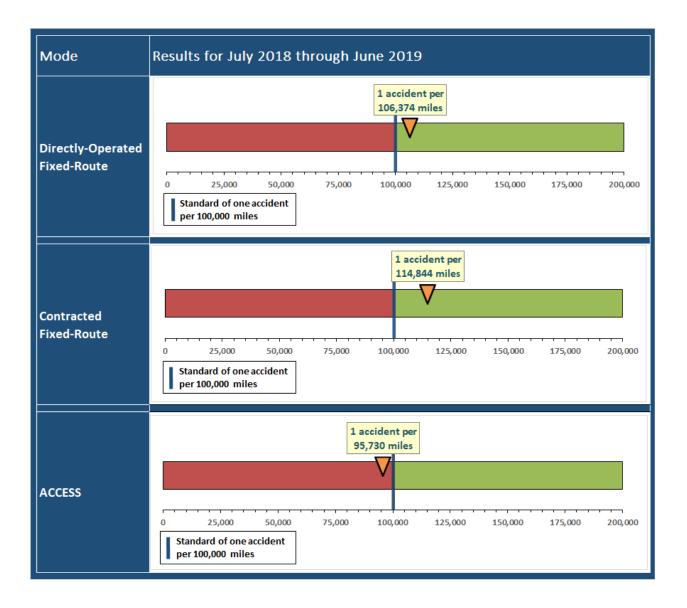
The Orange County Transportation Authority (OCTA) operates a countywide network of 60 routes including local, community, rail connector, and express bus routes serving over 5,000 bus stops known as OC Bus. OCTA also operates paratransit service (OC ACCESS), a shared-ride program available for people unable to use the standard OC Bus service because of functional limitations. OC Bus service is provided through both direct operations by OCTA referred to as directly-operated fixed-route (DOFR) and contracted operations referred to as contracted fixed-route (CFR). The OC ACCESS service is a contract-operated demand-response service required by the Americans with Disabilities Act that is complementary to the fixed-route service and predominately accounts for the overall paratransit services operated by OCTA. These three services make up the bus transit system and are evaluated by the performance measurements summarized in this report.

This report tracks bus system safety, as measured by vehicle accidents; courtesy, as measured by customer complaints; and reliability, as measured by on-time performance (OTP) and miles between road calls (MBRC). Along with these metrics, industry-standard measurements are tracked to assess OCTA bus operations; these measurements include ridership, productivity, farebox recovery ratio (FRR), and cost per revenue vehicle hour (RVH). Graphs accompany the details of each indicator showing the standards or goals and the values for the current reporting period. The following sections provide performance information for OC Bus service, DOFR and CFR, and OC ACCESS service.

Safety: Preventable Vehicle Accidents

OCTA is committed to the safe delivery of the OC Bus service. The safety standard for DOFR, CFR, and OC ACCESS services is no more than one vehicle accident per 100,000 miles. Preventable vehicle accidents are defined as the number of incidents when physical contact occurs between vehicles used for public transit and other vehicles, objects, or pedestrians, and where a coach operator failed to do everything reasonable to prevent the accident.

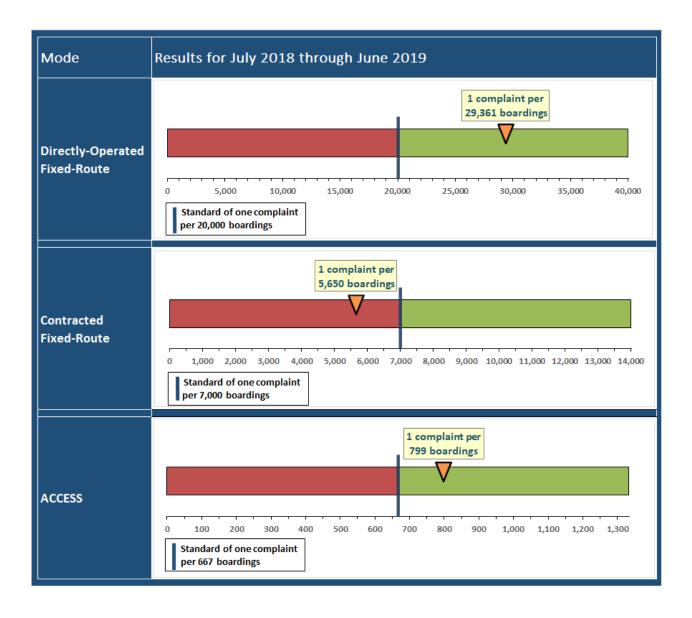
Through the fourth quarter of fiscal year (FY) 2018-19, the DOFR and CFR modes of service exceeded the safety standard with less than one accident per 100,000 miles. During the fourth quarter, OC ACCESS experienced an increase in preventable fixed object-related collisions and failed to meet the performance standard. During this same time period, the contract operator saw the departure of three key staff, the Safety Manager, Operations Manager, and Lead Road Supervisor, all of whom are responsible for safety oversight. As a result, OCTA staff met with the MV Transportation, Inc. (MV) General Manager and the Vice President of Safety Operations in August 2019 to review and discuss MV's Safety Training and Initiatives. In addition, by the end of the fourth quarter, the Safety and Operations Manager positions were filled, and rather than hire a Lead Road Supervisor, three additional Road Supervisors were added to the team. OCTA staff will monitor service delivery to ensure that the initiatives instituted by the contractor result in achieving this important performance standard.



Courtesy: Customer Complaints

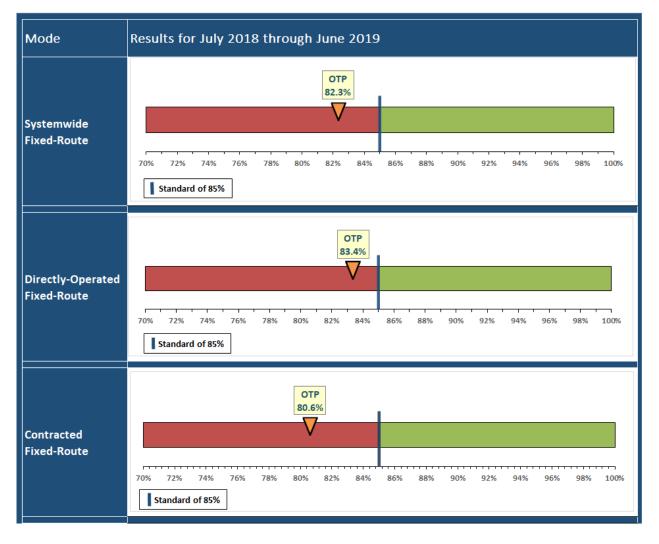
OCTA strives to achieve the highest level of customer satisfaction in the delivery of OC Bus services. The performance standard for customer satisfaction is courtesy as measured by the number of valid complaints received. Customer complaints are the count of incidents when a rider reports dissatisfaction with the service. The standard adopted by OCTA for DOFR OC Bus is no more than one customer complaint per 20,000 boardings; the standard for CFR OC Bus service is no more than one complaint per 7,000 boardings; and the contractual standard for OC ACCESS is no more than one complaint per 667 boardings.

Through the fourth quarter of FY 2018-19, DOFR OC Bus and OC ACCESS service modes exceeded the courtesy standard with less than one complaint per 20,000, and 667 boardings, respectively. The number of valid complaints received for CFR OC Bus service exceeded the one complaint allowed per 7,000 boardings for the entire year. The rise in valid complaints is directly attributed to the loss of service (driver shortage) related to the implementation of the February 2019 Service Bid. Performance in the last quarter showed improvement, with the average number of CFR complaints for the quarter reaching one for every 7,047 passengers carried, just over the performance standard. Staff will continue to monitor this performance standard and work with the contractor toward continued improvement in this area.



Reliability: On-Time Performance

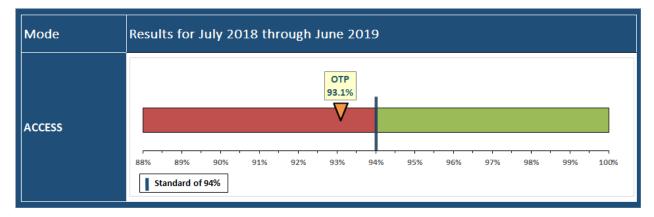
Reliability is vital to a successful transportation network. Reliability for OCTA is measured in part by OTP. OTP is a measure of performance which evaluates the schedule adherence of a bus operating in revenue service according to a published schedule. Schedule adherence is tracked by monitoring the departures of vehicles from time points, which are designated locations on a route used to control vehicle spacing as shown in the published schedule. For OC Bus service, a trip is considered on time if it departs the time point anywhere from zero minutes early to no more than five minutes late. OCTA's fixed-route system standard for OTP is 85 percent. For OC ACCESS service, OTP is a measure of performance evaluating a revenue vehicle's adherence to a scheduled pick-up time for transportation on a demand response trip. A trip is considered on-time if the vehicle arrives within a 30-minute window. The OC ACCESS OTP standard is 94 percent. Both OC Bus and OC ACCESS failed to meet the standard.



Through the fourth quarter of FY 2018-19, systemwide fixed-route OTP was 82.3 percent, 2.7 percent below the standard. This marks a 0.1 percent improvement from the previous quarter and a 2.3 percent decline compared to the same quarter last year. Overall, multiple construction projects throughout the county have impacted the OTP for OC Bus. Many of these projects have required the use of short- and long-term detours.

OTP for the DOFR OC Bus service completed the fiscal year at 83.4 percent, 0.1 percent higher than last quarter and 1.9 percent lower than the same time last year.

The OTP for the CFR OC Bus service did not change compared to third quarter performance, but compared to the same time last year, OTP was 2.9 percent lower. During the fourth quarter of FY 2018-19, OTP for CFR improved month over month, from 79.3 percent in April to 82.1 percent in June.



OTP for OC ACCESS service ended the fiscal year at 93.1 percent, 0.9 percent below the standard, the same as the previous quarter, and 1.3 percent lower than the 94.4 percent reported during the same period last year.

During the fourth quarter, the contract operator continued to struggle with an operator shortage (averaging about 20 drivers short), which resulted in reduced capacity and the need to send additional trips to the supplemental taxi service. Three things have been implemented and are anticipated to help improve OTP going forward:

- MV has two new key staff, both a Safety Manager and Operations Manager.
- Three additional Road Supervisors were added to the team.
- The recent collective bargaining agreement ratification for drivers went into effect on July 12, 2019, increasing the starting wage from \$13 per hour to \$15 per hour has increased the applicant flow and number of trainees being released into revenue service.
- MV introduced the "Pending List" function in the OC ACCESS scheduling software, Trapeze, allowing reservationists to view the number of trips booked each 15-minute interval, which is expected to improve trip negotiating practices.

OCTA staff will continue to monitor service delivery to ensure contractor efforts are working to attain performance standards.

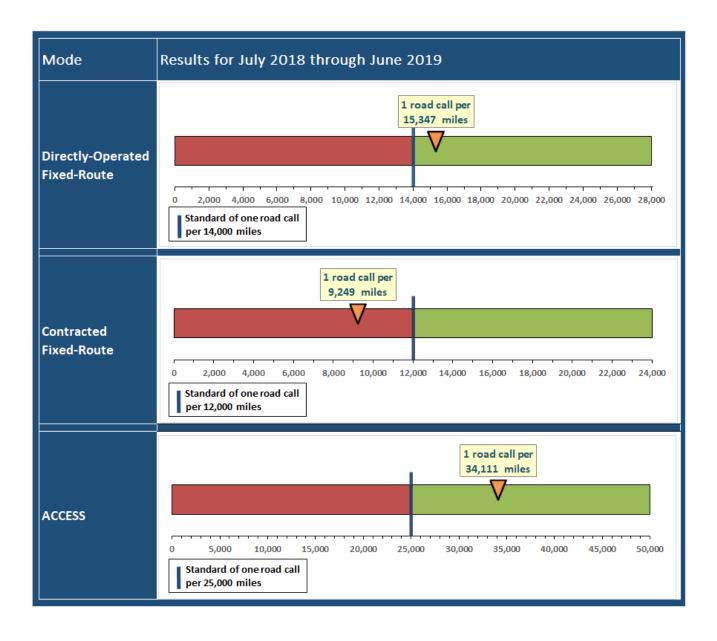
Reliability: Miles Between Road Calls

MBRC is a vehicle reliability performance indicator that measures the average distance in miles that a transit vehicle travels before failure of a vital component forces removal of the vehicle from service. Valid mechanical road calls usually cause a delay or cancellation in service. OCTA has adopted standards for the MBRC for DOFR, CFR, and OC ACCESS services. These standards vary to align with the specific type of service being provided and account for the variability inherent to each of these services including the vehicles assigned. The specific standards as adopted by OCTA are 14,000 MBRC for DOFR OC Bus service; 12,000 MBRC for CFR OC Bus service; and 25,000 MBRC for OC ACCESS

Through the fourth quarter of FY 2018-19, OC Bus services showed steady performance in this measure. DOFR OC Bus service performed above standard, averaging 15,347 vehicle MBRC, a drop of 4.6 percent from last quarter, but an 8.5 percent increase from the same quarter of last year. The recent reduction in the miles between road calls is in part due to an increase in premature piston and cylinder head failures that have become common in the Cummins ISLG engines. Cummins, the original equipment manufacturer, issued a new steel piston (the current pistons are aluminum) to address the issue. Engines under warranty at failure are being retrofitted with steel pistons by Cummins. Engines not under warranty are being overhauled by OCTA's Rebuild section.

MBRC for the CFR OC Bus service was below standard at 9,249 MBRC through the fourth quarter of FY 2018-19. However, this is a 1.6 percent improvement compared to the 9,100 MBRC reported last quarter, and it is 6.2 percent higher than the same quarter last year. The positive trend for MBRC for CFR OC Bus service continued through the fourth quarter with continued corporate staff presence and support in the maintenance shop, and the recent hire of a maintenance director responsible for oversight at both CFR facilities.

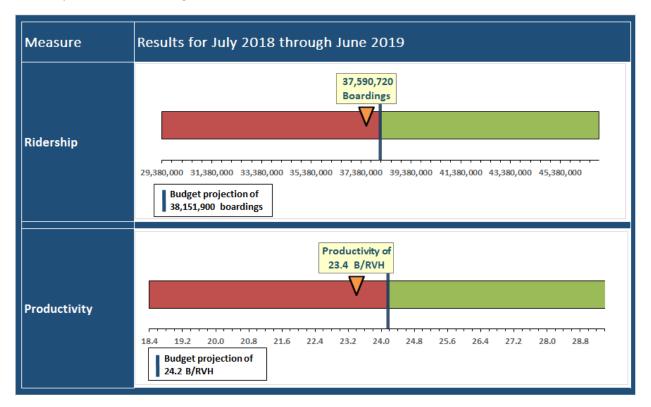
The MBRC for OC ACCESS service exceeded the standard, with 34,111 miles between road calls.



Ridership and Productivity – OC Bus

Ridership (or boardings) is the number of rides taken by passengers using public transit and is influenced by level of service provided, weather, economy, and seasonal variations in demand. Productivity is an industry measure that counts the average number of boardings for each RVH that is operated. RVH is any 60-minute increment of time that a vehicle is available for passengers within the scheduled hours of service, excluding deadhead (a non-revenue movement of a transit vehicle to position it for service). Boardings per RVH (B/RVH) is calculated by taking the boardings and dividing it by the number of RVH operated.

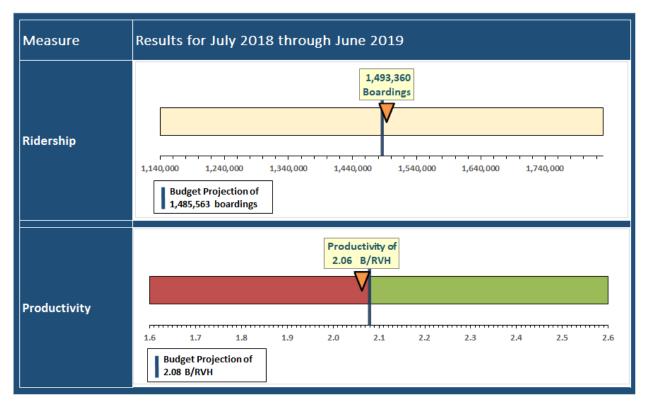
The FY 2018-19 approved budget was developed with the assumption that boardings would decrease by 2.3 percent from FY 2017-18 actuals. Through the fourth quarter of FY 2018-19, both ridership and productivity for OC Bus service were lower than expected. Compared to the same time last year, ridership was down by 3.6 percent. The annual drop beyond the forecast is largely attributed to amount of rain during the year compared to the previous year and the lost service associated with the implementation of the February 2019 Service Change.



Ridership and Productivity – OC ACCESS

(Primary Service Provider and Supplemental Taxi)

Through the fourth quarter of FY 2018-19, the ridership and productivity trends for OC ACCESS continue to indicate increasing demand for this service. Ridership for the quarter exceeded budgeted projections by one half of a percent. Productivity is one percent below the budgeted projection, which is consistent with the rate reported last quarter.



Contractor Performance: Fixed-Route

Per Agreement No. C-4-1737 between OCTA and First Transit, Inc. (First Transit), additional measures are tracked to ensure the CFR OC Bus service meets specified standards for safety, customer service, and reliability. When the contractor's monthly performance exceeds the standard as set forth in the agreement, financial incentives are paid to the contractor; conversely, when the monthly performance of the contractor is below the standard as set forth in the agreement, penalties are assessed and are paid to OCTA by the contractor.

Through the fourth quarter of FY 2018-19, the overall performance of the contracted OC Bus service as determined by the performance categories outlined in the contract was below standard for all measures, including accident reporting, safety, courtesy, and reliability.

Table 1 provides the penalties and incentives assessed to the contractor by quarter for FY 2018-19. The incentives paid in the fourth quarter total \$3,200. The total penalties assessed to the contractor during the FY total \$3,275,661, of which \$727,472 was assessed from April through June. These assessed penalties, particularly for the missed trips, were largely due to the changes implemented by First Transit for the February 2019 Service Change.

Table 1:	Performance Categories	FY19 Q1	FY19 Q2		FY19 Q3	FY19 Q4		FYTD 19
	On-Time Performance	\$ (7,000)	\$ (9,000)	\$	(9,000)	\$ (7,000)	\$	(32,000)
	Valid Complaints: Per 7,000 boardings	\$ (2,900)	\$ -	\$	(54,400)	\$ (2,400)	\$	(59,700)
	Unreported Accident	\$ (20,000)	\$ (20,000)	\$	(110,000)	\$ (90,000)	\$	(240,000)
	Accident Frequency Ratio	\$ -	\$ -	\$	(5,000)	\$ (5,000)	\$	(10,000)
	Key Positions	\$ -	\$ (29,000)	\$	-	\$ -	\$	(29,000)
Penalties	CHP Terminal Inspections	\$ -	\$ -	\$	-	\$ -	\$	-
Penalties	Reports	\$ -	\$ -	\$	-	\$ -	\$	-
	Preventive Maintenance	\$ (137,841)	\$ (36,683)	\$	(16,766)	\$ (22,372)	\$	(213,661)
	Road Calls	\$ (14,300)	\$ (7,000)	\$	(300)	\$ (4,700)	\$	(26,300)
	Vehicle Damage: Per vehicle per day	\$ -	\$ -	\$	-	\$ -	\$	-
	Missed Trips	\$ (80,000)	\$ (67,000)	\$(1,922,000)	\$ (596,000)	\$(2,665,000)
	Total	\$ (262,041)	\$ (168,683)	\$(2,117,466)	\$ (727,472)	\$(3,275,661)
	On-Time Performance	\$ -	\$ -	\$	-	\$ -	\$	-
Incentives	Valid Complaints: Per 7,000 boardings	\$ 3,200	\$ 9,000	\$	4,300	\$ 3,200	\$	19,700
incentives	Accident Frequency Ratio	\$ -	\$ -	\$	-	\$ -	\$	-
	Total	\$ 3,200	\$ 9,000	\$	4,300	\$ 3,200	\$	19,700
Prior Periods	Road Calls	\$ (100)	\$ -	\$	-	\$ -	\$	(100)
Adjustment	Key Position	\$ -	\$ 25,182	\$	-	\$ -	\$	25,182
Aujustment	Total	\$ (100)	\$ 25,182	\$	-	\$ -	\$	25,082
All	Total	\$ (258,941)	\$ (134,501)	\$(2,113,166)	\$ (724,272)	\$(3,230,879)

Contractor Performance: OC ACCESS

(Primary Service Provider and Supplemental Taxi)

Per Agreement No. C-2-1865 between OCTA and MV, additional measures are tracked to ensure the OC ACCESS meets the standards for safety, customer service, and reliability. When the contractor's monthly performance exceeds the standard as set forth in the agreement, financial incentives are paid to the contractor; conversely, when the monthly performance of the contractor is below the standard as set forth in the agreement, penalties are assessed and must be paid to OCTA by the contractor.

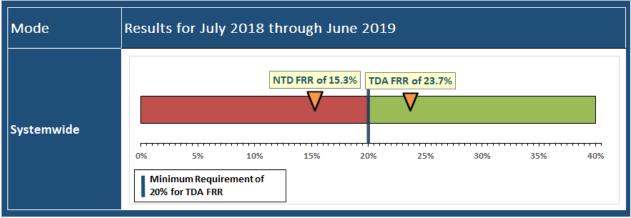
As presented in this report, the overall performance of the contractor providing OC ACCESS service through the fourth quarter of FY 2018-19 mirrors previous reporting periods. Table 2 below lists, by quarter, the penalties and incentives assessed to the OC ACCESS contractor as established in the agreement. Through the fourth quarter, there were no incentives awarded to the contractor, but \$335,174 in penalties were assessed. Since the last reporting period, \$73,349 in penalties were assessed for OTP, call center hold times, excessively late trips, unreported accident, and late preventive maintenance inspections.

Table 2:	Performance Categories	FY19 Q1	FY19 Q2	FY19 Q3	FY19 Q4	FYTD 19
	Passenger Productivity	\$ -	\$ (10,000)	\$ -	\$ -	\$ (10,000)
	On-Time Performance	\$ (10,000)	\$ (20,000)	\$ (10,000)	\$ (5,000)	\$ (45,000)
	Customer Comments	\$ -	\$ (3,800)	\$ (300)	\$ -	\$ (4,100)
	Call Center Hold Times	\$ (33,000)	\$ (33,000)	\$ (33,000)	\$ (28,000)	\$ (127,000)
	Excessively Late Trips	\$ (10,000)	\$ (30,000)	\$ (30,000)	\$ (30,000)	\$ (100,000)
	Missed Trips	\$ (5,000)	\$ (10,000)	\$ (5,000)	\$ -	\$ (20,000)
Penalties	Unreported Accident	\$ -	\$ (5,000)	\$ -	\$ (10,000)	\$ (15,000)
Penanties	Preventive Maintenance	\$ (13,725)	\$ -	\$ -	\$ (349)	\$ (14,074)
	Road calls	\$ -	\$ -	\$ -	\$ -	\$ -
	Reports	\$ -	\$ -	\$ -	\$ -	\$ -
	Key Positions	\$ -	\$ -	\$ -	\$ -	\$ -
	CHP Terminal Inspections	\$ -	\$ -	\$ -	\$ -	\$ -
	Vehicle Damage	\$ -	\$ -	\$ -	\$ -	\$ -
	Total	\$ (71,725)	\$ (111,800)	\$ (78,300)	\$ (73,349)	\$ (335,174)
	Passenger Productivity	\$ -	\$ -	\$ -	\$ -	\$ -
	On-Time Performance	\$ -	\$ -	\$ -	\$ -	\$ -
Incentives	Excessively Late Trips	\$ -	\$ -	\$ -	\$ -	\$ -
	Missed Trips	\$ -	\$ -	\$ -	\$ -	\$ -
	Total	\$ -	\$ -	\$ -	\$ -	\$ -
Prior Periods	Customer Comments	\$ 1,100	\$ -	\$ -	\$ -	\$ 1,100
Adjustment	Total	\$ 1,100	\$ -	\$ -	\$ -	\$ 1,100
All	Total	\$ (70,625)	\$ (111,800)	\$ (78,300)	\$ (73,349)	\$ (334,074)

Farebox Recovery Ratio

FRR is a measure of the proportion of operating costs recovered by passenger fares, calculated by dividing the farebox revenue by total operating expenses. A minimum FRR of 20 percent for all service is required by the Transportation Development Act in order for transit agencies to receive the state sales tax available for public transit purposes. In an effort to normalize seasonal fluctuations, data shown below reflects actuals over the last 12 months from July 2018 through June 2019 post accounting close for FY 2018-19.

FRR, based on the National Transit Database definition in which only passenger fares are included under revenue, did not meet the 20 percent goal. However, as a result of the passage of Senate Bill No. 508 (SB 508), OCTA was able to adjust the FRR to include local funds. SB 508 states, "If fare revenues are insufficient to meet the applicable ratio of fare revenues to operating cost required by this article, an operator may satisfy that requirement by supplementing its fare revenues with local funds. As used in this section, "local funds" are any non-federal or non-state grant funds or other revenue generated by, earned by, or distributed to an operator." After incorporating property tax revenue, advertising revenue, and Measure M fare stabilization, the adjusted FRR was 23.7 percent, an increase of 0.1 percent from the previous quarter and a 1.5 percent drop from the same quarter last year.



Note:

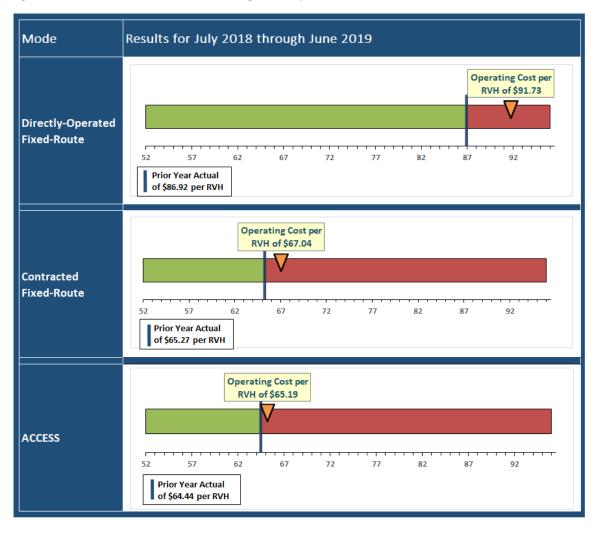
- National Transit Database (NTD) FRR consists of only passenger fares

- Transportation Development Act (TDA) FRR includes passenger fares, property tax revenue, advertising revenue and Measure M fare stabilization

Operating Cost per Revenue Vehicle Hour

Cost per RVH is one of the industry standards used to measure the cost efficiency of transit service. It is derived by dividing operating expenses by RVH. In order to provide a more comparable illustration, all metrics below are calculated based on direct operating cost, which excludes capital, general administrative, and other overhead costs.

Similar to the FRR, the statistics below depict actuals over the last 12 months post accounting close for FY 2018-19. All modes operated at a higher cost per RVH than the same 12-month period of the prior year, with 5.5 percent increase in DOFR, 2.7 percent increase in CFR, and 1.2 percent increase in OC ACCESS. The increase in DOFR was primarily due to the execution of a new labor agreement for Coach Operators with a wage increase each year. In addition, DOFR and CFR costs were both increased due to a higher than expected compressed natural gas rate since July 2018. Also contributing to the higher cost per hour was the Alternative Fuel Tax Credit that was received in March 2018, but not received in March 2019. This reduced costs by 2.1 percent in FY 2017-18. For OC ACCESS, the increase in cost per hour was within an expected range due to the increase in the contracted rates as included in the agreement with MV and an increase in gasoline prices.



Performance Evaluation by Route

Continuing efforts are underway to better understand, evaluate, and improve route performance. Performance evaluation is important because it provides:

- A better understanding of where resources are being applied;
- A measure of how well services are being delivered;
- A measure of how well these services are used; and
- An objective basis for decisions regarding future service changes and service deployment.

The tables on the following pages summarize route-level performance through the fourth quarter in FY 2018-19 post accounting close. The first three tables present the route-level performance sorted by routes with the highest net subsidy per boarding to routes with a lower net subsidy per boarding, and the remaining three tables present the same information sorted by routes that have the highest boardings to routes with a lower level of boardings.

A route guide listing all of the routes and their points of origins and destinations is provided after the route-level performance tables. Route types are grouped by route numbers as follows:

- **Routes 1 to 99**: Local Routes include two sub categories:
 - Major: These routes operate as frequent as every 15 minutes during peak times. Major routes operate seven days a week throughout the day. Together, the Major routes form a grid on arterial streets throughout the highest transit propensity portions of the OC Bus service area, primarily in northern parts of the county.
 - Local: These routes operate on arterials within the grid created by the Major routes, but at lower frequencies. Local routes also operate in parts of Orange County with lower transit demand. Most Local routes operate seven days per week, however some operate on weekdays only.
- Routes 100 to 199: Community routes to connect pockets of transit demand with major destinations and offer local circulation. Routes tend to be less direct than Local routes, serving neighborhoods and destinations off the arterial grid. Approximately half of Community routes operate seven days per week.
- Routes 200 to 299: Intra-county express routes that operates on weekdays only at peak times and connect riders over long distances to destinations within Orange County, using freeways to access destinations.
- **Routes 400 to 499:** Stationlink routes are rail feeder services designed to connect Metrolink stations to nearby employment destinations. These routes have relatively short alignments, with schedules tied to Metrolink arrivals and departures. They operate during weekday peak hours only, in the peak direction, from the station to destinations in the morning and the reverse in the evening.
- **Routes 500 to 599:** Bravo! routes are limited-stop services operated with branded vehicles.
- **Routes 600 to 699:** Seasonal routes (these are not included on the following charts) such as OC Fair Express.
 - Routes 700 to 799: Inter-county Express bus service that operates on weekdays only at peak times and connects riders over long distances to destinations outside of Orange County, often using freeways to access destinations.

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Bus Count	40 FT 32 FT 60 FT	4	4	-		3	-	
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	HSV	5,681	3,525	3,810	2,536	1,740	3,992	
	BoardVSH	2.49	4.14	277	9.23	7.49	17.7	
	CostVSM	\$ 8.54	9.76	9.29	11.47	9.34	8.26	
arding)	Direct CostVSH	\$ 91.05 \$	97.10	147.05	168.85	106.00	143.47	
y per Bo	CostVSH	14,173 \$ 144.90 \$	167.30	239.08	275.05	178.14	220.67	
for Express Service (Sorted by Subsidy per Boarding)	Boardings	14,173	14,588	21,967	23,396	13,025	31,034	
vice (Sorte	Revenue per Boarding	\$ 1.09	1.03	1.85	2.08	1.05	5.87	
ress Ser	"Capital Subsidy" Per Boarding	\$ 90.8 \$	2.83	4.55	4.27	6.58	4.30	
for Exp	Indirect Subsidy	\$ 25.06	17.32	14.90	10.43	10.00	06'6	rements.
y Route	Direct Subsidy	65.05 \$ 31.93	22.08	24.72	17.30	12.74	12.62	ment require
OCTA Operating Statistics By Route Fiscal Year 2018-19 Through Q4	Zone Farebox Subsidy per Boarding	\$ 65.05	47.23	44.17	32.00	29.32	26.82	1) Total bus count (429) is based on PM weekday equipment requir
A Opera Year 2018	Farebox	1.9%	2.5%	4.5%	7.0%	4.4%	20.7%	(429) is bas
OCT. Fiscal	Zone	C	z	N	c	C	ပ	us count
OCTA	Route	211	213	721	701	206	794	(1) Total b

(2) C under Zone is Central County, N is North County and S is South County.

By Ro	Statistics By Ro hrough Q4	Operating Statistics By Ro sar 2018-19 Through Q4	OCTA Operating Statistics By Ro Fiscal Year 2018-19 Through Q4	ute for Stationlink Service (Sorted by Subsidy per Boarding)	
	Statistics Through Q4	Operating Statistics ear 2018-19 Through Q4	OCTA Operating Fiscal Year 2018-19	By Route f	

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						"Capital											
Route	Zone	Farebox	Route Zone Farebox Subsidy per Boarding	Direct	Indirect	Subsidy"	Revenue per	Boardings	CostVSH	Direct	CostVSM	BoardVSH	VSH	40 FT 32 FT 60 FT	32 FT	60 FT	
				Subsidy	Subsidy	Per Boarding	Boarding	2		CostVSH							
463	ပ	3.8%	\$	30.07 \$ 12.69	\$ 11.18 \$	\$ 6.20	\$ 0.95	21,503	21,503 \$ 175.12 \$ 104.38 \$	\$ 104.38	\$ 16.90	7.06	3,048	4	-		
480	ပ	8.2%	12.90	5.53	4.87	2.50	0.93	26,719	176.70	105.13	15.21	15.60	1,713	2	-	-	
453	z	7.9%	11.65	4.99	4.40	2.26	0.81	29,472	180.48	105.60	27.45	17.68	1,667	2	-	-	
472	ပ	10.1%	11.51	4.46	3.93	3.12	0.94	34,759	166.39	102.37	14.10	17.82	1,951	3	-		
473	ပ	13.1%	8.41	3.59	3.17	1.65	1.02	45,493	184.43	105.84	16.23	23.71	1,918	2	-	-	
462	ပ	12.6%	7.68	3.61	3.18	0.89	0.98	37,363	162.03	101.15	22.89	20.85	1,792	1			
(1) Total t (2) C unde	bus count er Zone is	: (429) is bat Central Coi	 Total bus count (429) is based on PM weekday equipment requirements. C under Zone is Central County, N is North County and S is South County. 	nent requirer d S is South	ments. County.												

N	Zone Farebox	٥ ا	ubsidy per Boarding	Direct Subsidy	Indirect Subsidy	Subsidy" Per Boarding	Revenue per Boarding	Boardings	CostVSH	Direct CostVSH	CostVSM	BoardVSH	HSV	40 FT	32 FT	60 FT
1	Н	21.4% \$		\$ 2.30	\$ 1.46	\$ 0.23	\$	2,095,510	\$ 148.87		\$ 14.87	31.08	67,414	13	•	ŀ
	C 19.	19.0%	4.87	2.79	1.77	0.31		2,084,732	151.57	90.68	13.53	26.91	77,461	20		
	_	.6%	3.52	2.03	1.29	0.20		2,025,989	149.88	89.49	14.90	34.44	58,823	12	-	•
		19.2%	4.57	2.61	1.66	0.30	1.02	1,961,526	161.30	96.22	15.16	30.55	64,211 00.075	8		4
	2 1 <u>9</u>	19.0%	4.32	2.49	1.58	GZ-0		1,902,206	152.51	91.34	13.19	30.35	G/0'70 500 CL	16		-
		23.9%	3.16	1.83	1 16	0.20		1 539 228	151.80	91.13	15.66	38.67	39,800	~		' '
	22 22	22.7%	3.38	1.92	1,18	0.28		1.521.160	110.07	65.16	06.6	27.41	55.490	13		
		20.3%	4.08	2.34	1.49	0.25		1.403.386	156.65	93.36	16.74	32.55	43.119	10	,	
		16.1%	6.17	3.51	2.23	0.43		1.288.216	152.53	91.31	13,63	22.27	57.853	18		
	N 12.	7%	6.52	3.76	2.39	0.37		1,219,499	159.17	95.63	13.78	22.60	53,965	11		
		15.2%	5.98	3.37	2.14	0.47	66.0	1,204,423	152.05	91.08	13.69	23.41	51,446	17	•	•
		23.7%	3.70	2.08	1.32	0.30		1,105,807	137.84	82.48	13.04	30.98	35,697	5	-	2
		15.3%	5.80	3.30	2.10	0.40	0.98	1,090,725	155.32	92.95	12.62	24.37	44,752	14		
	N 20.	20.7%	3.99	2.22	1.36	0.41		1,065,887	111.83	65.73	9.16	24.78	43,020	14		
		.5%	4.69	2.66	1.69	0.34	0.99	953,471	153.76	92.09	13.90	28.81	33,100	9	4	•
		20.1%	4.56	2.55	1.57	0.44		917,393	114.04	66.20	9.38	22.12	41,479	12	-	
	N 18.	18.6%	4.64	2.56	1.57	0.51	0.94	800,787	111.91	65.48	9.79	22.04	36,334	12	-	•
		.3%	6.40	3.58	2.28	0.54		772,805	156.18	93.69	13.50	22.87	33,793	6	7	
	_	16.7%	5.59	3.23	1.98	0.38	1.05	693,541	109.12	65.01	8.72	17.43	39,781	8		
	_	.0%	4.10	2.33	1.48	0.29		663,354	137.90	82.39	13.39	28.56	23,228	9		•
	N 17.	17.8%	4.72	2.72	1.67	0.33		649,329	107.93	64.79	8.34	20.21	32,134	9		
		21.9%	4.04	2.27	1.39	0.38		639,251	108.99	64.92	9.45	23.27	27,470	2		
	C 26.	26.0%	2.74	1.65	1.05	0.04		619,337	138.07	82.49	13.11	37.95	16,321	30		
		0/C.1	11 00 11	4.00	7.30	94.0	0.04	011,333 EE0 404	104.00	93.0U	32.0	11.30	10,014	0		
		.0% %U	6 20	3.46	4. 1 4 0 10	0.62		551 857	112 53	90.37 65.66	3.73	16 03	32 502	11		
1		3%	6.01 6.01	3.43	2.12	0.02	10.1	100,100 108 Q65	146.63	87 04	11.84	22.11	22,332 22 568	- u		
	0 12 12	15.4%	6.40	3.68	2.26	0.46		438,354	108.03	64.61	9.52	15.40	28,466	9		
1		.6%	5.47	3.19	1.96	0.32		436,160	109.78	64.83	10.87	17.77	24,544	4		
		12.9%	6.58	3.84	2.44	0:30		417,674	150.06	89.80	14.18	20.81	20,070	4	-	•
	S 14.	14.2%	7.66	4.35	2.67	0.64	1.16	390,773	110.24	65.51	7.65	13.46	29,029	8	-	•
		18.6%	4.40	2.52	1.55	0.33		380,214	108.19	64.72	8.78	21.63	17,579	4		
		16.6%	5.84	3.31	2.03	0.50		366,601	109.48	65.08	9.11	17.07	21,473	5	-	
		15.7%	6.21	3.54	2.17	0.50		347,150	108.47	64.85	8.71	16.03	21,658	5	-	
	S 15.	15.5%	7.00	3.89	2.39	0.72		325,438	113.48	66.22	7.56	15.27	21,310	9		
	-	14.1%	7.37	4.19	2.52	0.66		202,283	108.06	64.55	9.05	13.85	14,607	4 0		
		13.1%	0.11	3.30 2 BF	2.30	0.40	1.12	191,703	107.00	02.00	9. IG	14.07	12,300	7 0	•	
		17 9%	5 98	3.26	1 96	0.76		174 724	112 20	65.25	11 07	17.63	9 911	7		
	+	13.1%	7.83	4.42	2.71	0.70		143.398	107.96	64.71	8.34	13.16	10.892	t m	-	
	-	14.9%	7.34	4.05	2.48	0.81		123,619	108.87	64.93	8.49	14.19	8,710	3		
1		7.3%	14.07	7.98	5.08	1.01	1.02	121,571	174.37	97.14	15.19	12.38	9,820	9	4	•
1		10.0%	10.69	6.31	3.79	0.59		112,865	107.79	64.71	8.83	9.61	11,746	2		
	C 10.	10.7%	10.11	5.84	3.51	0.76	1.12	87,439	107.89	64.61	8.68	10.31	8,481	2	-	
		9.3%	10.81	6.14	3.90	0.77		86,502	145.85	87.37	12.43	13.17	6,570	2		
	S 13.	13.0%	8.53	4.92	2.95	0.66		86,223	107.96	64.71	8.37	11.93	7,228		2	
	-	18.9%	6.34	3.17	1.95	1.22		82,003	123.46	68.41	8.72	19.57	4,191	3		
		8.6%	12.86	7.36	4.52	0.98		68,017	108.88	64.83	8.87	8.38	8,118	2	, '	•
		8.7%	11.60	6.66	4.09	0.85		61,172	115.05	66.62	1.67	9.76	6,8/9		2	•
	× ×	7.4%	14.27	021 N 7.4% 14.27 8.07	8.07 4.95	1.25	1.04	62,946	117.50	66.80	8.91	8.36	7,531		2	

OCTA Operating Statistics By Route for Local and Community Services (Sorted by Boardings)

I,			_						I I	
	nt	60 FT		-	-	-	-	-		
	Bus Count	32 FT		-	-	4	4	3		
	В	40 FT 32 FT 60 FT	4	3	3					
		HSV	3,992	2,536	3,810	3,525	5,681	1,740		
		BoardVSH	77.7	9.23	5.77	4.14	2.49	7.49		
		CostVSM	\$ 8.26	11.47	9.29	9.76	8.54	9.34		
		Direct CostVSH	143.47	168.85	147.05	97.10	91.05	106.00		
		CostVSH	\$ 220.67 \$	275.05	239.08	167.30	144.90	178.14		
		Boardings	31,034 \$	23,396	21,967	14,588	14,173	13,025		
		Revenue per Boarding	\$ 5.87	2.08	1.85	1.03	1.09	1.05		
		"Capital Subsidy" Per Boarding	\$ 4.30	4.27	4.55	7.83	8.06	6.58	ents.	County.
		Indirect Subsidy	\$ 9.90	10.43	14.90	17.32	25.06	10.00	ent requirem	S is South (
		Direct Subsidy	26.82 \$ 12.62 \$ 9.90	17.30	24.72	22.08	31.93	12.74	kday equipm	County and
		Subsidy per Boarding	\$ 26.82	32.00	44.17	47.23	65.05	29.32	1) Total bus count (429) is based on PM weekday equipment requirements.	(2) C under Zone is Central County, N is North County and S is South
		Zone Farebox	20.7% \$	%0.7	4.5%	2.5%	1.9%	4.4%	(429) is base	Central Cour
		Zone	ပ	ပ	z	z	υ	С	us count	r Zone is
	OCTA	Route	794	701	721	213	211	206	(1) Total br	(2) C undei

OCTA Operating Statistics By Route for Express Service (Sorted by Boardings) Fiscal Year 2018-19 Through Q4

OCT A Operating Statistics By Route for Stationlink Service (Sorted by Boardings) Fiscal Year 2018-19 Through Q4

OCTA														Bus	Bus Count	
Route		Zone Farebox	Subsidy per Boarding	Direct Subsidy	Indirect Subsidy	"Capital Subsidy" Per Boarding	Revenue per Boarding	Boardings	CostVSH	Direct CostVSH	CostVSM	BoardVSH	HSV	40 FT 32 FT 60 FT	2 FT (30 FT
473	ပ	13.1%	ь	8.41 \$ 3.59 \$	\$ 3.17		\$ 1.02	45,493 \$	\$ 184.43 \$	\$ 105.84 \$	\$ 16.23	23.71	1,918	2		
462	ပ	12.6%	7.68	3.61	3.18	0.89	0.98		162.03	101.15	22.89	20.85	1,792	1		
472	ပ	10.1%	11.51	4.46	3.93	3.12	0.94	34,759	166.39	102.37	14.10	17.82	1,951	3		
453	z	7.9%	11.65	4.99	4.40	2.26	0.81	29,472	180.48	105.60	27.45	17.68	1,667	2		
480	С	8.2%	12.90	5.53	4.87	2.50	0.93		176.70	105.13	15.21	15.60	1,713	2		
463	ပ	3.8%	30.07	12.69	11.18	6.20	0.95	21,503	175.12	104.38	16.90	7.06	3,048	4		
(1) Total t	ous count	(429) is bas	(1) Total bus count (429) is based on PM weekday equipment requirem	dav equipm	ent requirem	nents.										

total pus courti (4.29) is pased on Fin weekday equipment requirements.
 C under Zone is Central County, N is North County and S is South County.

Route Reference Table

Route	Route Description	Main Street	Route Category
1	Long Beach - San Clemente	via Pacific Coast Hwy	LOCAL
21	Buena Park - Sunset Beach	via Valley View St/ Bolsa Chica Rd	LOCAL
24	Buena Park - Orange	via Malvern Ave/ Chapman Ave/ Tustin Ave	LOCAL
25	Fullerton - Huntington Beach	via Knott Ave/ Goldenwest St	LOCAL
26	Fullerton - Placentia	via Commonwealth Ave/ Yorba Linda Blvd	LOCAL
29	La Habra - Huntington Beach	via Beach Blvd	LOCAL
30	Cerritos - Anaheim	via Orangethorpe Ave	LOCAL
33	Fullerton - Huntington Beach	via Magnolia St	LOCAL
35	Fullerton - Costa Mesa	via Brookhurst St	LOCAL
37	La Habra - Fountain Valley	via Euclid St	LOCAL
38	Lakewood - Anaheim Hills	via Del Amo Blvd/ La Palma Ave	LOCAL
42	Seal Beach - Orange	via Seal Beach Blvd/ Los Alamitos Blvd/ Lincoln Ave	LOCAL
43	Fullerton - Costa Mesa	via Harbor Blvd	LOCAL
46	Long Beach - Orange	via Ball Road/ Taft Ave	LOCAL
47	Fullerton - Balboa	via Anaheim Blvd/ Fairview St	LOCAL
50	Long Beach - Orange	via Katella Ave	LOCAL
53/53X	Anaheim - Irvine	via Main St	LOCAL
54	Garden Grove - Orange	via Chapman Ave	LOCAL
55	Santa Ana - Newport Beach	via Standard Ave/ Bristol St/ Fairview St/ 17th St	LOCAL
56	Garden Grove - Orange	via Garden Grove Blvd	LOCAL
57/57X	Brea - Newport Beach	via State College Blvd/ Bristol St	LOCAL
59	Anaheim - Irvine	via Kraemer Blvd/ Glassell St/ Grand Ave/ Von Karman Ave	LOCAL
60	Long Beach - Tustin	via Westminster Ave/ 17th St	LOCAL
64/64X	Huntington Beach - Tustin	via Bolsa Ave/ 1st St	LOCAL
66	Huntington Beach - Irvine	via McFadden Ave/ Walnut Ave	LOCAL
70	Sunset Beach - Tustin	via Edinger Ave	LOCAL
70	Yorba Linda - Newport Beach		LOCAL
	Sunset Beach - Tustin	via Tustin Ave/ Red Hill Ave/ Newport Blvd	
72 76		via Warner Ave	LOCAL
76 79	Huntington Beach - John Wayne Airport	via Talbert Ave/ MacArthur Blvd	LOCAL
	Tustin - Newport Beach	via Bryan Ave/ Culver Dr/ University Ave	LOCAL
82	Foothill Ranch - Rancho Santa Margarita	via Portola Pkwy/ Santa Margarita Pkwy	LOCAL
83	Anaheim - Laguna Hills	via 5 Fwy/ Main St	LOCAL
85	Mission Viejo - Laguna Niguel	via Marguerite Pkwy/ Crown Valley Pkwy	LOCAL
86	Costa Mesa - Mission Viejo	via Alton Pkwy/ Jeronimo Rd	LOCAL
87	Rancho Santa Margarita - Laguna Niguel	via Alicia Pkwy	LOCAL
89	Mission Viejo - Laguna Beach	via El Toro Rd/ Laguna Canyon Rd	LOCAL
90	Tustin - Dana Point	via Irvine Center Dr/ Moulton Pkwy/ Golden Lantern St	LOCAL
91	Laguna Hills - San Clemente	via Paseo de Valencia/ Camino Capistrano/ Del Obispo St	LOCAL
129	La Habra - Anaheim	via La Habra Blvd/ Brea Blvd/ Birch St/ Kraemer Blvd	COMMUNITY
143	La Habra - Brea	via Whittier Blvd/ Harbor Blvd/ Brea Blvd/ Birch St	COMMUNITY
150	Santa Ana - Costa Mesa	via Fairview St/ Flower St	COMMUNITY
153	Brea - Anaheim	via Placentia Ave	COMMUNITY
167	Orange - Irvine	via Irvine Ave/ Hewes St/ Jeffrey Rd	COMMUNITY
177	Foothill Ranch - Laguna Hills	via Lake Forest Dr/ Muirlands Blvd/ Los Alisos Blvd	COMMUNITY
178	Huntington Beach - Irvine	via Adams Ave/ Birch St/ Campus Dr	COMMUNITY
206	Santa Ana - Lake Forest Express	via 5 Fwy	EXPRESS BUS
211	Huntington Beach - Irvine Express	via 405 Fwy	EXPRESS BUS
213	Brea - Irvine Express	via 55 Fwy	EXPRESS BUS
453	Orange Transportation Center - St. Joseph's Hospital	via Chapman Ave/ Main St/ La Veta Ave	STATIONLINK
462	Santa Ana Regional transportation Center - Civic Center	via Santa Ana Blvd/ Civic Center Dr	STATIONLINK
463	Santa Ana Regional transportation Center - Hutton Centre	via Grand Ave	STATIONLINK
472	Tustin Metrolink Station - Irvine Business Complex	via Edinger Ave/ Red Hill Ave/ Campus Dr/ Jamboree Rd	STATIONLINK
473	Tustin Metrolink Station - U.C.I.	via Edinger Ave/ Harvard Ave	STATIONLINK
480	Irvine Metrolink Station - Lake Forest	via Alton Pkwy/ Bake Pkwy/ Lake Forest Dr	STATIONLINK
529	Fullerton - Huntington Beach	via Beach Blvd	BRAVO
543	Fullerton Transportation Center - Santa Ana	via Harbor Blvd	BRAVO
560	Santa Ana - Long Beach	via 17th St/ Wesminster Blvd	BRAVO
701	Huntington Beach - Los Angeles Express	via 405 Fwy/ 605 Fwy/ 105 Fwy/ 110 Fwy	EXPRESS BUS
721	Fullerton - Los Angeles Express	via 110 Fwy/ 91 Fwy	EXPRESS BUS
794	Riverside / Corona - South Coast Metro Express	via 91 Fwy/ 55 Fwy	EXPRESS BUS

OC Bus 360° Plan: Performance to Date

To address declining bus ridership, the OCTA Board of Directors (Board) endorsed a comprehensive action plan known as OC Bus 360° plan in 2015. This effort included a comprehensive review of current and former rider perceptions, a peer review panel that reviewed OCTA's performance and plans, new branding and marketing tactics tied to rider needs, upgraded bus routes and services to better match demand and capacity, technology solutions to improve passenger experience, and pricing, as well as other revenue changes to stimulate ridership and provide new funding.

Extensive work was invested by OCTA divisions to implement the OC Bus 360° plan. These efforts included:

- Implementation of new and faster bus routes;
- Redeployment of services in June 2016, October 2016, October 2017, and February 2018, to improve efficiencies and build ridership;
- Competitively-awarded grants to local agencies through Project V for transit services tailored to community needs;
- Implementation of a promotional fare and college pass program;
- Rollout of new technologies, such as mobile ticketing, real-time bus arrival information, a microtransit service; and
- Extensive marketing, public outreach, and promotional campaigns.

Impact of the Service Changes

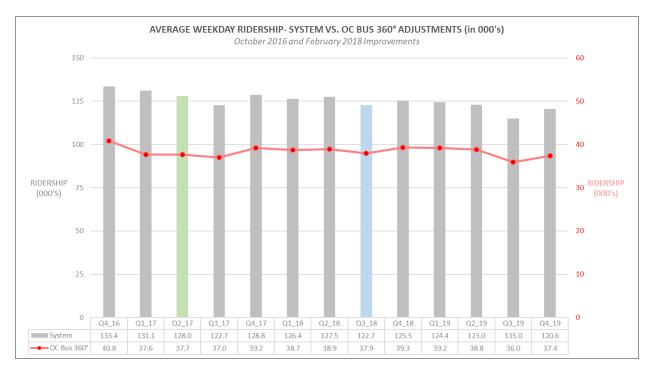
Of the series of approved bus service changes under the OC Bus 360° plan, the changes implemented in October 2016 and February 2018 were the most significant and tracked for overall OC Bus 360° plan impact. Provided below is a series of charts that show overall system performance over the last 13 quarters and the impact of these route adjustments (*October 2016 marked by green bar; February 2018 marked by blue bar*). In this review, performance is measured by change in average weekday boardings for routes that were improved and average B/RVH for routes that were reduced. This analysis is necessary and on-going to gauge the effectiveness of the recommended changes and the overall OC Bus 360° plan. The trend of overall system ridership and productivity is provided on the following chart.



Through the fourth quarter of FY 2018-19, ridership and productivity increased compared to last quarter.

- Ridership was 7.1 percent higher than the previous quarter, but 3.8 percent lower than the same quarter last year.
- Productivity through the fourth quarter increased by 5.0 percent from last quarter but decreased by 5.4 percent from the same quarter last year.

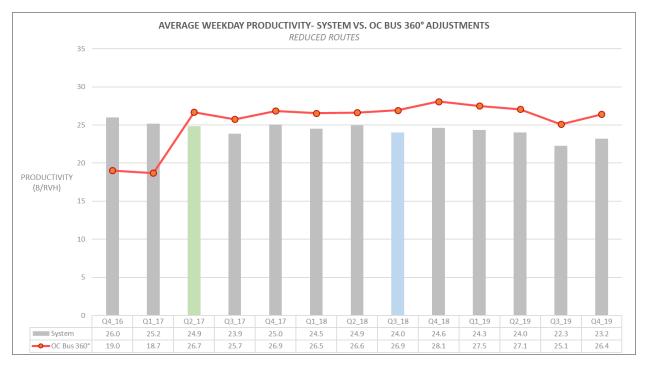
The impacts of the adjustments implemented under the OC Bus 360° plan are consistent with the systemwide trend. The following chart compares the system trend against the group of routes improved under the OC Bus 360° plan. Overall, the average weekday ridership systemwide and for the improved routes increased above last quarter by 4.9 percent and 4.0 percent, respectively.



Comparing the results of the fourth quarter of FY 2018-19 with the fourth quarter of FY 2017-18, systemwide average weekday ridership decreased 3.9 percent, while the average weekday ridership on the improved routes fell by five percent.

Improved system and route productivity are the goals for services that are *reduced* or *eliminated* under the OC Bus 360° plan – making low performing routes more productive.

The following chart compares the system productivity trend against the productivity of the group of routes that were reduced/eliminated in October 2016 and February 2018.



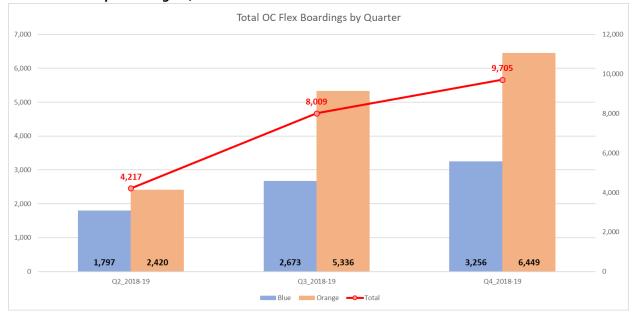
During the fourth quarter of FY 2018-19, productivity for the collective reductions remain above the system average, by 13.8 percent, but is trending similarly, increasing by 5.3 percent compared to last quarter. The productivity for these routes fell by 5.9 percent compared to the same quarter last year.

Other OC Bus 360° Initiatives

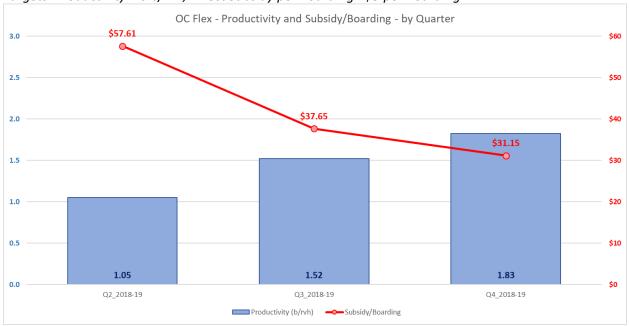
OC Flex Pilot Program

OC Flex began service in October 2018 in two zones under a one-year pilot program. The OCTA Board approved five primary goals and performance metrics to evaluate the pilot program. Upon approval of the pilot program, the Board directed staff to provide updates of the performance metrics as part of quarterly Bus Operations Performance Measurements Report.

Through the fourth quarter of FY2018-19, ridership was steady entering the summer season. Three of the five performance metrics, shared trips, connecting trips and customer satisfaction have reached the respective targets. The remaining two measures, productivity and subsidy per boarding, are trending below their respective targets but continue to trend favorably (see charts below). The OC Flex team continues to monitor and adjust the service as needed to meet the established performance targets while maintaining service quality. Though the pilot evaluation period is scheduled to end in October 2019, OC Flex service will continue to operate while staff analyzes performance data and prepares the final report and recommendations to be presented to the Board for consideration in February 2020.



OC Flex Ridership – Through Q4-FY2018-19

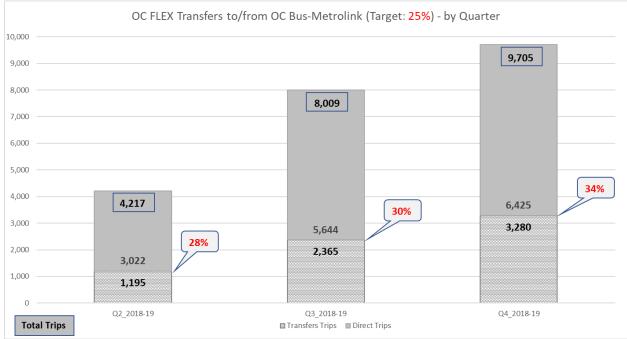


OC Flex Productivity (B/RVH) and Direct Subsidy per Boarding – Through Q4-FY2018-19 Targets: Productivity – 6 b/rvh; Direct Subsidy per Boarding - \$9 per Boarding

OC Flex Shared Trips – Through Q4-FY2018-19

Target: 25% of Booked Trips Sharing a Vehicle





OC Flex Connecting Trips (Transfers) – Through Q4-FY2018-19 Target: 25% of Trips Transfer to OC Bus or Metrolink Service

College Pass Program

The College Pass Program started in August 2017, with students from Santa Ana College and continuing education students from Santa Ana College and Santiago Canyon College. In August 2018, the program expanded to include all students from Santiago Canyon College. The college pass program has been very successful and popular among students and colleges. OCTA continues to work with other colleges to expand the College Pass program using available Low Carbon Transit Operations Program and Mobile Source Air Pollution Reduction grant funds, along with college-provided funding or student fees.

As of June 30, 2019, nearly two years since starting, the College Pass Program has reported 2.2 million boardings with 11,470 unique participating students among participating colleges since August 2017. Compared to the same period in 2018, ridership in the second quarter increased by 3 percent, from 289,233 boardings to 297,801 boardings.

Staff has been working closely with Golden West and Fullerton colleges, which are joining the program in Fall 2019, on technical and logistical preparations to ensure the success of the launch. Marketing and outreach efforts, including posters, brochures, digital information, and a fully wrapped bus, have started to build awareness and ridership. Discussions continue with other interested colleges, including Saddleback and Irvine Valley colleges, among others, for future College Pass programs.