Bus Operations
Performance
Measurements
Report





First Quarter
Fiscal Year 2018-19

About This Report

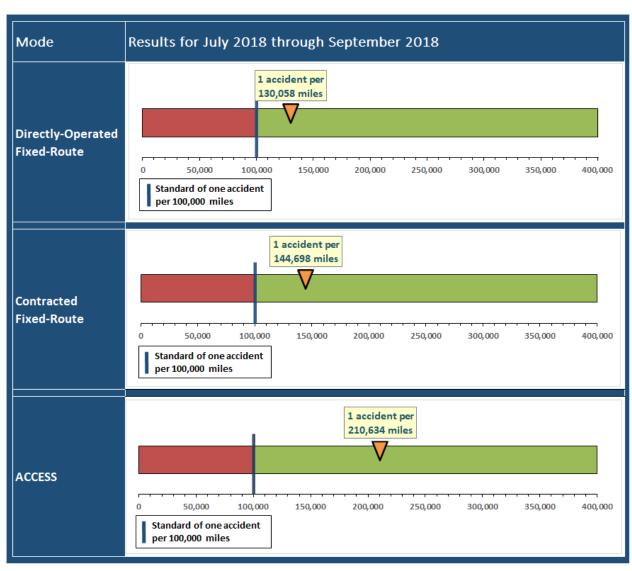
OC Bus service, operated by the Orange County Transportation Authority (OCTA), is a countywide network of local, community, rail connector, and express bus routes serving over 5,000 bus stops. OCTA also operates federally-mandated paratransit service (OC ACCESS), a shared-ride program available for people unable to use the regular OC Bus service because of functional limitations. OC Bus service operated by OCTA is referred to as directly-operated fixed-route (DOFR) service, while OC Bus service operated under contract is referred to as contracted fixed-route (CFR) service. The OC ACCESS program is a contract-operated demand-response service mandated 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. OC Bus (DOFR and CFR) and OC ACCESS services make up the bus transit system and are evaluated by the performance measurements summarized in this report on a quarterly basis. This report covers the first quarter of fiscal year (FY) 2018-19 including July, August, and September 2018.

Performance is measured in three categories: Safety, Customer Satisfaction (Courtesy), and Reliability. 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

Safety is the top priority in the delivery of public transit services. The safety standard for DOFR, CFR, and ACCESS services is no more than one vehicle accident per 100,000 miles. Preventable vehicle accidents are 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.

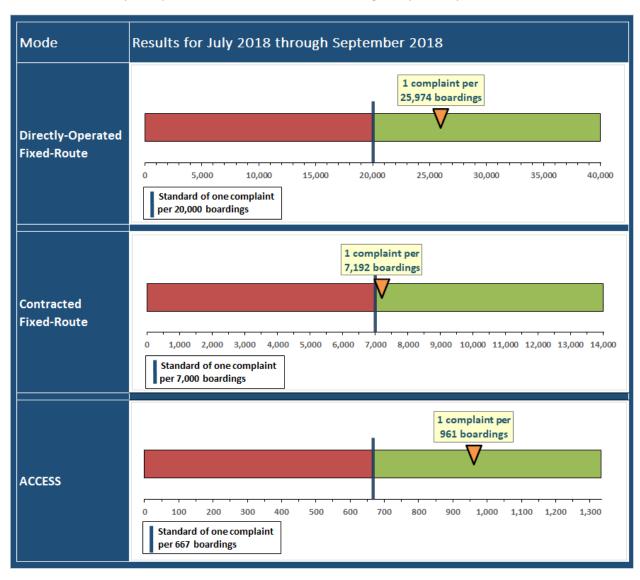
All modes of service exceeded the safety standard through the first quarter of FY 2018-19 with less than one accident per 100,000 boardings.



Courtesy: Customer Complaints

Customer complaints are counts of incidents when a rider reports dissatisfaction with the service. The standard adopted by OCTA for OC Bus service operated by OCTA is no more than one customer complaint per 20,000 boardings; the standard for contracted OC Bus service is no more than one valid complaint per 7,000 boardings; and the contractual standard for OC ACCESS is no more than one valid complaint per 667 boardings.

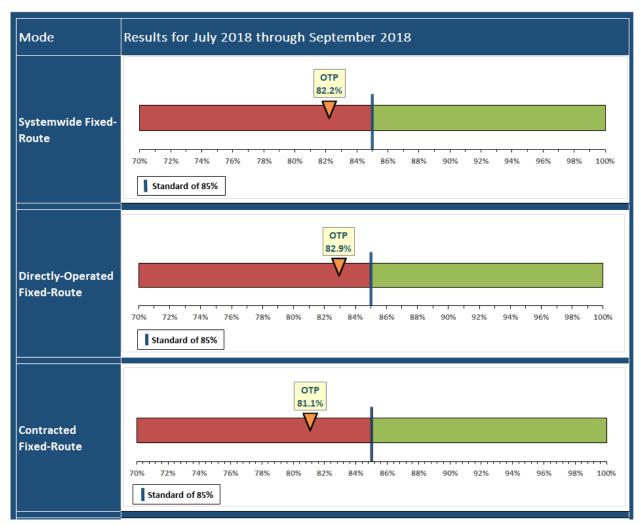
Through the first quarter of FY 2018-19, all modes of service exceeded the courtesy standard with less than one valid complaint per 20,000, 7,000, and 667 boardings, respectively.



Reliability: On-Time Performance

OTP is a measure of performance evaluating the schedule adherence of an OC 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 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 as long as the vehicle arrives within a 30-minute window. The OC ACCESS OTP standard is 94 percent.

Through the first quarter of FY 2018-19, systemwide fixed-route OTP was 82.2 percent, 2.8 percent below the standard. This marks a 2.4 percent drop from the previous quarter and a 2.3 percent drop from the same quarter last year. Compared to last quarter, OTP for the DOFR fell by 2.4 percent from 85.3 percent to 82.9 percent, lower than the same quarter last year which was 84.7 percent. The OTP for CFR service also fell by 2.4 percent and 3.0 percent compared to last quarter and the same quarter last year, respectively.

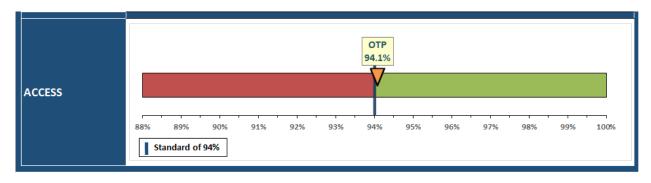


The significant reduction in OTP can be attributed to a number of elements including the seasonal traffic patterns along Pacific Coast Highway, major construction projects affecting local streets and roads (e.g., Interstate 405 (I-405) Project - Bridge Demolition), and other temporary events such as marathons, festivals, and local construction. These events cause delays as existing routing is often affected and detours typically add travel time to the route. During the first quarter of FY 2018-19, the projects listed below had direct impacts on OC Bus Service. This list does not include temporary, daily disruptions that occurred during the quarter.

- Orange Transportation Center parking structure project
- I-405 Bridge demolition at McFadden Avenue, lane reduction at Magnolia Street
- Bus pad installation eastbound/westbound Westminster Boulevard between Harbor Boulevard and Fairview Street
- Bristol Street widening project at 17th Street
- Katella Avenue water main replacement between Disneyland Drive and Haster Street/ Anaheim Boulevard
 - With competing construction work along Katella Avenue for new hotel builds
- Fiber-optic work along Haster Street between Katella Avenue and Orangewood Avenue reducing traffic lanes
- Multiple line detours on the July 4th holiday
- Fiesta de Padrias event in downtown Santa Ana

OCTA staff will continue to coordinate with the various project teams to advise of the timeline for service changes and other service impacts during construction to minimize the effects on OTP. In addition, the Scheduling department has been evaluating running time throughout the system to address chronic chokepoints, and operating staff have been evaluating driver performance as it is related to attaining the 85 percent OTP standard. This comprehensive approach has provided staff with more information on routes that require additional running time to be added with the June service change.

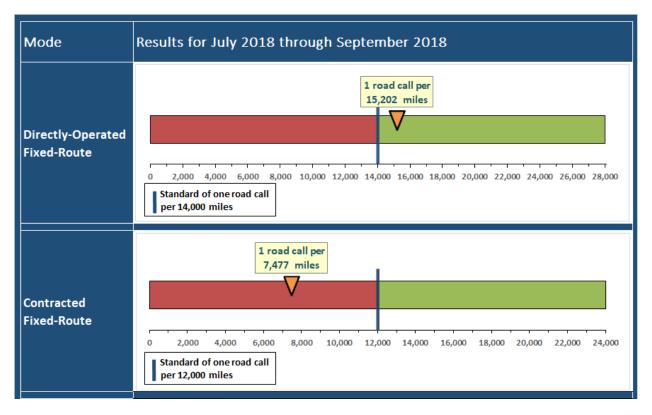
The OTP for OC ACCESS service remained above the standard at 94.1 percent, though it dropped by three-tenths from last quarter and 0.9 percent from the 95 percent reported during the same period last year.



Reliability: Miles Between Road Calls

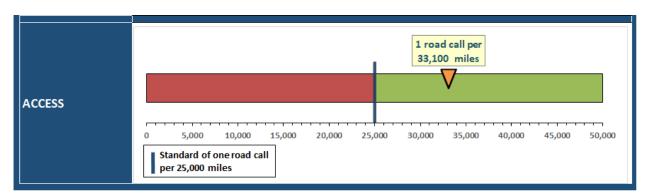
MBRC is a vehicle reliability performance indicator that measures the average distance in miles that a transit vehicle travels before failure of a vital component forces removal of the vehicle from service. Valid mechanical road calls usually cause a delay in service. The standard adopted by OCTA for OC Bus service operated by OCTA is 14,000 MBRC; the standard for OC Bus service operated by the contractor is 12,000 MBRC; and the contractual standard for OC ACCESS is 25,000 MBRC.

Through the first quarter of FY 2018-19, OC Bus services continue to improve in this performance measure. OCTA-operated OC Bus service performed above standard, averaging 15,202 MBRC, a 7.5 percent increase over last quarter and 11.8 percent increase over the first quarter of last year. Some of the increase in MBRC can be credited to a midlife engine replacement campaign underway during the first quarter in addition to seasonal variations, and continued work with the vehicle manufacturer to address warranty-related failures.



CFR did not meet the MBRC standard. Through the first quarter of FY 2018-19, the contractor operated below standard at 7,477 MBRC, a 14 percent fall from the previous quarter and a 7.5 percent fall from the same quarter last year. In an effort to improve MBRC, the contractor has provided additional maintenance training and implemented a rigorous quality control process to improve vehicle repair procedures. In addition, recent staff changes have been made and corporate staff has maintained a consistent presence in the shop. The completion of the 98 near-zero engine repowers in the second quarter of FY 2018-19 included fifty-nine percent of the vehicles operated by contracted services. Benefits from this type of project are expected to improve vehicle reliability, reduce road calls, and reduce service interruptions in the third quarter of FY 2018-19.

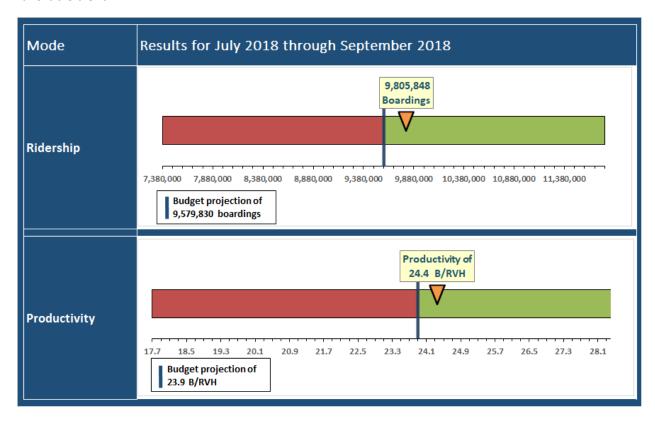
OC ACCESS exceeded the service standard with 33,100 MBRC.



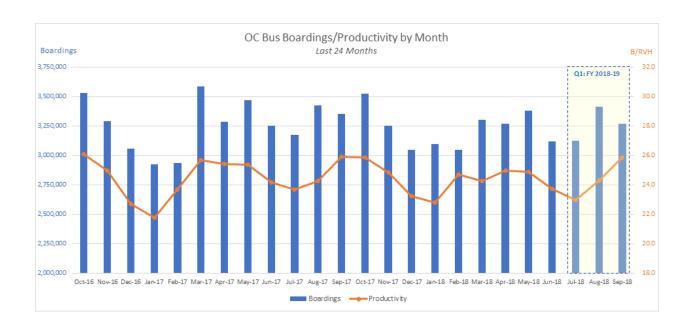
Ridership and Productivity - OC Bus

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. A RVH is any sixty-minute increment of time that a vehicle is available for passengers within the scheduled hours of service, excluding deadhead. Boardings per RVH (B/RVH) is calculated by taking the boardings and dividing it by the number of RVH operated.

Through the first quarter of FY 2018-19, ridership and productivity for OC Bus service exceeded the budgeted projections by 2.4 percent and 2.1 percent, respectively. Actions taken as part of the OC Bus 360° Plan, including proactive service marketing and service improvements, are drivers of this favorable trend.



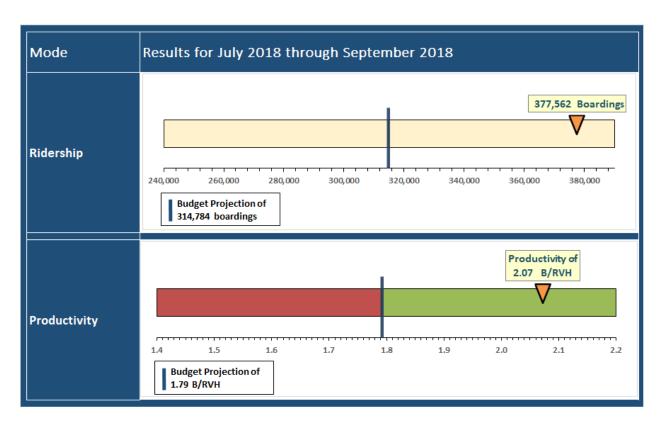
Over the last two years, the ridership and productivity indicate steady positive trends, as shown in the chart below. Ridership tends to peak during the spring and fall when school is in session, and dip during the winter and summer when students are on vacation. Productivity also tends to rise and fall during the same periods. Through the first quarter of FY 2018-19, ridership in August proved to be the high month, consistent with last year, while productivity increased month-over-month through the summer and into the beginning of the 2018-19 school year.



Ridership and Productivity – ACCESS

(Primary Service Provider and Supplemental Taxi)

Through the first quarter of FY 2018-19, the ridership and productivity trends for OC ACCESS continue to indicate increasing demand for this service. ACCESS ridership for the quarter exceeded budgeted projections by over 62,000 boardings, a 19.9 percent increase. Similarly, productivity for ACCESS increased by 0.28 boardings per RVH, a 15.6 percent increase over the budgeted projection at this point of the fiscal year. Though the productivity is good, indicating service efficiency, OCTA staff will continue to look for ways to utilize more cost-effective services such as Same Day Taxi to reduce overall program costs.



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 OC Bus service provided by the contractor meets the standards for safety, customer service, and reliability. When the contractor's monthly or quarterly performance exceeds the standard as set forth in the agreement, financial incentives are paid to the contractor. When the monthly or quarterly 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.

Through the first quarter of FY 2018-19, the overall performance of contracted OC Bus service as determined by the performance categories outlined in the contract, was above standard for the measures of safety and courtesy. With respect to reliability, the performance was below standard.

Table 1 provides the penalties and incentives assessed to the contractor, by quarter, for FY 2018-19. The incentives paid to date, a total of \$3,200, reflect the outstanding performance related to courtesy. For the first quarter, the total penalties assessed to the contractor totaled \$262,041, largely due to poor performance in preventive maintenance (\$137,841), which likely contributed to the high number of missed trips (\$80,000) and road calls.

Table 1:	Performance Categories	FY19 Q1	FY19 Q2	FY19 Q3	FY19 Q4	FYTD 19
	On-Time Performance	\$ (7,000)				\$ (7,000)
	Valid Complaints: Per 7,000 boardings	\$ (2,900)				\$ (2,900)
	Unreported Accident	\$ (20,000)				\$ (20,000)
	Accident Frequency Ratio	\$ -				\$ -
	Key Positions	\$ -				\$ -
Penalties	CHP Terminal Inspections	\$ -				\$ -
remaities	Reports	\$ -				\$ -
	Preventive Maintenance	\$ (137,841)				\$ (137,841)
	Road Calls	\$ (14,300)				\$ (14,300)
	Vehicle Damage: Per vehicle per day	\$ -				\$ -
	Missed Trips	\$ (80,000)				\$ (80,000)
	Total	\$ (262,041)				\$ (262,041)
	On-Time Performance	\$ -				\$ -
Incentives	Valid Complaints: Per 7,000 boardings	\$ 3,200				\$ 3,200
incentives	Accident Frequency Ratio	\$ -				\$ -
	Total	\$ 3,200				\$ 3,200
Prior Periods	Road Calls	\$ (100)				\$ (100)
Adjustment	Total	\$ (100)				\$ (100)
All	Total	\$ (258,941)				\$ (258,941)

Contractor Performance: OC ACCESS

(Primary Service Provider and Supplemental Taxi)

Per Agreement No. C-2-1865 between OCTA and MV Transportation, Inc. (MV), additional measures are tracked to ensure the OC Bus service provided by the contractor meets the standards for safety, customer service, and reliability. When the contractor's monthly or quarterly performance exceeds the standard as set forth in the agreement, financial incentives are paid to the contractor. When the monthly or quarterly 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 first quarter of FY 2018-19 is above standard for all measures. Table 2 below lists, by quarter, the penalties and incentives assessed to the OC ACCESS contractor as established in the agreement. Over the quarter, there were no incentives awarded to the contractor, however, \$71,725 of penalties were assessed for call center hold times, issues with preventive maintenance, excessively late trips, and OTP.

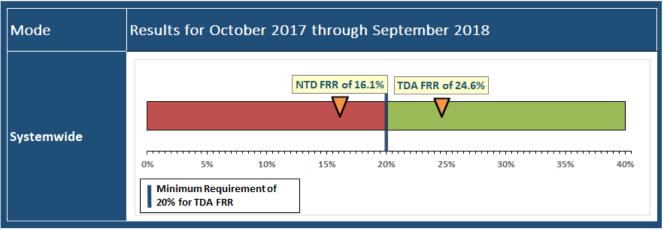
Table 1:	Performance Categories	FY19 Q1	FY19 Q2	FY19 Q3	FY19 Q4	FYTD 19
	Passenger Productivity	\$ -				\$ -
	On-Time Performance	\$ (10,000)				\$ (10,000)
	Customer Comments	\$ -				\$ -
	Call Center Hold Times	\$ (33,000)				\$ (33,000)
	Excessively Late Trips	\$ (10,000)				\$ (10,000)
	Missed Trips	\$ (5,000)				\$ (5,000)
Penalties	Unreported Accident	\$ -				\$ -
Penaities	Preventive Maintenance	\$ (13,725)				\$ (13,725)
	Road calls	\$ -				\$ -
	Reports	\$ -				\$ -
	Key Positions	\$ -				\$ -
	CHP Terminal Inspections	\$ -				
	Vehicle Damage	\$ -				
	Total	\$ (71,725)				\$ (71,725)
	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)				\$ (70,625)

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 their full share of the state sales tax available for public transit purposes.

In an effort to minimize seasonal fluctuations, data shown below reflects actuals over the last 12 months from October 2017 through September 2018.

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 24.6 percent, a drop of 0.6 percent from the previous quarter and a 0.8 percent drop from the same quarter last year.



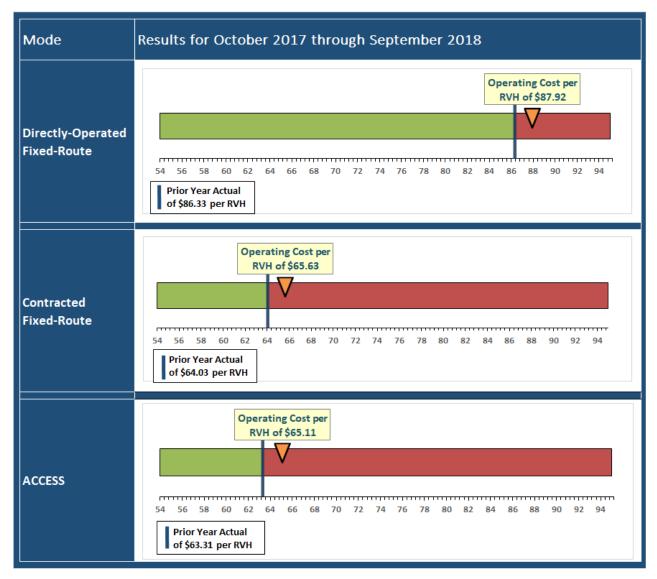
Note:

- 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. All modes operated at a higher cost per RVH than the same 12-month period of the prior year with 1.84 percent increase in DOFR, 2.50 percent increase in CFR, and 2.84 percent increase in OC ACCESS. The increase in DOFR was primarily due to the execution of the new coach operator labor contract. A signing bonus was expensed in May 2018, along with a salary increase. The increases in CFR and OC ACCESS cost per RVH were primarily associated with the increase in the contracted rates as included in the First Transit and MV agreements for each new FY. Another factor that contributed to the increase in OC ACCESS cost is the increase in gasoline prices.



Performance Evaluation by Route

Continuing efforts are underway to better understand and address ridership trends. The OC Bus 360° Plan, approved by the OCTA Board of Directors (Board) in March 2016, included several strategies to stimulate fixed-route ridership. These strategies include targeted marketing, a discounted summer youth pass, development of a mobile ticketing application, re-branding the fixed-route fleet, and improved travel time through the use of express-type service on local routes. Major route adjustments were implemented in both October 2016 and February 2018. All adjustments were developed based on route-level performance. Staff continue to track the impact of these adjustments on ridership and productivity while considering other strategies to further improve service 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 first quarter in FY 2018-19. 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 origin and destination is provided on the last page of this report. Route types are grouped by route numbers as follows:

- Routes 1 to 99: Local routes
- Routes 100 to 199: Community routes
- Routes 200 to 299: Intra-county express routes
- Routes 400 to 499: Stationlink routes
- Routes 500 to 599: Bravo! routes
- Routes 600 to 699: Seasonal routes (these are not included on the following charts)
- Routes 700 to 799: Inter-county express routes

OCTA Operating Statistics By Route for Local and Community Services (Sorted by Subsidy per Boarding) Fiscal Year 2018-19 Through Q1

	60 FT															6						Ι.							,	-					13							7				
Bus Count	32 FT 6		-	2				2			-		١.		-							١.			-																					
Bus	40 FT 3	2	2	-	10	7 0	2 2		4	3	9 9	n 4	^	9	8	4	4	13	က	7 5	10	17	2	9	15	5	7	12	ω 7	<u>†</u> _	10	20	12	12		<u>t</u> ແ	2	7	16	12	10		12	13	n ۲	-
	VSH 4	1,815	2,012	1,706	10,977	0,030	2,347	1,791	3,650	1,042	8,591	2,176	7,265	7,116	5,323	13,342	3,201	8,375	5,025	3,056	8,173	12.987	6,059	5,634	14,481	5,427	5,364	11,252	9,949	8,034	8,305	19,409	9,025	10,385	16,104	4370	5,750	6,848	16,954	11,141	10,925	8,740	13,913	14,486	4,106	3,220
	BoardVSH	9.32	8.90	9.97	14.00	10.30	11.52	11.86	12.77	16.86	19.23	14.18	13.96	13.95	15.57	23.46	15.71	22.71	21.58	15.57	17.10	23.28	17.22	22.75	23.14	17.51	18.25	24.64	18.04	20.75	29.25	28.38	23.39	23.43	32.29	23.10	28.51	23.94	32.42	25.41	34.34	31.64	27.74	36.73	30.98	40.04
	CostVSM	\$ 7.95	8.17	7.02	9.13	8 11	20.8	7.71	8.40	7.92	7.79	7.72	7.02	8.79	6.92	12.94	8.35	12.33	13.16	8.70	9.20	12.57	9.88	10.82	12.37	8.04	8.36	11.34	8.00	7.70	12.45	12.31	8.94	8.43	13.49	8 09	12.24	8.67	13.53	8.28	15.15	11.80	9.09	13.21	12.16	<u>‡</u>
	Direct CostVSH	\$ 65.75	64.22	65.32	95.25	64.07	64.13	64.10	64.03	66.53	90.74	64.07	64.51	64.09	65.02	97.00	64.46	91.13	88.65	64.09	64.74	88.20	64.35	85.54	88.52	64.17	64.32	88.45	64.24	64.14	89.38	88.10	64.69	65.00	92.42	64 21	80.32	64.25	86.55	64.49	89.95	80.44	64.38	87.21	80.34	00.10
	CostVSH	\$ 107.86	100.39	105.40	147.96	133.17	99.94	09.66	99.52	111.92	141.13	99.55	101.17	99.73	103.87	151.73	101.49	142.81	139.08	99.65	103.18	138.29	101.44	134.00	138.79	99.93	100.73	138.64	100.15	99.60	140.04	138.16	102.96	104.09	144.81	100 22	126.31	100.41	135.94	101.55	141.28	126.43	101.15	136.86	120.33	10.101
	Boardings	16,927	17,911	17,016	153,627	30 649	24,243	21,245	46,616	17,561	165,189	30,848	101,408	99,291	82,859	313,023	50,296	190,153	108,463	47,586	139,771	302,361	104,357	128,144	335,056	95,021	97,911	277,237	179,474	166,668	242,954	550,922	211,127	243,319	519,977	100 963	163,926	163,983	549,594	283,105	375,155	276,562	385,948	532,011	151,813	400,000
	Revenue per Boarding	\$ 0.97	1.03	0.93	0.87	0.90	0.96	1.07	0.98	1.05	0.87	0.99	1.09	0.93	1.05	0.81	1.04	0.83	0.81	0.98	0.95	0.86	0.90	0.91	1.00	0.98	0.96	0.86	0.95	0.86	0.86	0.94	0.83	0.90	0.90	0.02	0.90	0.92	06.0	0.85	0.87	0.91	0.82	0.91	0.83	70.0
	"Capital Subsidy" Per Boarding	8	0.93	0.84	0.54	0.73	69.0	0.67	0.72	1.42	0.50	0.81	0.58	0.50	0.80	0.48	99.0	0.57	0.23	0.35	0.60	0.47	0.40	0.39	0.37	0.44	09:0	0.36	0.37	0.35	0.34	0:30	0.47	0.41	0.32	0.25	0.25	0.36	0.24	0.35	0.22	0.33	0.26	0.20	0.16	
	Indirect Subsidy	\$ 4.03	3.90	3.67	3.77	3.22	2.89	2.75	2.55	2.13	2.51	2.30	2.34	2.36	2.14	2.20	2.03	2.12	2.19	2.03	1.94	1.97	1.90	1.94	1.94	1.80	1.74	1.85	1.75	1.50	1.53	1.52	1.36	1.35	1.39	1.38	1.37	1.25	1.28	1.20	1.26	1.20	1.08	1.10	1.0.1	U.39 1
	Direct Subsidy	\$ 6.57	6.35		5.93		4.82	4.58	4.25	3.46	3.95	3.74	3.81	3.85	3.49	3.46	3.39	3.34	3.44	3.39	3.15	3.10	3.09	3.05	3.06	2.93	2.83	2.92	2.85	2.44	2.40	2.40	2.21	2.19	2.19	2.13	2.16	2.03	2.01	1.95	1.99	1.89	1.75	1.72	2.78	UC.1
	Subsidy per Boarding	\$ 11.58	11.18	10.48	10.24	9.33	8.40	8.00	7.52	7.01	6.96	6.85	6.73	6.71	6.43	6.14	80.9	6.03	5.86	5.77	5.69	5.54	5.39	5.38	5.37	5.17	5.17	5.13	4.97	4.39	4.27	4.22	4.04	3.95	3.90	3.78	3.78	3.64	3.53	3.50	3.47	3.42	3.09	3.02	2.75	1.50 0.99 0.99 0.99 0.44 0.50 0.99 0.99 0.99 0.99 0.99 0.99 0.99
	Farebox	8.4%	9.1%	8.8%	8.2%	9.5%	11.1%	12.8%	12.6%	15.8%	11.9%	14.0%	15.1%	13.0%	15.7%	12.5%	16.0%	13.2%	12.5%	15.3%	15.7%	14.5%	15.2%	15.4%	16.7%	17.2%	17.3%	15.2%	17.1%	18.0%	17.9%	19.4%	18.8%	20.3%	20.0%	18.7%	20.3%	21.9%	21.5%	21.3%	21.0%	22.8%	22.4%	24.3%	24.270	24.470 L
	Zone	z	S	S	S	z	z	S	С	S	0	z	S	ပ	S	z	z	O	z	z	၁၂	z	z	ပ	С	S	z	z	z	z	z	С	z	S	ပ	z	ı O	z	Z	z	С	0	z	ပ	ی ر	<u>و</u> و
OCTA	Route	021	085	087	001	153	178	177	167	082	083	024	091	620	060	020	129	260	056	143	059	054	026	072	055	680	025	037	071	030	543	047	035	020	057	033	053X	046	043	038	053	057X	042	990	064 V	13 Total 5

 ⁽¹⁾ Total bus count (426) is based on PM weekday equipment requirements.
 (2) Bus count for routes 53X, 57X and 64X are estimated based on total route 53, 57 and 64 equipment requirements.
 (3) C under Zone is Central County, N is North County and S is South County.

OCTA Operating Statistics By Route for Express Service (Sorted by Subsidy per Boarding) Fiscal Year 2018-19 Through Q1

60 FT **Bus Count** 32 FT 40 FT 409 879 945 629 432 066 VSH 3.11 3.99 6.09 9.76 7.63 8.20 BoardVSH 6.30 7.20 8.46 10.31 6.99 6.11 CostVSM 63.84 68.38 141.44 161.49 73.57 99.24 Direct CostVSH 108.12 126.44 217.63 248.71 133.32 163.21 CostVSH 4,384 3,511 5,751 6,138 3,292 Boardings Revenue per Boarding 0.99 0.88 1.93 2.45 0.96 6.52 8.14 4.35 4.07 6.51 "Capital Subsidy" Per 14.84 13.53 12.72 8.66 7.26 6.17 Indirect Subsidy 18.92 17.24 21.11 14.37 78.7 Direct Subsidy 40.28 38.91 38.18 27.10 23.02 18.15 Subsidy per Boarding Farebox 2.9% 2.8% 5.4% 9.6% 5.5% 29.5% Zone OZZ ပ Route OCTA 211 213 721 701 206 794

(1) Total bus count (426) is based on PM weekday equipment requirements. (2) C under Zone is Central County, N is North County and S is South County.

OCTA Operating Statistics By Route for Stationlink Service (Sorted by Subsidy per Boarding)

Fiscal Year 2018-19 Through Q1

	H (,	,			
Bus Count	40 FT 32 FT 60 FT						
Bus	H 32	4	2	က	2	3	1
	VSH 40	753	425	503	406	464	466
	BoardVSH	7.43	15.35	17.37	17.85	21.04	20.40
	CostVSM	\$ 12.75	11.41	12.61	20.54	10.43	18.01
	Direct CostVSH	\$ 73.29	73.33	73.56	74.14	72.51	70.93
	CostVSH	\$ 132.73	132.40	135.47	137.33	128.26	121.50
	Boardings	5,597	6,529	8,734	7,252	9,765	9,510
	Revenue per Boarding	\$ 0.96	0.94	0.95	0.82	0.85	0.98
	"Capital Subsidy" Per Boarding	\$ 5.96	2.55	2.86	2.30	2.56	0.88
	Indirect Subsidy	\$ 7.91	3.60	3.21	3.22	2.46	2.33
	Direct Subsidy	8.98	4.09	3.64	3.65	2.79	2.65
	Zone Farebox Subsidy per Boarding	22.85	10.24	9.71	9.17	7.81	2.86
	Farebox (5.4%	10.9%	12.2%	10.7%	14.0%	16.4%
	Zone	O	O	ပ	z	ပ	၁
OCTA	Route	463	480	473	453	472	462

Total bus count (426) is based on PM weekday equipment requirements.
 C under Zone is Central County, N is North County and S is South County.

OCTA Operating Statistics By Route for Local and Community Services (Sorted by Boardings) Fiscal Year 2018-19 Through Q1

F 09 Bus Count 32 FT 40 FT 16 4 4 12 5 1 7 14,486 18,767 16,104 15,834 9,993 13,913 10,925 2,458 14,481 8,740 5,364 5,427 5,323 13,342 12.987 11.141 946 3,056 3,650 VSH 23.14 23.46 23.28 25.41 24.64 31.64 23.43 29.25 23.39 22.71 18.04 19.23 23.94 14.00 14.00 17.10 22.75 21.58 17.22 17.22 13.96 18.25 17.51 15.71 15.57 12.77 16.86 **BoardVSH** 11.96 13.49 11.95 14.11 9.09 15.15 12.37 12.94 11.257 11.34 11.80 8.43 12.45 8.94 8.94 12.33 8.00 7.70 8.67 9.13 9.13 12.16 9.20 10.82 13.16 9.88 9.88 9.88 7.02 8.09 8.09 8.36 8.36 8.36 8.36 8.35 8.35 7.92 CostVSM 92.42 88.12 87.68 64.38 89.95 88.52 64.49 88.45 64.25 80.32 95.25 80.34 64.74 88.65 64.35 64.35 64.32 64.32 64.32 64.17 65.02 64.46 97.00 88.20 80.44 65.00 64.69 Direct CostVSH 141.28 138.79 138.29 101.55 138.64 126.43 104.09 102.96 102.96 142.81 100.41 126.31 126.33 103.18 103.08 100.22 99.73 99.93 100.73 99.62 99.52 103.06 99.92 99.55 151.73 107.86 99.94 99.60 CostVSH 133, 532,011 520,354 519,977 496,711 408,089 385,948 375,155 283,105 163,926 151,813 139,771 128,144 101,408 101,408 101,408 97,911 97,911 98,021 82,859 50,296 46,616 43,905 38,078 30,848 30,649 24,243 22,783 276,562 243,319 242,954 211,127 190,153 179,474 47,586 313,023 17,016 17,561 302,361 16.927 Boardings Revenue per Boarding 0.094 0.096 0. 1.03 1.05 1.42 0.98 "Capital Subsidy" Per Boarding 1.52 1.10 1.39 0.99 0.99 1.26 1.94 2.20 1.97 1.20 1.85 1.35 1.35 1.36 1.36 1.36 1.75 2.89 3.90 4.03 Indirect Subsidy 2.51 1.56 1.95 2.40 5.93 3.15 3.05 3.09 3.81 2.19 3.06 3.46 3.10 1.89 3.85 2.83 3.49 3.46 Direct Subsidy 3.90 3.09 5.54 3.50 5.13 10.48 11.58 5.37 6.14 6.43 6.08 5.56 Subsidy per Boarding 7.52 22.4% 16.7% 12.5% 14.5% Farebox Zone Route 030 083 046 001 001 004 059 072 072 076 091 073 079 079 079 OCTA 057X 029 067 060 042 053 053 020 054 143 150 980 070 543 035 560 071 167 024 153 085 082 037 087

Bus count for routes 53%, 57% and 64% are estimated based on total route 53, 57 and 64 equipment requirements. (2) Bus count for routes 53X, 57X and 64X are estimated based on total route ! (3) C under Zone is Central County, N is North County and S is South County. (1) Total bus count (426) is based on PM weekday equipment requirements.

OCTA Operating Statistics By Route for Express Service (Sorted by Boardings) Fiscal Year 2018-19 Through Q1

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nut	109	Ľ	Ľ	•	-	-	_
Bus Count	40 FT 32 FT 60 FT	-	-	-	4	4	3
Е	40 FT	4	3	3	-	-	-
	VSH	066	629	945	1,409	879	432
	BoardVSH	8.20	9.76	60.9	3.11	3.99	7.63
	CostVSM	\$ 6.11	10.31	8.46	6.30	7.20	66.9
	Direct CostVSH	\$ 99.24		141.44	63.84	88.38	73.57
	HSASO	\$ 163.21	248.71	217.63	108.12	126.44	133.32
	Boardings	8,115 \$	6,138	5,751	4,384	3,511	3,292
	Revenue per Boarding	\$ 5.87	2.45	1.93	0.99	0.88	96.0
	"Capital Subsidy" Per Boarding	\$ 4.11 \$	4.07	4.35	6.52	8.14	6.51
	Indirect Subsidy	\$ 6.17	8.66	12.72	14.84	13.53	7.26
	Direct Subsidy	\$ 7.87 \$	14.37	21.11	18.92	17.24	9.25
	Subsidy per Boarding	\$ 18.15 \$	27.10	38.18	40.28	38.91	23.02
	Zone Farebox	29.5% \$	%9.6	5.4%	2.9%	2.8%	2.5%
	Zone	ပ	C	Z	C	z	С
OCTA	Route	794	701	721	211	213	506

OCTA Operating Statistics By Route for Stationlink Service (Sorted by Boardings) Fiscal Year 2018-19 Through Q1

Zone Farebox Subsidy per location "Capital Subsidy S			•					•						Bu	Bus Count	
Solution Subsidy Subsidy Subsidy Boarding Subsidy Roarding Subsidy Boarding Subsidy Subsidy Boarding Per					Indiract	"Capital	Povenie ner			paric						
\$\text{Colored Monday (a)} \$\text{Colored Monday (a)} <th< th=""><th>4</th><th>arebox</th><th></th><th></th><th>Subsidy</th><th>Per</th><th>Boarding</th><th>Boardings</th><th>CostVSH</th><th>CostVSH</th><th>CostVSM</th><th>BoardVSH</th><th>NSA NSA</th><th>40 FT</th><th>- E Z H</th><th>F 00</th></th<>	4	arebox			Subsidy	Per	Boarding	Boardings	CostVSH	CostVSH	CostVSM	BoardVSH	NSA NSA	40 FT	- E Z H	F 00
5.86 2.65 2.33 0.88 0.98 9,510 121.50 70.93 18.01 20.40 466 1 - 9.71 3.64 3.21 2.86 0.95 8,734 135.47 73.56 12.61 17.37 503 3 - 9.17 3.65 3.22 2.30 0.82 7,252 137.33 74.14 20.54 17.85 406 2 - 10.24 4.09 3.60 2.55 0.94 6,529 132.40 73.33 11.41 15.36 425 2 - 22.85 8.98 7.91 5.96 132.73 73.29 17.75 7.43 753 4 - -		14.0%	G		မာ	S	8	9,765			\$ 10.43	21.04	464	0		
9.71 3.64 3.21 2.86 0.95 8,734 135.47 73.66 12.61 17.37 503 3 - 1 9.17 3.65 3.22 2.30 0.82 7,252 137.33 74.14 20.54 17.85 406 2 - 2 10.24 4.09 3.60 2.55 0.94 6,529 132.40 73.33 11.41 15.36 425 2 - 2 22.85 8.98 7.91 5.96 132.73 73.29 12.75 7.43 753 4 - 5 - 6		16.4%		2.65		0.88		9,510	121.50		18.01	20.40	466	-		
9.17 3.65 3.22 2.30 0.82 7,252 137.33 74.14 20.54 17.85 406 2 6.529 132.40 73.33 11.41 15.35 425 2 6 6 6.529 132.40 73.33 11.41 15.35 425 2 6 6 6 22.85 8.98 7.91 5.96 132.73 73.29 12.75 7.43 753 4 7 7 6	ı	12.2%		3.64	3.21	2.86		8,734	135.47	73.56	12.61	17.37	503	3		
10.24 4.09 3.60 2.55 0.94 6.529 132.40 73.33 11.41 15.35 22.85 8.98 7.91 5.96 0.96 5,597 132.73 73.29 12.75 7.43		10.7%		3.65		2.30	0.82	7,252	137.33	74.14	20.54	17.85	406	2		
22.85 8.98 7.91 5.96 0.96 6,597 132.73 73.29 12.75 7.43		10.9%		4.09	3.60	2.55	0.94	6,529	132.40	73.33	11.41	15.35	425	2		
		5.4%		8.98		5.96		5,597	132.73	73.29	12.75	7.43	753	4		

Total bus count (426) is based on PM weekday equipment requirements.
 C under Zone is Central County, N is North County and S is South County.

⁽¹⁾ Total bus count (426) is based on PM weekday equipment requirements. (2) 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	Los Alamitos - 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
71	Yorba Linda - Newport Beach	via Tustin Ave/ Red Hill Ave/ Newport Blvd	LOCAL
72	Sunset Beach - Tustin	via Warner Ave	LOCAL
76	Huntington Beach - John Wayne Airport	via Talbert Ave/ MacArthur Blvd	LOCAL
79	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
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, in 2015, the Board endorsed a comprehensive action plan (Plan), known as OC Bus 360°. 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 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, and 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 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 overall plan.

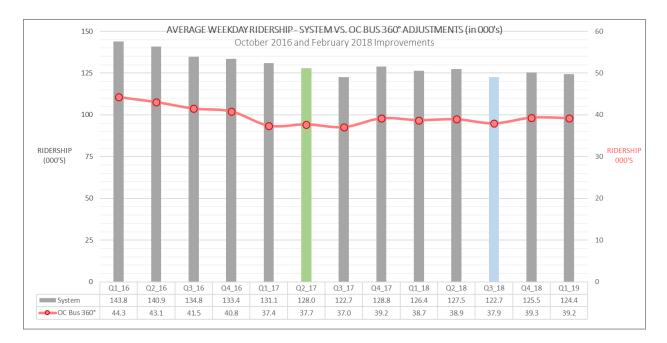
The trend of overall system ridership and productivity is provided on the following chart. Of note is the difference in the productivity numbers provided here compared to the productivity numbers provided in previous reports. This variation is due to the actions taken to correct an inadvertent omission of recovery time in the dashboard. Data was not captured for several routes with distinct operational characteristics (remote layover zones). The added time to the total RVH accounts for the slight drop in the quarterly boardings per RVH.



Through the first quarter of FY 2018-19, ridership and productivity are down slightly compared to last quarter, but are generally constant with respect to the quarterly trend over the past two years, since the October 2016 service change.

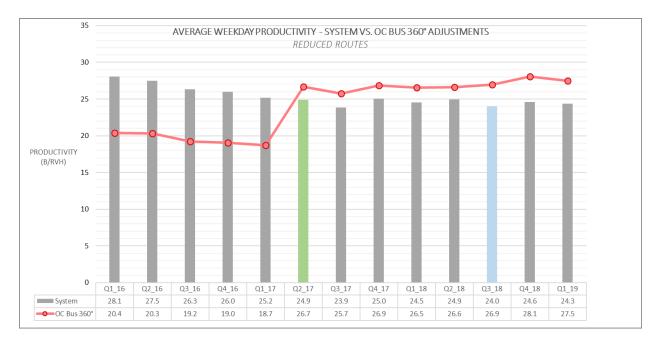
- Ridership was 0.5 percent lower than the previous quarter, and 1.5 percent lower than the same quarter last FY.
- Productivity over the first quarter fell by 0.7 percent from last quarter and was 0.9 percent lower than the same quarter last year.

Overall, the adjustments implemented under the OC Bus 360° Plan are trending steadily. The following chart compares the system trend against the group of routes improved in October 2016 and February 2018. The adjustments implemented in October 2016, though now mature, continue to show steady growth. Comparing the results of the first quarter of FY 2018-19 with the first quarter of FY 2017-18, the collective average weekday ridership on the eight improved routes has increased from 9,652 boardings to 11,510, a 16.1 percent jump. Three routes serving La Habra/Fountain Valley, Sunset Beach/Tustin, and Yorba Linda/Newport Beach, respectively, account for nearly 88 percent of the average weekday increase associated with the October 2016 service change. Service changes of this kind generally mature in a timeframe between 18 to 24 months. Therefore, the changes implemented in October 2016 will continue to be tracked, but will not be specifically identified in future reports. The adjustments implemented in February 2018 will be specifically tracked with respect to OC Bus 360° updates.



- The system average for average weekday ridership during the first quarter was 124,388, a 0.9 percent drop compared to the previous quarter and a 1.6 percent drop from the same quarter last year.
- The improved routes collectively (October 2016 and February 2018 improvements) had 39,220 average weekday boardings over the quarter.
 - 0.3 percent drop under the 39,326 average weekday boardings reported the previous quarter, but
 - 1.3 percent higher than the 38,714 boardings reported during the same quarter last year.
 - Trend is similar to systemwide average weekday ridership

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. In February 2018, more routes were reduced or eliminated to improve productivity. 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 first quarter of FY 2018-19, the collective reductions are yielding observable improvements in productivity compared to the system average.

- The system average for weekday productivity was at 24.3 B/RVH.
 - The reduced services collectively are performing considerably above the system average, by 13.2 percent
 - The reduced services collectively had an average weekday productivity above 27.5 B/RVH, down by 2.1 percent from the fourth quarter of last year, but 3.8 percent higher than the first quarter of last year (before the February 2018 service change).

Other OC Bus 360° Initiatives

OC FLEX Pilot Program

OC FLEX is an on-demand service offered under a one-year pilot. OC FLEX is a curb-to-curb shuttle service available in two zones in Orange County, seven days a week, that began in October 2018 in select areas that, to date, have been unable to productively support fixed-route bus service. One zone includes parts of Huntington Beach and Westminster, while the other zone includes parts of Aliso Viejo, Laguna Niguel, and Mission Viejo. The service is operated under a contract with Keolis. The service introduces a new vehicle type and is consistent with the OC Bus 360 Program as it will test new rider markets while matching resources with demand. Rides are primarily booked using a mobile app on a smart phone, but trips may also be booked by phone through the Keolis reservation center. Inside each OC FLEX zone, riders are able to take unlimited rides to work, school, for recreation, entertainment, or other purposes for \$4.50 per day using the OC Flex mobile app, or \$5 per day if paying cash onboard. Riders are also able to transfer between OC FLEX and OC Bus to create first mile and last mile service. Over the course of the pilot, OCTA staff will be tracking ridership, productivity, average wait times, shared rides, and customer satisfaction. Staff will provide the Board with an update after six months of service and annual after completion of the

pilot project. The evaluation after one year of operation will help determine if one or both pilot zones should continue to operate and if this service model should be considered for additional areas.

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. The College Pass Program uses a shared cost strategy where all students pay a transportation fee, whether they ride or not. These fees were approved by students who voted to support the fees in a referendum and are collected by the colleges.

From August 2017 to September 30, 2018, the College Pass Program has realized 1.5 million boardings with 9,750 unique students participating. In November and December 2017, a survey was conducted to further evaluate the effectiveness of the pass program. To determine if students were new riders, the survey asked if students had ridden the bus prior to the start of the College Pass Program. Survey results indicated that 14 percent of students from Santa Ana College were new riders who did not ride the bus prior to implementation of the College Pass program. Additionally, 26 percent of continuing education students responded that they were new riders who did not ride the bus prior to the pass program.

The college pass program has stabilized the ridership on the routes that directly serve Santa Ana College and Santiago Canyon College as well as other routes that connect students to these schools. Because of the interest among students generated by the availability of the College Pass Program for continuing education students, a referendum was held, and students voted to support expansion of the College Pass Program to include all students from Santiago Canyon College, making the program available to all eligible students in the Rancho Santiago Community College District in August 2018. A survey will be conducted toward the end of the school year to evaluate the program and help determine the number of new riders attained from expanding the college pass program at Santiago Canyon College.