Transit Division Performance Measurements





Fiscal Year 2016-17 Fourth Quarter Report

About This Report

The Orange County Transportation Authority (OCTA) operates 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 (ACCESS), a shared-ride program available for people unable to use the regular fixed-route bus service because of functional limitations. Fixed-route bus service operated by OCTA is referred to as directly-operated fixed-route (DOFR) service, while routes operated under contract are referred to as contracted fixed-route (CFR) service. The 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. These three services make up the bus transit system and are evaluated by the performance measurements summarized in this report.

This report tracks transit system safety, courtesy, and reliability in the areas of preventable vehicle accidents, customer complaints, on-time performance (OTP), and miles between road calls (MBRC). Along with these metrics, industry-standard measurements are tracked to assess OCTA transit operations; these measurements are 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 DOFR, CFR, and ACCESS services.

Safety: Preventable Vehicle Accidents

Preventable vehicle accidents are counts of incidents concerning physical contact between vehicles used for public transit and other vehicles, objects, or pedestrians, where a coach operator failed to do everything reasonable to prevent the accident. Safety is a 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.

All three modes of service exceeded the safety standard through the fourth quarter of fiscal year (FY) 2016-17.

Ongoing efforts to improve metrics for all services include: continuing education programs, focused training campaigns, direct operator oversight, and incremental process improvements. All these efforts are carried out on a regular basis to ensure the focus on safety is maintained.



Courtesy: Customer Complaints

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

All three modes of service exceeded the courtesy standard through the fourth quarter of FY 2016-17.

For CFR service, the contractor reviews customer comments with OCTA staff weekly to identify areas for improvement and review progress on action plans developed to address complaints received. Staff also performs route-level analyses and coordinates with the contractor to assess where specific improvements can be made. Again, these efforts were key to the CFR service meeting the courtesy standard.

Mode	Results for July 2016 through June 2017
Directly-Operated Fixed-Route	1 complaint in 24,194 boardings 0 5,000 10,000 15,000 20,000 25,000 30,000 35,000 40,000 Standard of one complaint per 20,000 boardings 50,000 10,000
Contracted Fixed-Route	1 complaint in 7,811 boardings 0 1,000 2,000 3,000 4,000 5,000 6,000 7,000 8,000 9,000 10,000 12,000 13,000 14,000 Standard of one complaint per 7,000 boardings 5,000 6,000 7,000 8,000 9,000 10,000 12,000 13,000 14,000
ACCESS	1 complaint in 887 boardings 0 100 200 300 400 500 600 700 800 900 1,000 1,200 1,300 Standard of one complaint per 667 boardings Standard of one complaint Standard o

Reliability: On-Time Performance

OTP is a measure of performance evaluating a revenue vehicle's adherence to a planned schedule. For fixed-route service, a trip is considered on-time if it departs the time-point no more than five minutes late. OCTA's system standard for OTP is 85 percent. For 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 ACCESS OTP standard is 94 percent.

Through the fourth quarter of FY 2016-17, Systemwide Fixed-Route OTP was 83.4 percent, four-tenths of a percent better than last quarter. The trend continues in the positive direction since the last series of OC Bus 360° service adjustments implemented last October. OTP for the DOFR service increased from 84.6 percent to 84.9 percent, just shy of the 85 percent standard. CFR service improved by 0.7 percent, from 80.3 percent to 81.0 percent, but remains below the standard. Continued focus and coordination with the contractor, including identification of low performing routes, ride-alongs, and one-on-one discussions with the operators sustain the improving trend. ACCESS service finished the FY at standard, with a 94 percent OTP.

As recommended under Internal Audit Report No. 17-508 (August 30, 2017), the fixed-route OTP window reflects a "zero to five-minute window" consistent with contractual requirements. This OTP window has been applied to all quarters for FY 2016-17. The tables below compare the system, DOFR, and CFR OTP with respect to the adjusted OTP window. Overall, the impact of the adjustment on the system, DOFR, and CFR service show a drop of approximately two percentage points.

Table 1: Comparative	e Assessment	of the OTP W	indow Adjust	ment			
SYSTEM OTP	Q3_FY16	Q4_FY16	Q1_FY17	Q2_FY17	Q3_FY17	Q4_FY17	AVG Δ
5' 30" Window	84.1%	86.1%	85.1%	84.9%	84.6%	85.3%	1.09/
5' Window*	82.2%	84.2%	83.2%	83.0%	82.6%	83.4%	1.9%

DOFR OTP	Q3_FY16	Q4_FY16	Q1_FY17	Q2_FY17	Q3_FY17	Q4_FY17	AVG 🛆
5' 30" Window	84.5%	86.8%	86.1%	86.4%	86.6%	86.6%	1 00/
5' Window*	82.7%	85.0%	84.3%	84.7%	84.8%	84.9%	1.070

CFR OTP	Q3_FY16	Q4_FY16	Q1_FY17	Q2_FY17	Q3_FY17	Q4_FY17	AVG Δ
5' 30" Window	83.4%	84.4%	84.0%	82.7%	82.5%	83.1%	2.20/
5' Window*	81.3%	82.3%	81.8%	80.6%	80.3%	81.0%	2.270

*All OTP data has been adjusted to the five-minute window and will be maintained as such in all OCTA records.



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 DOFR service is 14,000 MBRC; the contractual standard for CFR service is 12,000 MBRC; and the contractual standard for ACCESS is 25,000 MBRC.

Through the fourth quarter of FY 2016-17, DOFR service maintained the standard with 14,647 MBRC while the CFR service is steadily improving, but remains below the standard with 8,001 MBRC. ACCESS continues to trend favorably with over 40,000 miles between road calls.



Ridership and Productivity – Fixed-Route

Ridership (or boardings) is the number of rides taken by passengers using public transit and is influenced by the weather, economy, and seasonal variations in demand. Productivity is an industry measure that counts the average number of boardings for each RVH that is provided. This metric is calculated by taking the boardings and dividing it by the number of RVH (B/RVH).

Through the fourth quarter of FY 2016-17, ridership and productivity for total fixed-route service came in under the budgeted projection. The ridership decline continued when compared to the same quarter last year, a 3.6 percent drop. However, fourth quarter ridership and productivity show increases when compared to the third quarter. These increases can be directly attributed to actions taken under the OC Bus 360° Plan, initiated in June 2016, which is projected to increase ridership and improve efficiency over a three year period. As projected, routes that were improved under the program show an overall increase in ridership and routes that were reduced are yielding improvements in productivity.



Ridership and Productivity – ACCESS

(Primary Service Provider and Supplemental Taxi)

Through the fourth quarter of FY 2016-17, ridership and productivity for ACCESS service have exceeded projections.

Mode	Results for July 2016 through June 2017
Ridership	1,476,326 Boardings 960,000 1,060,000 1,160,000 1,260,000 1,360,000 1,460,000 Budget Projection of 1,252,793 boardings
Productivity	Productivity of 2.10 B/RVH

Unclassified Revenue

Unclassified revenue is that revenue collected on all OCTA bus service that is not properly recorded through the farebox. This can occur through a variety of ways, including overpayment of fare or the incorrect input of fare information by the operator. The OCTA monthly standard for unclassified revenue is 2.35 percent. In the chart below, the monthly unclassified revenue for FY 2016-17 is presented by operator type. Generally, the trend is moving toward the standard.



Source: GFI

Unclassified revenue for both services was down significantly from the previous two quarters, during which time the six-month promotional \$4.00 day pass was available. During this time, incidents of overpayment increased significantly, likely due to many customers paying for the pass onboard the bus using a \$5.00 bill. The \$4.00 day pass promotion ended in early April 2017.

By operator type, the unclassified revenue for CFR service was below the standard every month of the fourth quarter while DOFR service remained above the standard. Actions to address unclassified revenue in excess of the standard identified include weekly monitoring, one-on-one counseling/discipline for operators with high volumes of incidents, and occasional awareness campaigns. As an operations rule/policy related to operator responsibilities related to fare collection, education and emphasis are included in new coach operator and refresher training curriculums.

Contractor Performance: Fixed-Route

As reported above, the overall performance of the CFR service through the fourth quarter of FY 2016-17 includes areas of good performance and areas in need of improvement. The contractor consistently exceeded the standards in some performance categories, primarily related to safety and courtesy, but performed notably below standard with respect to other performance categories, including those related to reliability.

Table 1 below provides the penalties and incentives assessed to the contractor, by quarter, and reflect the aforementioned performance trends related to safety, courtesy, and reliability.

Performance Category	Q1_FY17	Q2_FY17	Q3_FY17	Q4_FY17	FY17 Total
On-Time Performance	(\$2,000)	(\$6,000)	(\$4,000)	\$0	(\$12,000)
Valid Complaints per 7,000 Boardings	(\$600)	\$100	\$8,600	\$7,900	\$16,000
Accident Frequency Ratio	\$10,000	\$15,000	\$10,000	\$15,000	\$50 <i>,</i> 000
Preventive Maintenance	\$0	\$0	(\$20,100)	(\$8,400)	(\$28,500)
Road Calls	(\$17,100)	(\$10,000)	(\$8,600)	(\$7,600)	(\$43,300)
Missed Trips	(\$74,000)	(\$29,000)	(\$37,000)	(\$19,000)	(\$159,000)
Prior Period Adjustments	(\$2,000)	\$0	\$0	\$0	(\$2,000)
Total	(\$85,700)	(\$29,900)	(\$51,100)	(\$12,100)	(\$178,800)

Table1: CFR Penalties and Incentives – FY 2016-17

The incentives were primarily awarded for safety and courtesy and amounted to \$66,000 for the FY. This was offset by the \$244,800 in penalties related to low OTP, untimely preventive maintenance, road calls, and missed trips. The net penalty paid by the Contractor for this FY was \$178,800.

Contractor Performance: ACCESS

As reported above, the overall performance of ACCESS service through the fourth quarter of FY 2016-17 is at or above standard for all measures.

Table 2 below lists, by quarter, the penalties assessed to the ACCESS service contractor. Based on assessed penalties, areas of poor performance include call center hold times and excessively late trips, totaling \$60,000 and \$55,000, respectively. However, \$30,000 in penalties for excessively late trips, and \$5,000 for on-time performance were waived in the third quarter in response to a request for relief submitted by the contractor. Relief was granted due to the unanticipated increase in demand for Same Day Taxi and supplemental ACCESS services associated with the implementation of OCTA's OC Bus 360° Service Plan in October 2016. The net amount paid in penalties for performance of the ACCESS Service Contractor in FY 2016-17 was \$88,400. No incentives were awarded during FY 2016-17.

Performance Category	Q1_FY17	Q2_FY17	Q3_FY17	Q4_FY17	FY17 Total
Call Center Hold Times	(\$33,000)	(\$22,000)	\$0	(\$5,000)	(\$60,000)
On-Time Performance	(\$5,000)	\$0	\$0	\$0	(\$5,000)
Excessively Late Trips	(\$10,000)	(\$30,000)	(\$5,000)	(\$10,000)	(\$55,000)
Preventive Maintenance	\$0	\$0	(\$3,400)	\$0	(\$3,400)
Waived Penalties	\$0	\$0	\$35,000	\$0	\$35,000
Total	(\$48,000)	(\$52,000)	\$26,600	(\$15,000)	(\$88,400)

Table 2: ACCESS Penalties and Incentives – FY 2016-17

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 minimize seasonal fluctuations, data shown below reflects actuals over the last 12 months, from July 2016 through June 2017.

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" means 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 26.3 percent.



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, statistics below depict actuals over the last 12 months. DOFR and ACCESS Service both operated at a lower cost per RVH than last year. CFR Service had a two percent increase from last year in cost per RVH. This was associated with a three percent shift in RVH from DOFR service to CFR service in FY 2016-17. The re-allocation of RVH caused a seven percent increase in CFR's RVH compared to FY 2015-16. As a result, the direct operating expenses and other associated direct overhead expenses for CFR service also increased in FY 2016-17.



Performance Evaluation by Route

Continuing efforts are underway to better understand and address ridership trends. The OC Bus 360° Plan, approved by the Board of Directors in March 2016, identifies several strategies to stimulate fixed-route ridership, including 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. In addition, route adjustments were implemented in both June and October 2016 as part of the OC Bus 360° service plan. These adjustments were developed after considering route-level performance. For next FY, staff will continue to monitor the impact that these adjustments have had on route performance. In addition, staff will consider other strategies for future implementation 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 fourth quarter in FY 2016-17. 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 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

DCTA	Fiscal	l Year 201	6-17 Througl	h Q4										B	us Coun	
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
021	z	9.3%	\$ 12.02	\$ 6.95	\$ 3.27	\$ 1.80	\$ 1.05	71,513	\$ 111.15	\$ 64.40	\$ 8.08	9.86	7,250	e		
001	S	10.1%	9.60	6.04	2.87	0.69	1.00	616,986	136.44	87.73	8.22	13.77	44,816	10		
085	S	12.0%	9.16	5.73	2.70	0.73	1.15	117,433	101.26	61.72	7.73	10.58	11,102	2		
178	0	11.2%	8.78	5.33	2.45	1.00	0.98	129,126	102.89	62.64	8.08	11.75	10,991	ε		
0/6	ບ -	11.7%	8.74	5.32	2.53	0.89	1.04	95,936	137.39	87.40	11.43	15.46	6,206	2 0		
501	z	12.5%	8.20	07.9	2.39	0.67	90°L	141,030	99.92 101 01	62.11	1.84	26.11	12,244	N •	,	
101	، د	12.5%	8.14	4.92	07.7	0.97	1.02	002 00	101.01	62.30	8.30	12.32	14,409	4 0		
1/1	nu	14.4%	08.1	4.79	2.20	0.87	1.1/	98,780	101.00	62.32 62 00	1.84 6.75	12.3/	7 122	N C		
020	, ,	12.0%	6 01	4.00	2 U0	0.92	0.1	30,437	103.23	62 42	0.7.0 8.5.3	14.18	27 323	v u		
0.0	b	14 1%	6.00	4.15	1 95	0.00	0.00	160 649	101 00	62 30	7 82	14.24	11 284	0 0		
000	b c	14.0%	0.30 6.41	2 2 2	1 88	0.00	1.03	691 415	138.42	88.94	7.69	20.12	34 360	οσ		
620	b C	15.9%	6.03	3.79	1 77	0.54	40.1	399.059	130.09	82.75	10.42	19.92	20.034	o ua		
024	z	17.0%	5.98	3.65	1.72	0.61	1.10	141.255	100.54	62.21	8.16	15.55	9.086	0		
082	s	20.2%	5.88	3.21	1.51	1.16	1.20	110,799	110.32	63.41	7.51	18.64	5,945	ι m		
150	ပ	9.3%	7.03	4.15	1.91	0.97	1.13	175,936	96.42	77.52	9.52	13.27	9,949	4		
143	z	17.0%	5.84	3.70	1.70	0.44	1.11	195,529	100.23	62.09	8.81	15.39	12,704	2		
129	z	17.7%	5.81	3.60	1.65	0.56	1.13	231,533	103.90	62.71	8.19	16.30	14.207	e		
060	S	18.6%	5.80	3.39	1.59	0.82	1.14	311,782	108.49	63.91	7.21	17.75	17,567	9		
071	z	17.1%	5.75	3.50	1.65	0.60	1.06	641,852	102.17	62.68	8.30	16.44	39,045	6		
560	ပ	16.8%	5.72	3.40	1.61	0.71	1.01	781,831	138.27	88.10	11.66	22.97	34,042	13		
091	s	19.3%	5.70	3.45	1.62	0.63	1.21	407,213	103.18	62.88	7.13	16.43	24,787	9	-	
059	ပ	18.0%	5.51	3.27	1.54	0.70	1.06	551,352	105.88	63.14	8.62	18.03	30,576	6	-	
037	z	17.4%	5.27	3.25	1.54	0.48	1.01	975,382	142.43	90.53	10.69	24.54	39,744	11		
026	z	18.4%	5.18	3.17	1.49	0.52	1.05	415,456	102.02	62.46	9.82	17.87	23,250	5		
056	z	17.3%	5.15	3.15	1.49	0.51	0.97	421,113	130.06	82.74	11.93	23.16	18,179	5		
055	ပ	19.5%	5.14	3.11	1.48	0.55	1.11	1,333,030	132.48	84.33	11.72	23.24	57,368	17		
050	z	17.2%	5.08	3.08	1.46	0.54	0.94	1,220,156	136.56	87.02	11.83	24.92	48,971	з		8
054	z	18.2%	5.02	3.15	1.49	0.38	1.03	1,228,705	139.29	88.65	11.89	24.55	50,050	11		
030	z	19.5%	4.73	2.85	1.34	0.54	1.01	630,588	101.15	62.39	7.78	19.44	32,433	8		
680	S	20.8%	4.65	2.84	1.34	0.47	1.10	368,348	101.65	62.45	8.01	19.25	19,135	4		
025	z	21.7%	4.31	2.67	1.25	0.39	1.09	442,721	102.05	62.50	8.25	20.37	21,733	4		
053X	0	21.1%	4.20	2.59	1.23	0.38	1.02	228,478	124.95	78.68	12.02	25.80	8,857	2		
020	с і:	16.6%	4.92	2.97	1.40	0.56	1.05	992,766	98.89	74.55	7.76	18.57	42,238	13		
543	z	21.8%	4.08	2.47	1.17	0.44	1.02	1,176,910	135.78	86.56	11.77	29.17	40,348	12		
029	z	21.8%	4.04	2.49	1.18	0.37	1.03	2,023,329	135.20	86.18	11.57	28.78	70,298	13		n
047	zc	22.U%	3.91	72.20	1.00	0.03	00.1	7 220 272	124.00	02.30 05.30	11 50	23.31	17,451	° 5		
547	ى د	23.0%	3.30	90.0	0	0.40	1.05	2 121 257	147.66	00.00	12.20	23.13	65 002	7 0		•
035	z	15.9%	4.56	2.20 2.66	1 25	0.65	86.0	2, 101,237 861 232	86.84	70.58	7.55	17.71	36 931	о С		2
046	z	25.5%	3.65	2.09	0.98	0.58	1.05	670,422	101.39	62.34	8.74	24.64	27,212	6		
038	z	26.1%	3.23	1.91	06.0	0.43	0.99	1,206,326	102.80	62.67	8.32	27.10	44,519	12	,	
043	z	26.3%	3.23	2.02	0.96	0.25	1.06	2,190,951	132.86	84.42	12.83	32.93	66,539	13		
090	ပ	25.0%	3.20	2.01	0.95	0.24	0.98	1,999,862	132.93	84.73	11.67	33.72	59,306	11		
053	ပ	26.6%	3.17	1.91	0.91	0.36	1.02	1,909,607	132.52	84.25	14.40	34.59	55,205	16		
057X	ပ	28.0%	3.17	1.85	0.88	0.44	1.06	1,145,261	122.14	77.62	10.78	32.28	35,484	-		7
990	υ	28.5%	2.88	1.78	0.85	0.26	1.05	2,119,226	132.89	84.54	12.42	36.18	58,568	13		
042	z	28.2%	2.71	1.65	0.78	0.28	0.95	1,675,974	102.46	62.53	9.17	30.32	55,285	1		
064	U	29.5%	2.55	1.59	0.75	0.21	0.98	1,640,158	135.18	85.98	13.91	40.75	40,246	ω		
064X	U	30.8%	2.42	1.50	0.71	0.21	0.98	615,387	121.95	77.41	11.40	38.14	16,135	e		
(1) Total t	ous count	t (528) is bas	sed on PM week	day equipme	ent requireme	ents.										
(z) pns c	ount for s	pares is esti	TW THE TO DE 89.													
(a) Boutor		107 100 101	102 464 767 764	sumateu ba	seu un tutal un to diming	tion of the rol	tria o4 equipriteri #oc during Octo	t requirements.	This account	e for roughly 1	10K hoordinas	DVU 15K DVU	in EV 2017			
	S ZU, 17 U,	10/,100,131					nus aunig occo	วย รยุงเวย กาลางอ	וווא מררטמייי	s lui iuuyiiiy i	izn buaiuinya					
(2) C nua	er zone is	s Central Col	Unty, N IS NORD	County and	S IS South C	ounty.										

OCTA Operating Statistics By Route for Local and Community Services (Sort by Subsidy per Boarding)

	unt	т 60 FT	'	•	•	•	•	- 2	•	•	
	us Co	32 F1		•	•	•	•		•	•	
	ш	40 FT	•	9	3	3	9	•	8	4	
		HSV	599	5,821	4,273	2,615	5,299	1,373	2,148	3,557	
		BoardVSH	5.38	4.21	6.67	8.41	6.63	6.37	8.66	8.76	
		CostVSM	\$ 6.81	6.23	7.31	9.85	6.12	7.18	7.31	7.23	
		Direct CostVSH	\$ 80.11	59.51	130.98	152.28	94.11	70.31	72.07	63.54	
		CostVSH	\$ 153.47	109.60	201.21	234.50	166.03	140.27	146.58	127.02	
		Boardings	3,224	24,482	28,513	21,990	35,124	8,750	18,606	31,158	
		Revenue per Boarding	\$ 1.06	0.96	1.51	2.01	3.67	0.97	1.03	0.95	
		"Capital Subsidy" Per Boarding	\$ 8.86	8.75	4.51	5.85	7.32	6.53	6.91	5.50	ients.
		Indirect Subsidy	\$ 11.61	10.61	8.71	7.87	9.03	8.89	6.72	5.73	ent requirem
		Direct Subsidy	\$ 15.86	14.49	19.93	18.01	12.34	12.14	9.18	2.83	day equipme
)		Subsidy per Boarding	\$ 36.32	33.85	33.15	31.73	28.70	27.56	22.80	19.05	ed on PM week
		Farebox	3.7%	3.7%	5.0%	7.2%	14.7%	4.4%	6.1%	6.5%	(528) is bas
		Zone	S	ပ	z	ပ	ပ	S	ပ	z	us count
•	OCTA	Route	216	211	721	701	794	212	206	213	1) Total bi

OCTA Operating Statistics By Route for Express Service (Sort by Subsidy per Boarding) Fiscal Year 2016-17 Through Q4

(2) Bus count for spares is estimated to be 89.

Bus count for routes 53X, 57X and 64X are estimated based on total route 53, 57 and 64 equipment requirements.
 Routes 20, 175, 187, 188, 191, 193, 464, 757, 758 removed due to elimination of the routes during October service change. This accounts for roughly 112K boardings and 15K RVH in FY 2017.
 C under Zone is Central County, N is North County and S is South County.

OCTA Operating Statistics By Route for Stationlink Service (Sort by Subsidy per Boarding) Fiscal Year 2016-17 Through Q4 \leq

OCTA														Bu	s Count	
Route	Zone	Farebox	Subsidy per Boarding	Direct Subsidy	Indirect Subsidy	"Capital Subsidy" Per	Revenue per Boarding	Boardings	CostVSH	Direct CostVSH	CostVSM	BoardVSH	HSV	40 FT 3	12 FT 6	0 FT
00,	:					boarding	i o o				e	!			(
430	z	2.2%	\$ 52.43	\$ 23.57	\$ 18.24	\$ 10.62	\$ 0.95	5,381	\$ 135.46	\$ 68.77	\$ 15.63	3.17	1,699		2	
490	S	3.7%	31.90	13.98	10.82	7.10	0.94	8,049	138.83	69.79	12.97	5.39	1,492		2	
463	ပ	5.2%	25.80	9.56	7.40	8.84	0.93	24,230	135.83	69.72	12.84	7.60	3,190	5		
411	Z	3.7%	21.84	9.55	7.39	4.89	0.65	5,837	119.02	65.75	13.25	6.77	863		-	
480	с С	9.2%	12.44	4.97	3.84	3.63	0.89	23,593	134.25	69.23	11.57	13.84	1,705	2	-	
472	ပ	12.3%	10.55	3.70	2.87	3.98	0.92	32,313	129.45	68.28	10.50	17.28	1,870	3	-	
454	Z	13.3%	8.62	3.30	2.55	2.77	0.90	46,358	141.79	70.01	19.07	21.00	2,207	3		
473	с С	14.0%	8.30	3.04	2.35	2.90	0.88	44,283	136.29	68.91	12.71	21.73	2,038	3	-	
453	z	13.2%	7.75	3.05	2.36	2.34	0.82	36,562	139.52	69.94	20.97	22.38	1,634	2		
462	с С	16.6%	6.84	2.66	2.06	2.13	0.94	40,219	123.80	66.85	17.99	21.90	1,836	2	-	
(1) Total b	us count	(528) is bas	sed on PM week	kday equipm	ent requirem	ients.										

(2) Bus count for spares is estimated to be 89.
 (3) Bus count for routes 53X, 57X and 64X are estimated based on total route 53, 57 and 64 equipment requirements.
 (4) Routes 20, 175, 187, 188, 191, 193, 464, 757, 758 removed due to elimination of the routes during October service change. This accounts for roughly 112K boardings and 15K RVH in FY 2017.
 (5) C under Zone is Central County, N is North County and S is South County.

(4) Routes 20,175,187,188,191,193,464,757,758 removed due to elimination of (5) C under Zone is Central County, N is North County and S is South County.

\leq	OCT	A Opera I Year 201	ating Statis 16-17 Througl	tics By h Q4	Route f	or Expre	ss Service	(Sort by Bo	ardings)							
OCTA														Bu	is 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 (50 FT
794	υ	14.7%	\$ 28.70	\$ 12.34	\$ 9.03	\$ 7.32	\$ 3.67	35,124	\$ 166.03	\$ 94.11	\$ 6.12	6.63	5,299	9		
213	z	6.5%	19.05	7.83	5.73	5.50	0.95	31,158	127.02	63.54	7.23	8.76	3,557	4		
721	z	5.0%	33.15	19.93	8.71	4.51	1.51	28,513	201.21	130.98	7.31	6.67	4,273	3		
211	ပ	3.7%	33.85	14.49	10.61	8.75	0.96	24,482	109.60	59.51	6.23	4.21	5,821	5		
701	ပ	7.2%	31.73	18.01	7.87	58.5	2.01	21,990	234.50	152.28	6.85	8.41	2,615	3		
206	ပ	6.1%	22.80	9.18	6.72	6.91	1.03	18,606	146.58	72.07	7.31	8.66	2,148	3		
212	S	4.4%	27.56	12.14	8.89	6.53	26.0	8,750	140.27	70.31	7.18	6.37	1,373		2	
216	s	3.7%	36.32	15.86	11.61	8.86	1.06	3,224	153.47	80.11	6.81	5.38	599		1	
1) Total b	nus count	t (528) is ba:	sed on PM week	day equipme	ent requirem	ients.										
	and for e	too in out	timated to be 80													

OCTA Operating Statistics By Route for Express Service (Sort by Boardings) Fiscal Year 2016-17 Through Q4

Bus count for spares is estimated to be 89.
 Bus count for routes 53X, 57X and 64X are estimated based on total route 53, 57 and 64 equipment requirements.
 Routes 20, 175, 187, 188, 191, 193, 464, 757, 758 removed due to elimination of the routes during October service change. This accounts for roughly 112K boardings and 15K RVH in FY 2017.
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OCTA Operating Statistics By Route for Stationlink Service (Sort by Boardings) Fiscal Year 2016-17 Through Q4 \leq

Bus Count	т 60 FT	•	•	•	•	•	•	•	2 -	1 -	2 -	
	- 32 F	'	'	-	•	-	-	'				
	40 FT	e e	e	2	2	Э	5	2	•	•	•	
	HSV	2,207	2,038	1,836	1,634	1,870	3,190	1,705	1,492	863	1,699	
	BoardVSH	21.00	21.73	21.90	22.38	17.28	7.60	13.84	5.39	6.77	3.17	
	CostVSM	\$ 19.07	12.71	17.99	20.97	10.50	12.84	11.57	12.97	13.25	15.63	
	Direct CostVSH	\$ 70.01	68.91	66.85	69.94	68.28	69.72	69.23	62.79	65.75	68.77	
	CostVSH	\$ 141.79	136.29	123.80	139.52	129.45	135.83	134.25	138.83	119.02	135.46	
	Boardings	46,358	44,283	40,219	36,562	32,313	24,230	23,593	8,049	5,837	5,381	
	Revenue per Boarding	\$ 0.90	0.88	0.94	0.82	0.92	0.93	0.89	0.94	0.65	0.95	
	"Capital Subsidy" Per Boarding	\$ 2.77	2.90	2.13	2.34	3.98	8.84	3.63	7.10	4.89	10.62	ents.
	Indirect Subsidy	\$ 2.55	2.35	2.06	2.36	2.87	7.40	3.84	10.82	7.39	18.24	ent requirem
	Direct Subsidy	\$ 3.30	3.04	2.66	3.05	3.70	9.56	4.97	13.98	9.55	23.57	t (528) is based on PM weekday equipme
	Subsidy per Boarding	\$ 8.62	8.30	6.84	7.75	10.55	25.80	12.44	31.90	21.84	52.43	
	Farebox	13.3%	14.0%	16.6%	13.2%	12.3%	5.2%	9.2%	3.7%	3.7%	2.2%	
	Zone	z	ပ	υ	z	ပ	ပ	υ	S	z	z	is count
OCTA	Route	454	473	462	453	472	463	480	490	411	430	(1) Total bu

(2) Bus count for spares is estimated to be 89.
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(5) 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 - Anabeim Hills	via Del Amo Blvd/La Palma Ave	LOCAL
42	Seal Beach - Orange	via Seal Beach Blvd/Los Alamitos Blvd/Lincoln Ave	
42	Fullerton - Costa Mesa	via Harbor Blvd	
45		via Ball Road/ Taft Ave	
40	Eullerton - Balboa	via Anabeim Blud/Eainiew St	
47 50	Long Roach Orango	via Katella Avo	
50	Anabaim Inina	via Main St	LOCAL
55/558	Ananenn - Invine	via Malii St	LOCAL
54	Garden Grove - Orange	via Chaphan Ave	LOCAL
55	Santa Ana - Newport Beach	via Standard Ave/ Bristol St/ Fairview St/ 17th St	LUCAL
56	Garden Grove - Orange	via Garden Grove Bivd	LOCAL
5//5/X	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 - Anabeim	via Placentia Ave	COMMUNITY
167		via Invine Ave/ Hewes St/ Jeffrey Rd	COMMUNITY
177		via Lake Forest Dr/ Muidands Blud/Les Alises Blud	COMMUNITY
177		via Adams Avo/ Birch St/ Campus Dr	COMMUNITY
206	Santa Ana Jako Forest Express	via Additis Aver Birch Str Campus Di	
206	Salita Alia - Lake Forest Express	via 5 Fwy	EXPRESS BUS
211			EXPRESS BUS
212	Irvine - San Juan Capistrano Express	Via 405 Fwy	EXPRESS BUS
213	Brea - Irvine Express	VIa 55 FWy	EXPRESS BUS
216	San Juan Capistrano - Costa Mesa Express	via 405 Fwy	EXPRESS BUS
411	Anaheim Canyon Metrolink Station - Canyon Corporate Center	via Miraloma Ave/ La Palma Ave	STATIONLINK
430	Ananeim Regional Transportation Intermodal Center - Anaheim Resort Area	via Katella Ave/ Harbor Blvd/ Ball Rd	STATIONLINK
453	Orange Transportation Center - St. Joseph's Hospital	via Chapman Ave/ Main St/ La Veta Ave	STATIONLINK
454	Orange Transportation Center - Garden Grove	via Chapman Ave/ Metropolitan Dr	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
490	Laguna Niguel / Mission Viejo Metrolink Station - Aliso Viejo	via Crown Valley Pkwy/ Moulton Pkwy/ Aliso Viejo	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 Ewy/ 55 Ewy	EXPRESS BUS

OC Bus 360° Plan: Performance to Date

The last series of approved bus service changes under the OC 360° Bus Plan were implemented in October 2016. Provided below is a series of charts that show overall system performance for the last 13 quarters and the impact the route adjustments implemented in October 2016 have had on overall performance (marked by green bar on all charts). In this review, performance is measured by change in average weekday boardings for routes that were improved and average boardings per revenue vehicle hour (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.

13 39 SYSTEM PERFORMANCE RIDERSHIP (in millions) AND PRODUCTIVITY (B/RVH) 11 30 24 RIDERSHIP B/RVH (000,000'S) 18 Q4 14 Q1 15 Q2 15 Q3 15 Q4 15 Q1 16 Q2 16 Q3 16 Q4 16 Q1 17 Q2 17 Q3 17 Q4_17 9.9 🔲 Ridership 12.2 12.1 11.8 11.6 11.5 11.4 11.0 10.4 10.4 10.3 9.4 10.0 Productivity 30.4 30.1 29.2 29.3 28.4 27.9 27.1 26.0 25.7 25.2 24.6 23.9 25.3

The trend of overall system ridership and productivity is provided on the following chart.

Ridership through the fourth quarter of FY 2016-17 is showing signs of improvement in performance two quarters after the October 2016 Service Change Program.

- Fourth quarter ridership yielded the first quarter-to-quarter increase in the last 13 quarters, or last three years, spanning from April 2014 to June 2017.
- Quarterly ridership is back up to 10 million, up six percent, from the 9.4 million reported in the third quarter of FY2016-17, but 3.6 percent lower than the fourth quarter of FY 2015-16
- **Productivity** (*orange line in chart*) over the Fourth Quarter experienced an uptick, **up by nearly six percent over last quarter** and exceeding 25 boardings per revenue vehicle hour for the first time since the first quarter of FY 2016-17.

The adjustments implemented last October clearly had a marked impact on current performance. The following chart compares the system trend against the group of routes that were improved. It shows that the implemented service improvements, mainly the reallocation of service to areas of higher utilization, are trending favorably. The increases on these specific routes, the red line on the chart, were more immediate than the system-wide trend.



- Average weekday ridership on improved routes have increased in each successive quarter since the changes.
- During the first quarter of FY 2016-17, before the service changes, the total average weekday ridership on these routes was approximately 9,500 daily riders. During the fourth quarter of FY 2016-17, the average daily ridership on these routes were a reported 11,200 (*a* 17.5 percent increase).

Improved system and route productivity are the goals for services that are reduced or eliminated under the OC Bus 360° Plan. As of the fourth quarter of FY 2016-17, the services that were reduced are trending favorably. The impacts on productivity appear to be immediate and more significant. The following chart compares the system productivity trend against the productivity of the group of routes that were reduced/eliminated.



- Routes reduced under the plan in October have shown immediate and significant increases in productivity
- Beginning in the second quarter of FY 2016-17, route productivity on the average weekday for the changed routes jumped by over 45 percent
- Since October 2016 through the fourth quarter of FY 2016-17, these routes (26.9 B/RVH) are trending better than the system average (25.4 B/RVH).

Next Steps

Staff will continue to work with the operator of OCTA's CFR to improve service reliability. This includes on-going implementation of the OTP plan and the continued oversight of the CFR maintenance program.

The Planning and Transit Divisions will continue to collaborate on the development of strategies under the OC Bus 360° Plan that are innovative in attracting new riders, effective in meeting the county's diverse needs, and cost-efficient for system sustainability to improve overall system performance. The impacts of these changes will be monitored on an on-going basis through FY 2017-18 and beyond as appropriate.