2019/20 – Q3
Performance Measures Report

HALIFAX
TRANSIT

Contents

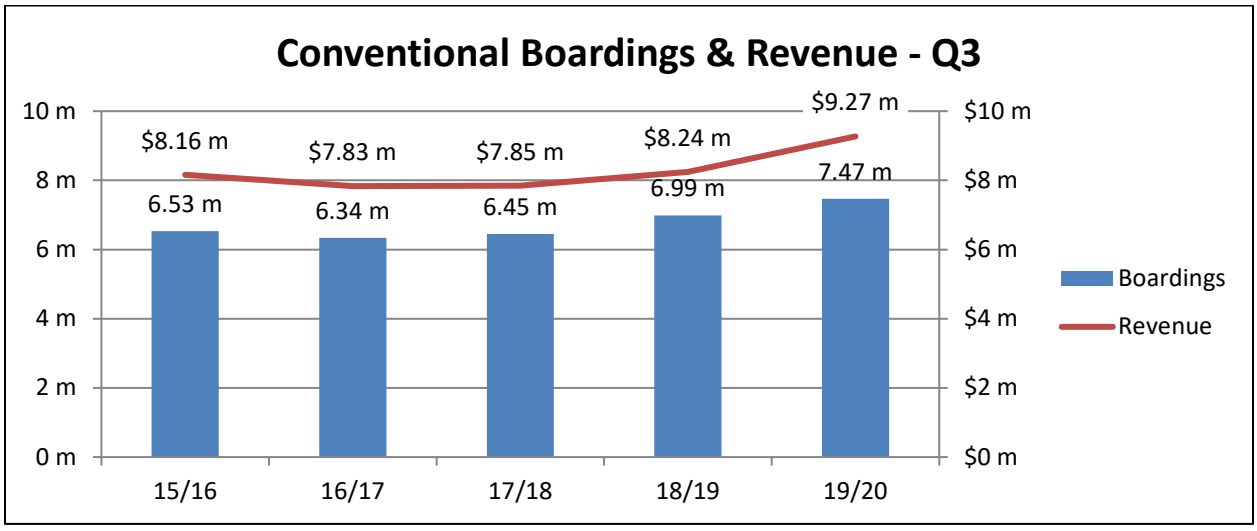
Boardings & Revenue

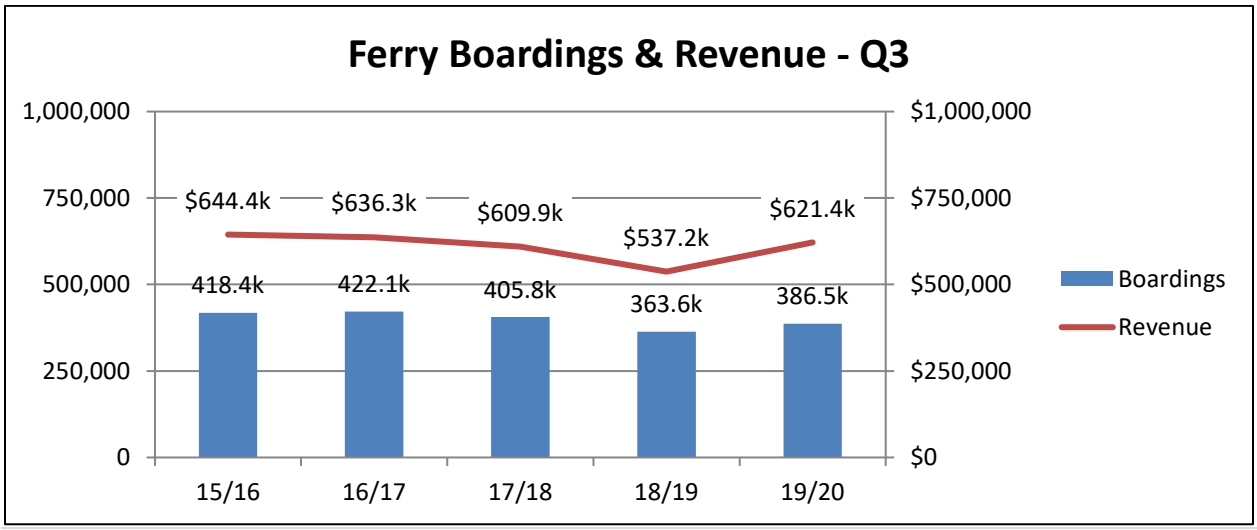
Revenue and boardings are reported to demonstrate how well transit services were used over the quarter, in comparison to the same quarter the previous year.

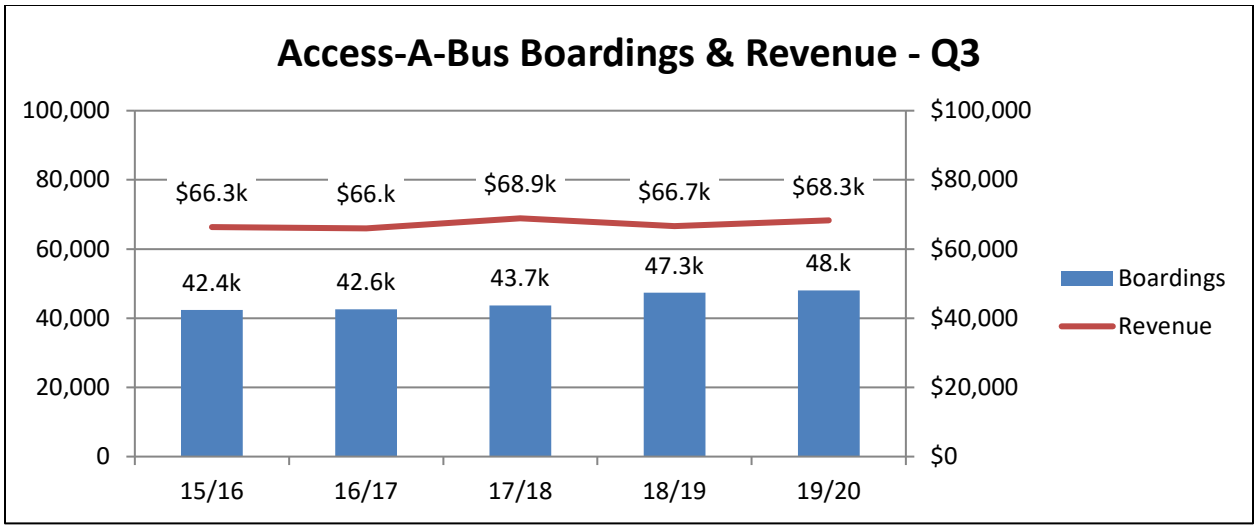
By installing Automatic Passenger Counter (APC) systems throughout the network in the 2017/18 fiscal year, Halifax Transit is now able to track the number of boardings by counting passengers entering the bus at each stop, instead of estimating boardings from revenue. Therefore, the data source for boardings in the chart below changed effective 2017/18. When a trip requires a transfer, the boardings metric would count the same passenger each time they entered a new bus. This method of data collection provides a more accurate measure of how passengers are utilizing the system, as assumptions related to multi-use revenue sources, such as tickets and passes, are removed, and replaced by physical counts.

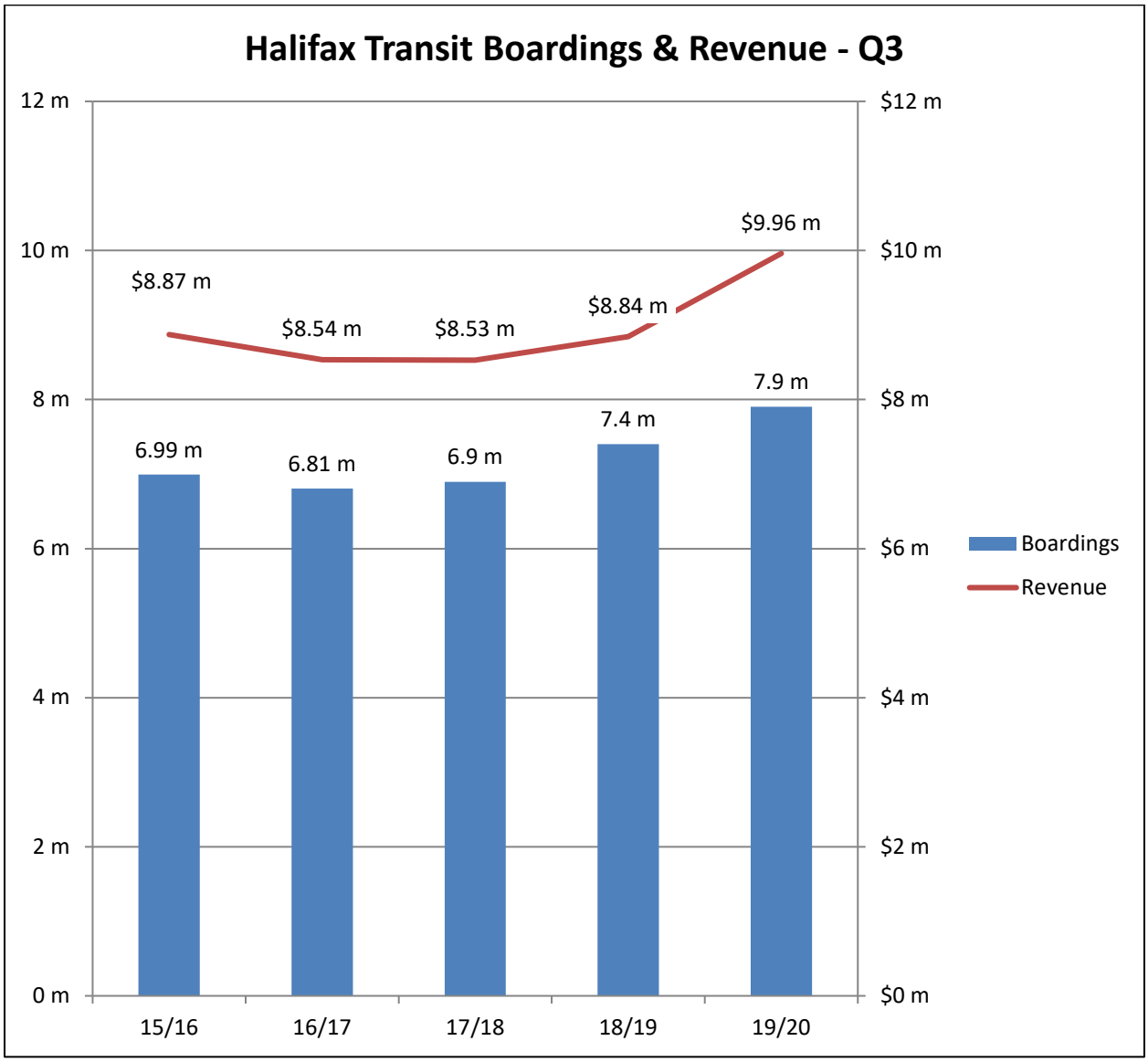
In the third quarter, Conventional boardings increased 6.8% from this quarter last year, Ferry boardings increased by 6.3% and Access-A-Bus boardings increased 1.5%. Overall, system wide boardings increased this quarter by 6.8% compared to last year. Overall revenue this quarter increased 12.6% from last year. It is estimated that 8.7% of the 12.6% increase in revenue can be attributed to the fare increase.

Historical Boardings & Revenue



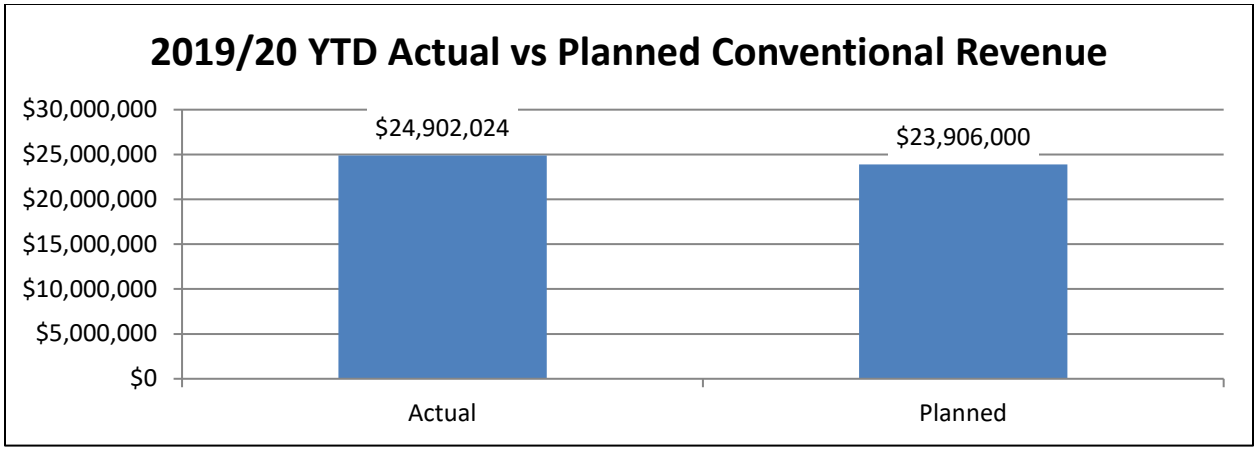


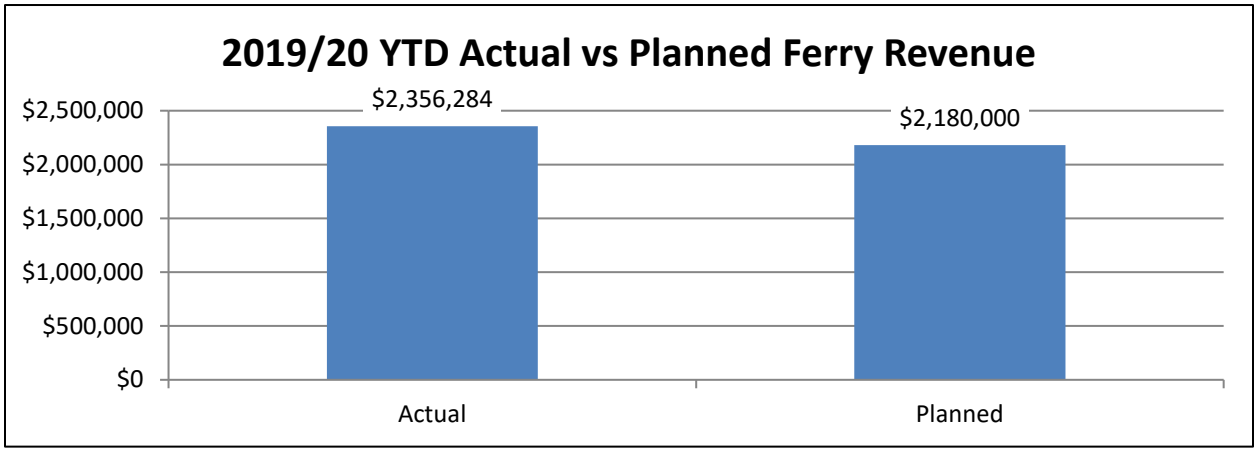

Access-A-Bus Boardings & Revenue - Q3
100,000
80,000
60,000
40,000
20,000
0
$100,000
$80,000
$60,000
$40,000
$20,000
$0
$66.3k
$66.k
$68.9k
$66.7k
$68.3k
42.4k
42.6k
43.7k
47.3k
48.k
15/16
16/17
17/18
18/19
19/20
Boardings
Revenue

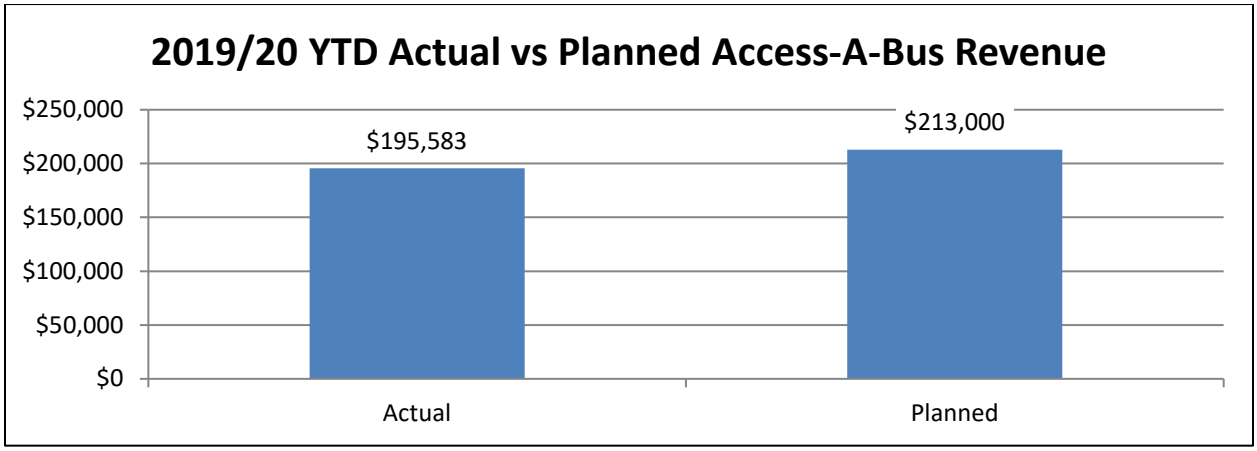

Halifax Transit Boardings & Revenue - Q3
12 m
10 m
8 m
6 m
4 m
2 m
0 m
$12 m
$10 m
$8 m
$6 m
$4 m
$2 m
$0 m
$8.87 m
$8.54 m
$8.53 m
$8.84 m
$9.96 m
6.99 m
6.81 m
6.9 m
7.4 m
7.9 m
15/16
16/17
17/18
18/19
19/20
Boardings
Revenue

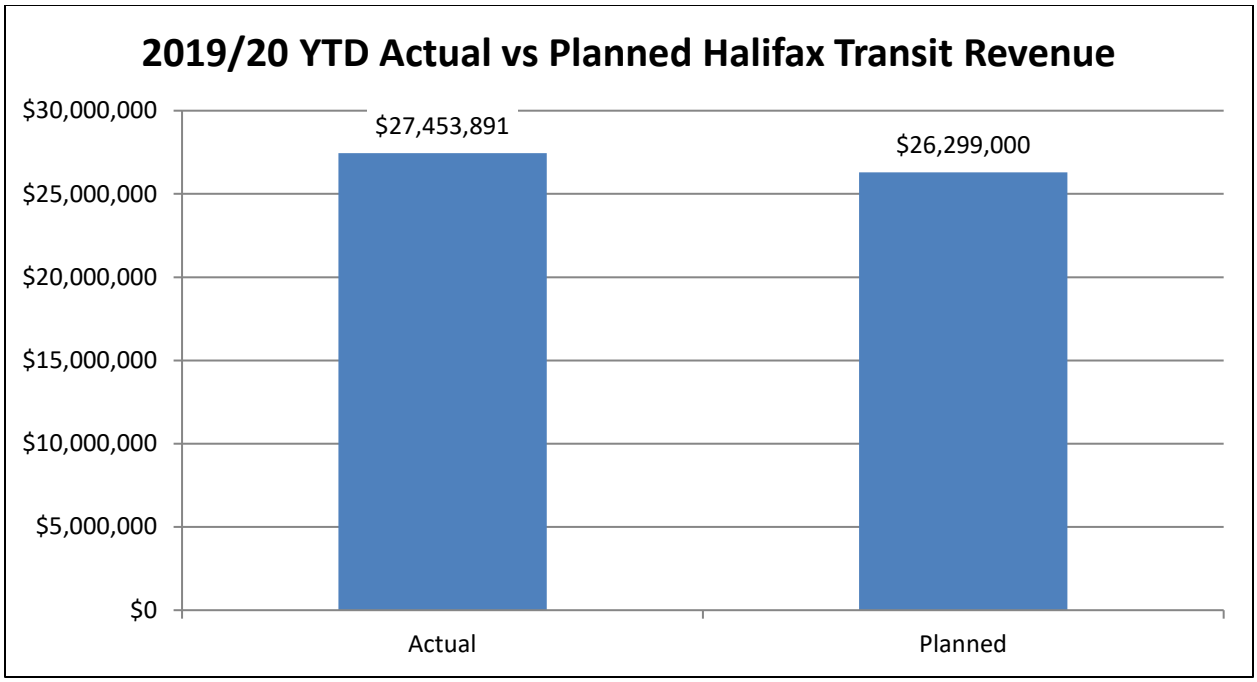
Revenue – Actual vs. Planned

The following charts provide an indication of how much revenue has been generated by each service type and by Halifax Transit in comparison to the planned budget revenue. Year to date Conventional revenue in the third quarter increased 9.2% from this time last year and is trending 4.2% above the planned amount. Ferry revenue to date increased 4.1% and is trending 8.1% above the planned amount. Access-A-Bus revenue to date has decreased 6.6% and is trending 8.2% below the planned amount. Overall revenue to date has increased 8.6% from this time last year and stands 4.4% higher than the planned amount.





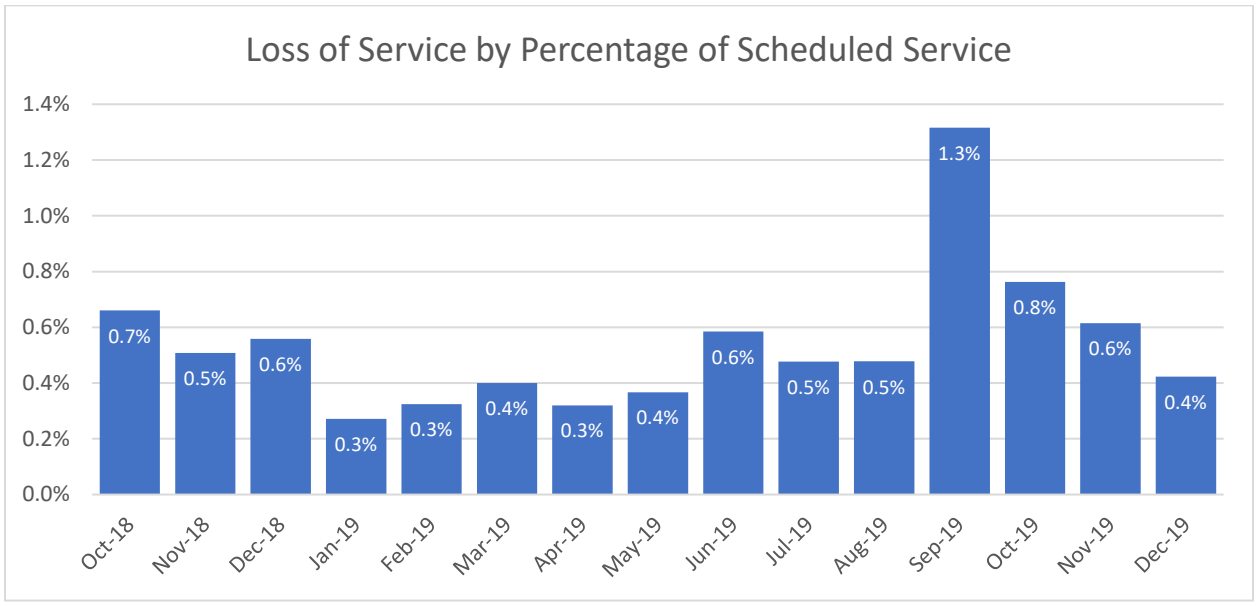




Loss of Service

Loss of service represents the total number of scheduled bus service hours that were not completed. If a trip was able to be filled or partially filled by a standby bus, that time would not be included in this figure.

In the third quarter, the total loss of service was 1272 hours and 28 minutes, which is 0.6% of the quarterly revenue hours. The table below shows the total loss of service for each month.September 2019 figures do not include service lost due to Hurricane Dorian.

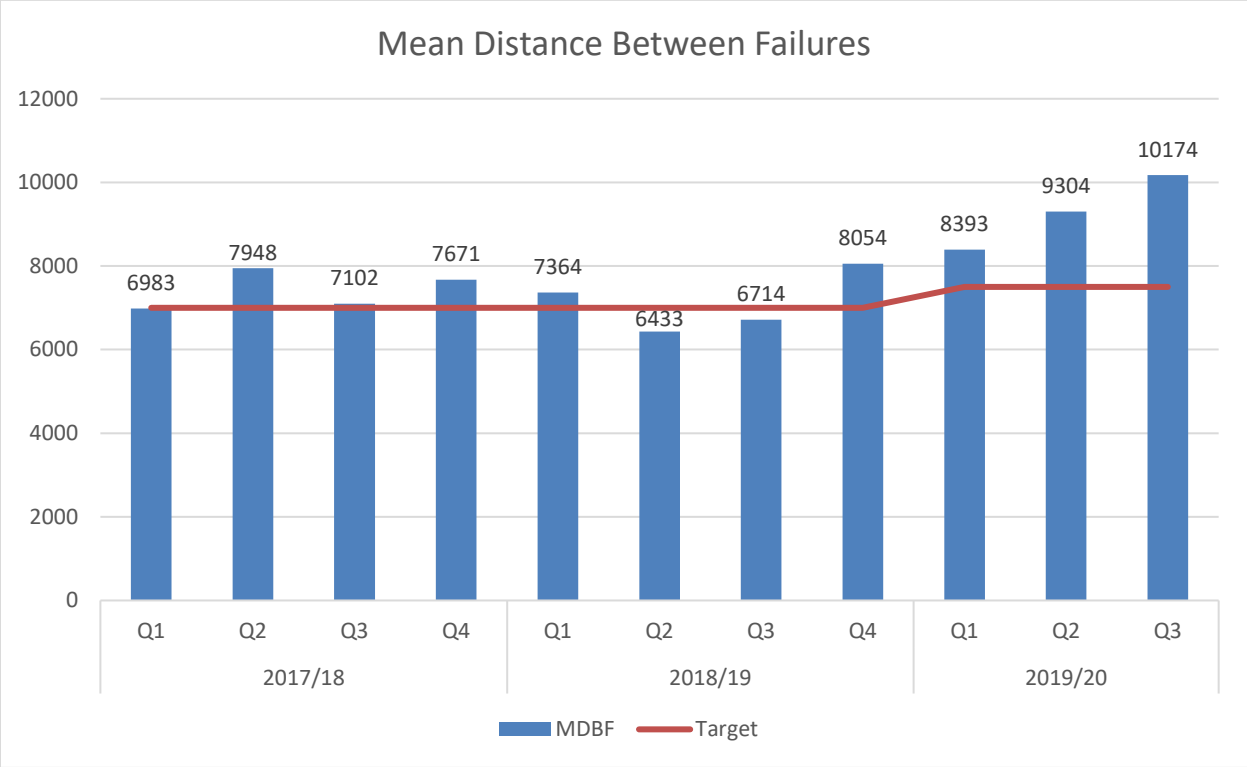


Mean Distance Between Failures

Halifax Transit's Mean Distance Between Failures (MDBF) is the distance in kilometres covered between failures. CUTA references the Federal Transit Administration's definition of failures which states that there are two classes of failures. The first being major mechanical system failures, which is the "failure of some mechanical element of the revenue vehicle that prevents the vehicle from completing a scheduled revenue trip or from starting the next scheduled revenue trip because actual movement is limited or because of safety concerns." The second type is other mechanical system failures which is the "failure of some other mechanical element of the revenue vehicle that, because of local agency policy, prevents the revenue vehicle from completing a scheduled revenue trip or from starting the next scheduled revenue trip even though the vehicle is physically able to continue in revenue service". Therefore, the MDBF is equal to the number of instances whereby a failure resulted in a change-off of the bus or service being lost. This metric does not consider failures resulting from passenger-related events (i.e. sickness on the bus), farebox defects or accident damages as they do not impede the scheduled revenue trips, which aligns with other transit authorities surveyed. Due to the nature of the data sources, Halifax Transit is looking to improve the accuracy of this number by removing failures that were logged, but resulted in "no fault found". Currently, the reported number does include these items.

Bus Maintenance had set a target of 7,500 kms for 2019/20. The target for this KPI shall be revisited on annual basis to promote continuous improvement, which may be achieved by implementation and support of quality and preventative maintenance initiatives.

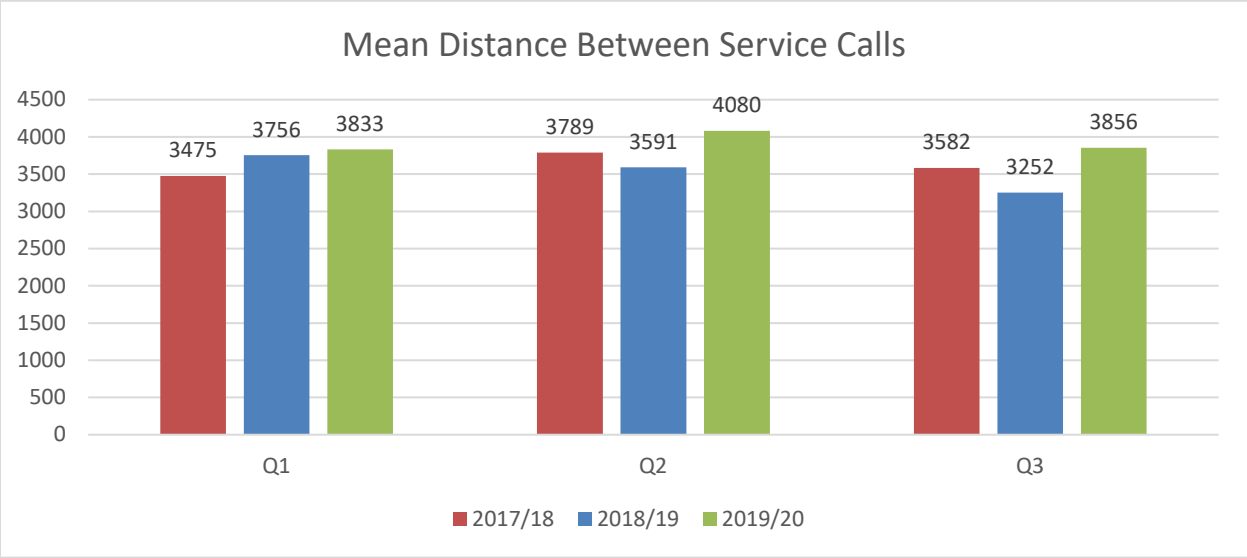
For the third quarter of 2019/20, the MDBF for Conventional transit is 10,174 kms. This is equivalent to a 52% improvement from the third quarter of the previous year. Bus Maintenance will continue to monitor this KPI and further develop quality initiatives to decrease aftertreatment and cooling system defects.



Mean Distance Between Service Calls

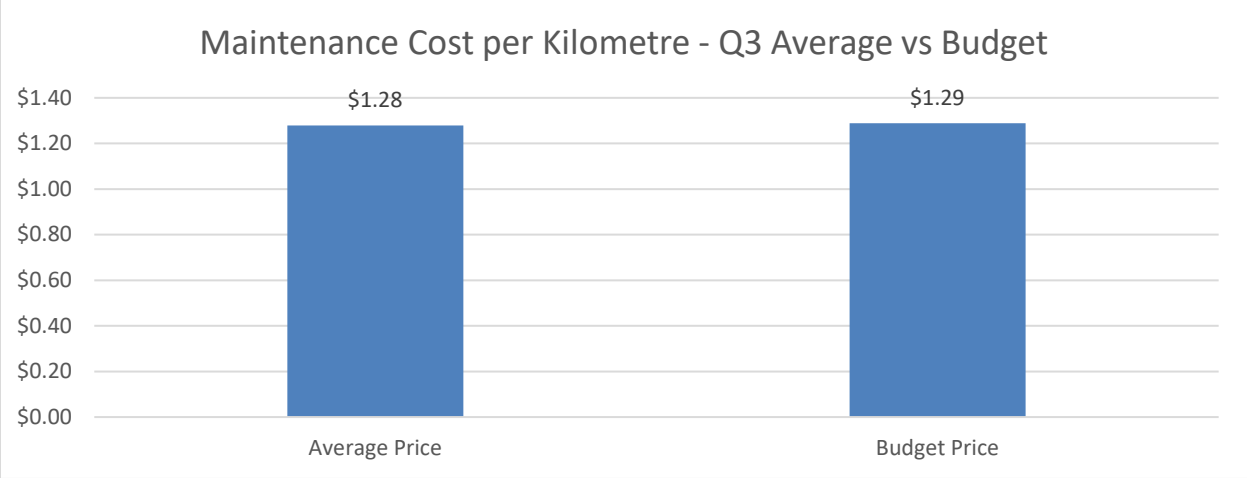
Mean Distance Between Service Calls (MDBS) reflects the average distance in kilometres covered between maintenance service calls. This metric includes all instances of service calls, including issues with secondary equipment, passenger-related events and damages to the bus resulting from minor accidents. Bus Maintenance is continuing to benchmark this metric in order to provide a target.

For the third quarter of 2019, the MDBS for Conventional transit was 3,856 kms. In comparison to the third quarter of 2018/2019 (3,252), this is an improvement of 19%. For the third quarter of 2019, the MDBS for Access-A-Bus service was 36,436 kms. Bus Maintenance will continue to monitor this metric in order to reduce service calls.



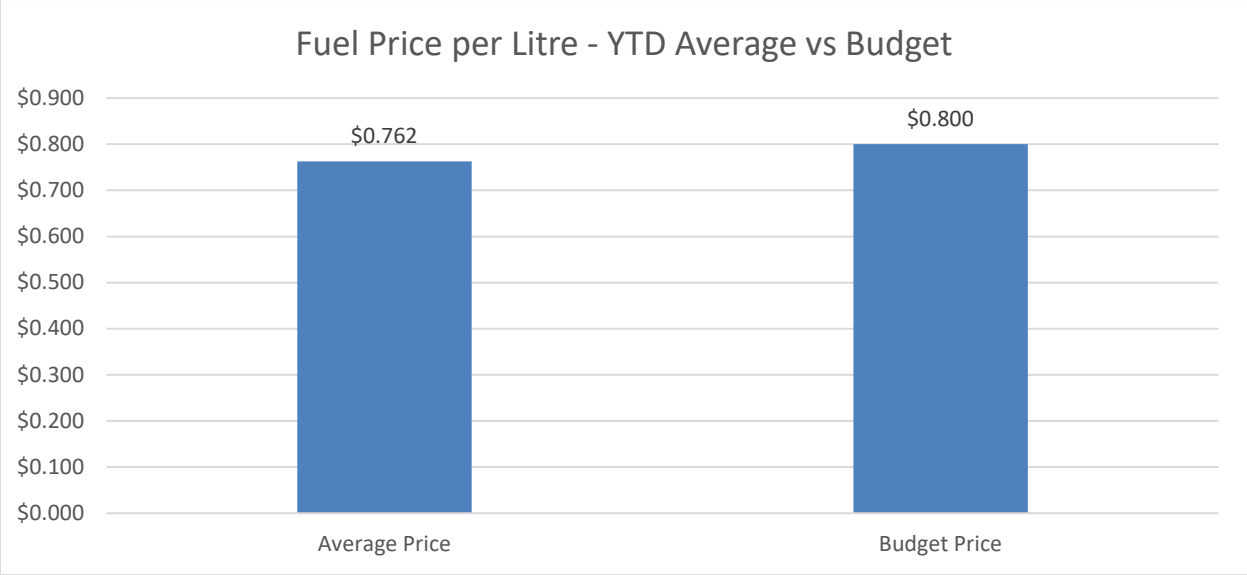
Bus Maintenance Cost – Quarter Average vs Budget

In the third quarter maintenance costs were $1.28/km, while the budgeted maintenance cost was $1.29/km. Therefore, in the third quarter the average cost per km was under budget by $0.01/km. Bus Maintenance will continue to strengthen budgeting processes to improve accuracy of future budgets.



Fuel Price – Year to Date Average vs Budget

The budgeted fuel price for 2019/20 was set at 80 cents/litre. In the third quarter, the average fuel price to date was 76 cents/litre, 4 cents lower than the budgeted cost per litre.

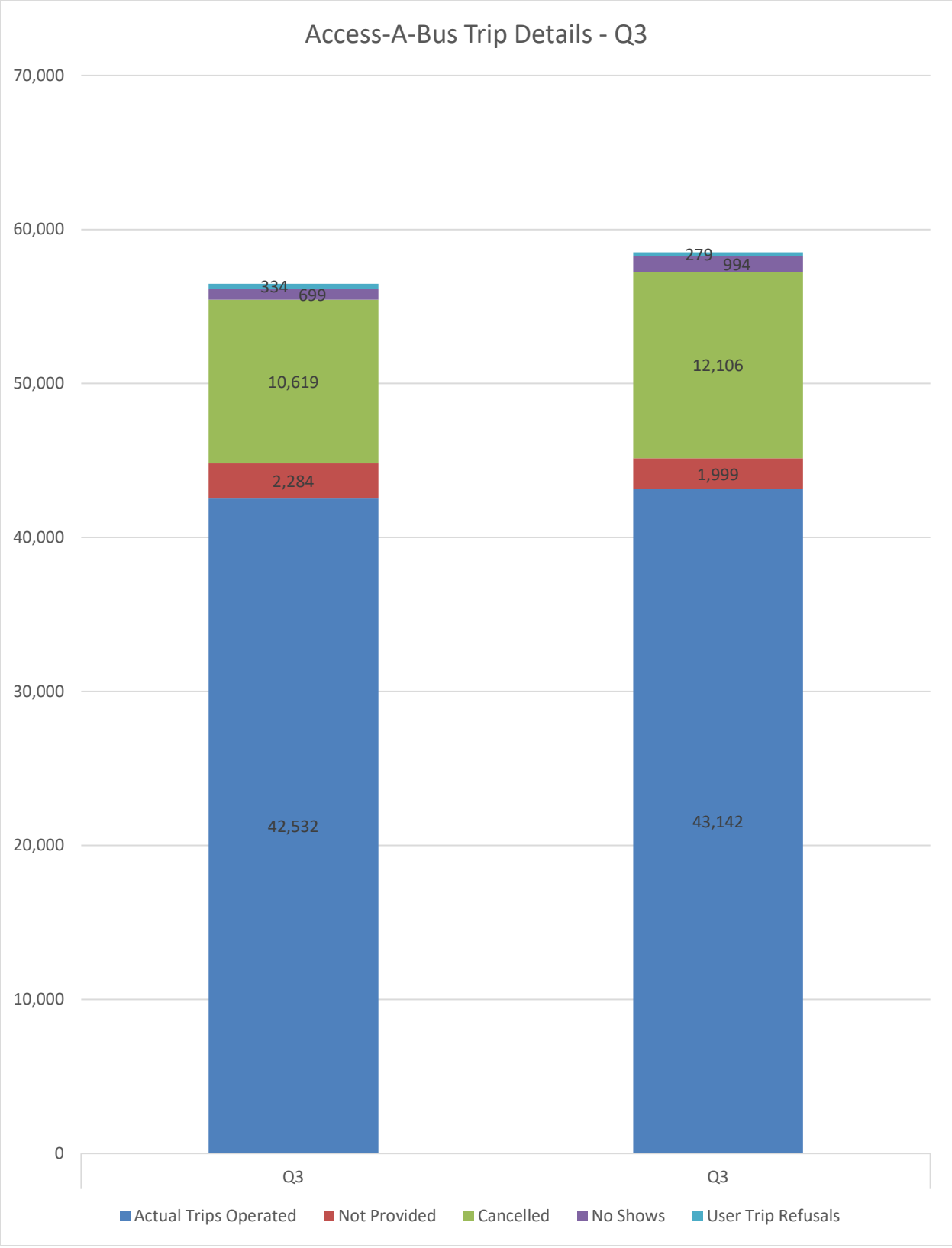


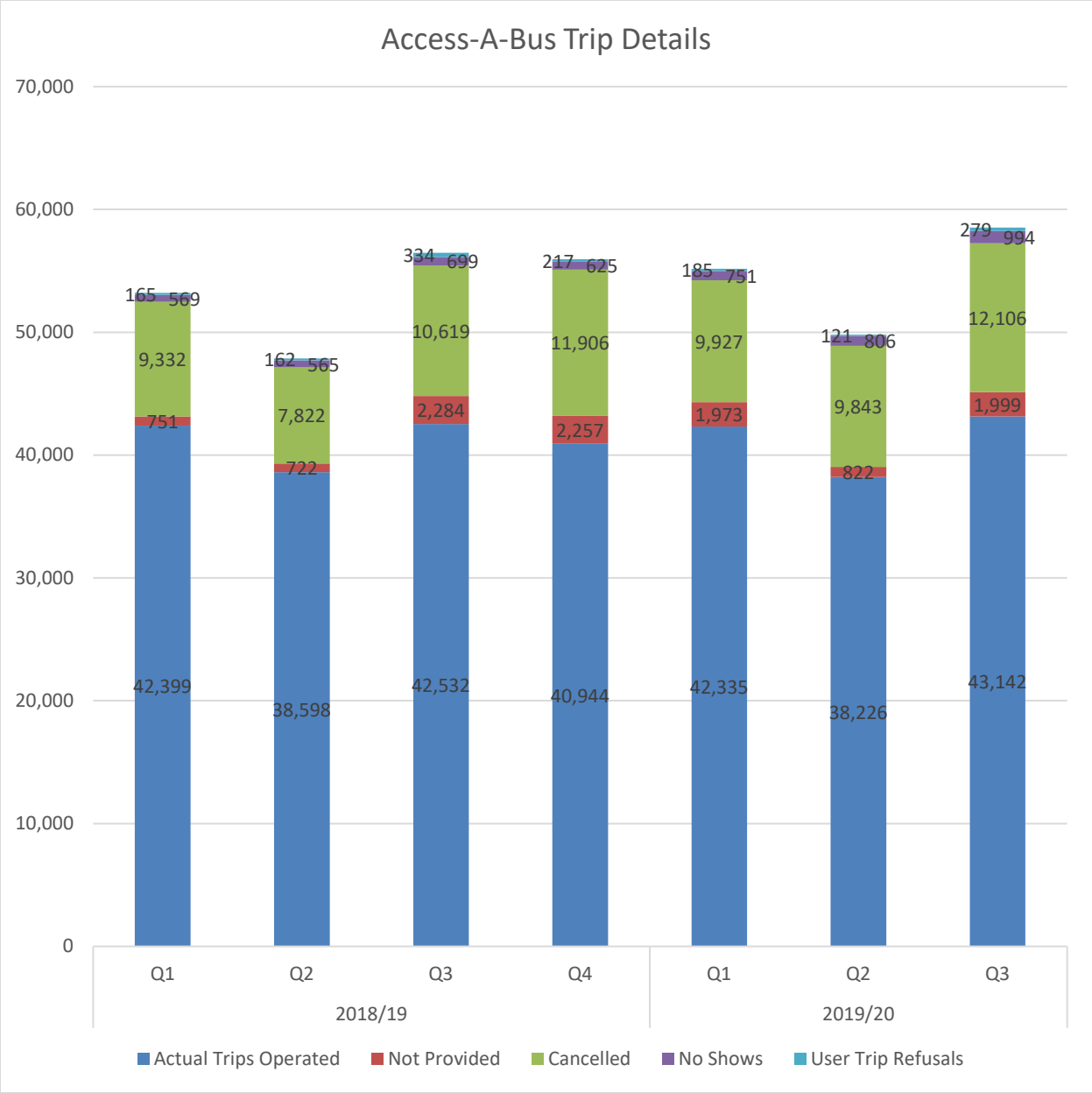
Access-A-Bus Trip Details

Access-A-Bus trip details are tracked monthly to provide an indication of efficiency in Access-A-Bus usage and booking. In April 2018 Access-A-Bus completed a scheduling software upgrade and process improvement review. After introducing these new, standardized processes, scheduling effectiveness has improved. These changes resulted in statistics such as the number of trip cancellations, no shows and errors, being recategorized and therefore, may not be comparable with prior years.

During a more recent review of the reporting processes for Access-A-Bus it was determined that further revision to the reporting categories would more accurately reflect the service and passenger experience and would better align with the key performance indicators. The category previously reported as “Waitlisted” will be reported as “Not Provided” and includes requested trips that could not be provided within the quarter. Those trips that were previously reported as “Not Provided” were erroneus and are now removed from the requested trip totals. A new category has been included; “User Trip Refusals”, and includes any trips where the customer declined a booking that was offered within a half hour of their desired trip time. Analysis and interpretation of the new data set resulting from the 2018 software upgrade is ongoing. Partnership with the vendor continues and may result in future reporting changes, all in an effort to convey the most accurate and meaningful performance statistics possible.

In the third quarter of 2019/20, 610 more trips were operated compared to third quarter last year, an increase of 1.4%. The trips that were not provided decreased by 12%, compared to this quarter last year.

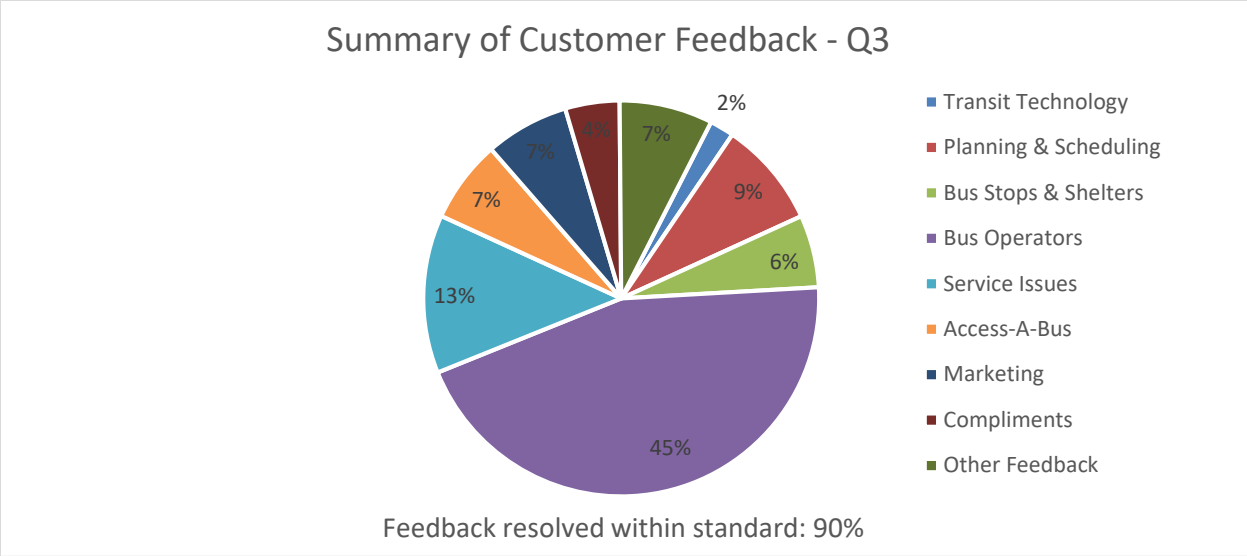

Access-A-Bus Trip Details - Q3
70,000
60,000
50,000
40,000
30,000
20,000
10,000
0
334
699
10,619
2,284
42,532
279
994
12,106
1,999
43,142
Q3
Q3
Actual Trips Operated
Not Provided
Cancelled
No Shows
User Trip Refusals

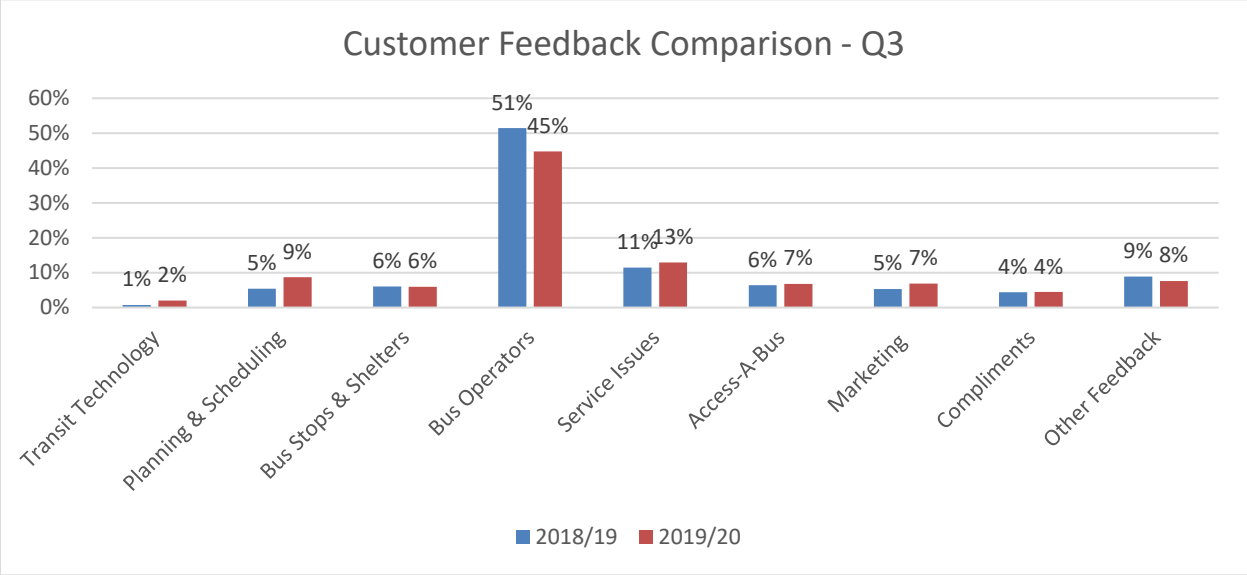


Customer Service – All Services

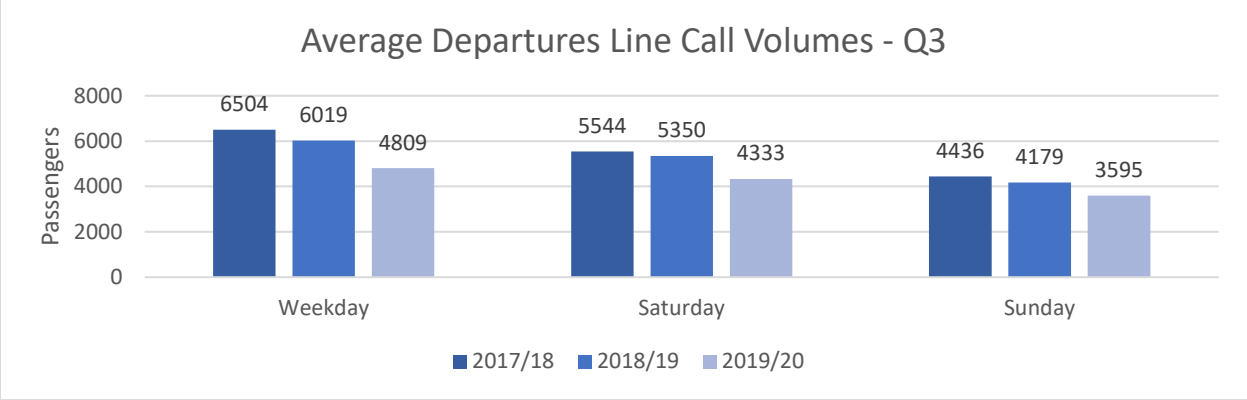
Customer service statistics are measured monthly using the Hansen Customer Relationship Management software along with Crystal Reports. Feedback is first categorized by subject matter and then divided into two categories: feedback resolved within service standard and feedback resolved outside service standard. The service standard varies depending on the subject matter.

In the third quarter, 51% of feedback received was related to bus operators, the remaining 49% is comprised of feedback regarding service issues, planning and scheduling, bus stops and shelters, marketing, compliments and other miscellaneous comments. Halifax Transit aims to address 90% of feedback within service standard. This quarter 90% of customer feedback was resolved within standard.





Call volumes to the Departures Line (902-480-8000) are displayed by day of the week. In the third quarter of 2019/20, average call volumes were lower than this time last year for weekdays as well as for Saturdays and Sundays.



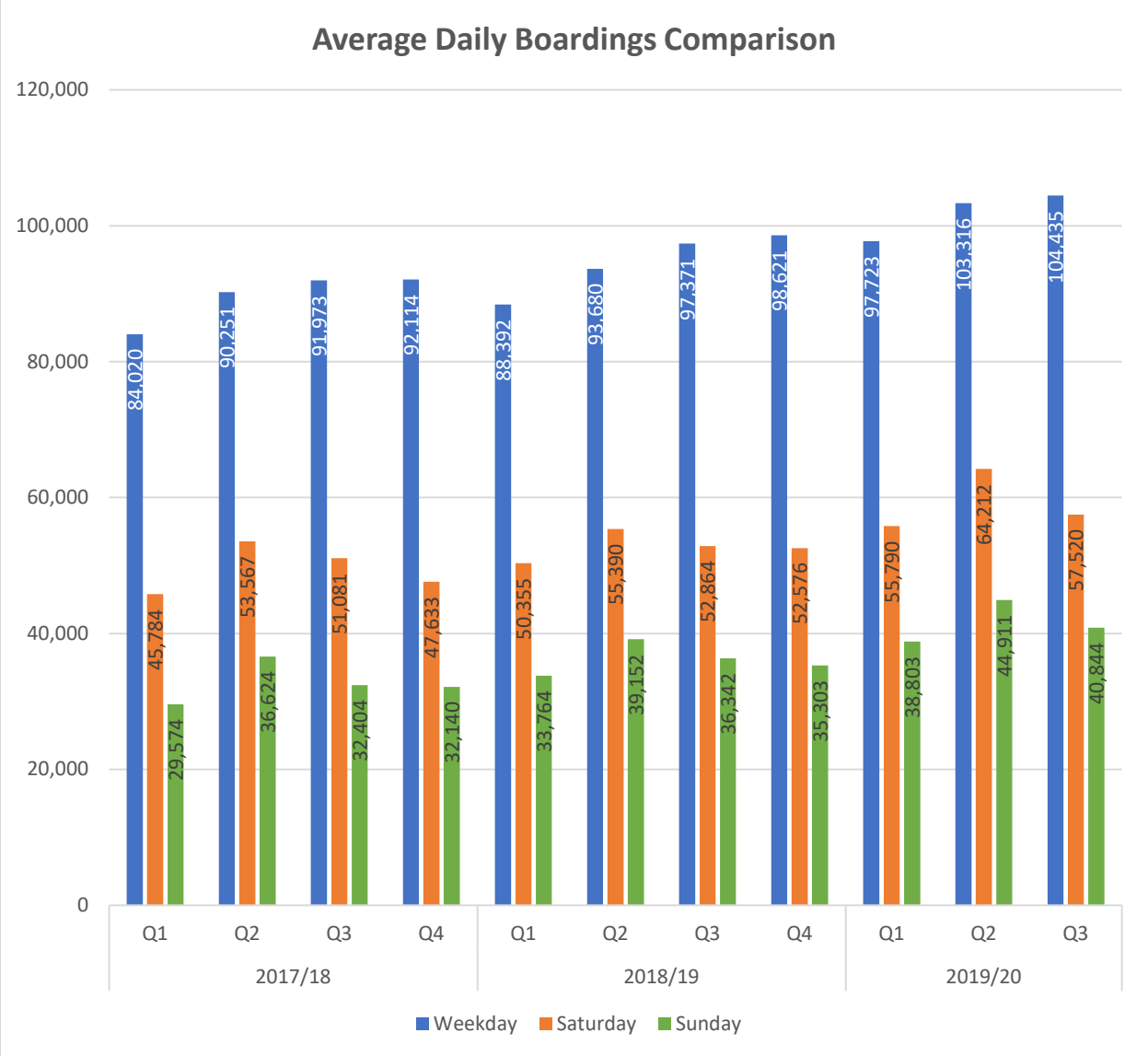
Passenger Boardings & Utilization

Automatic Passenger Counter (APC) data is now being been used to report bus ridership statistics. The APCs provide data within a 90% degree of accuracy. Boardings by Route demonstrate passenger usage during the past quarter. APC data has been collected since September 2016. The standard deviation is included to demonstrate the degree of variance in boardings from the daily average passenger count.

As large-scale service adjustments were implemented mid third quarter, on November 25, some routes have since been discontinued. Instances were route numbers have been reused post implementation are labelled ‘old versus ‘new’.

Average weekday boardings in the third quarter were 104,435 ± 13,436 (12.9% variance). Average Saturday boardings this quarter were 57,520 ± 7,213 (12.52% variance). Average Sunday boardings this quarter were 40,844 ± 2,759 (6.8% variance).

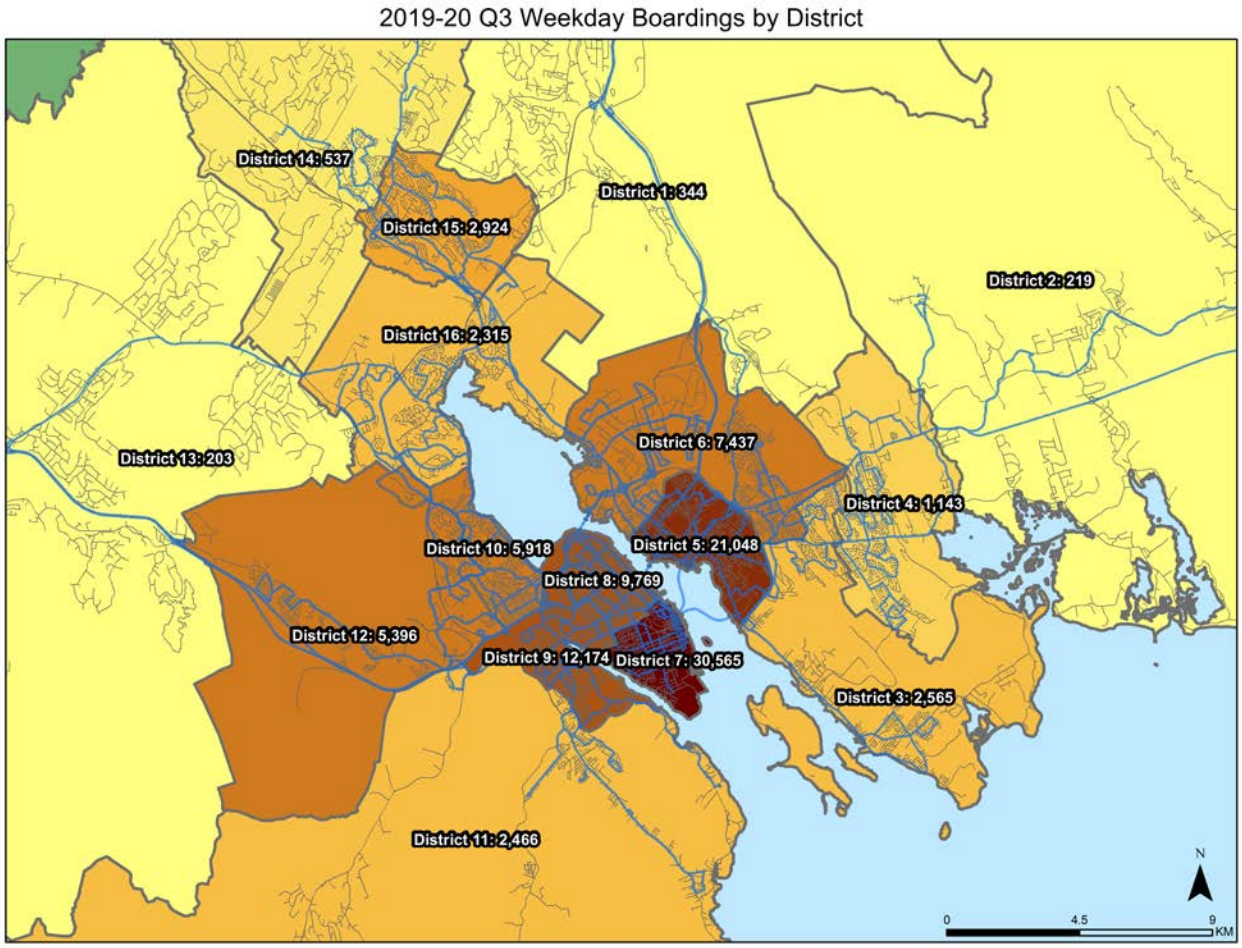
Average Daily Boardings by Service Day



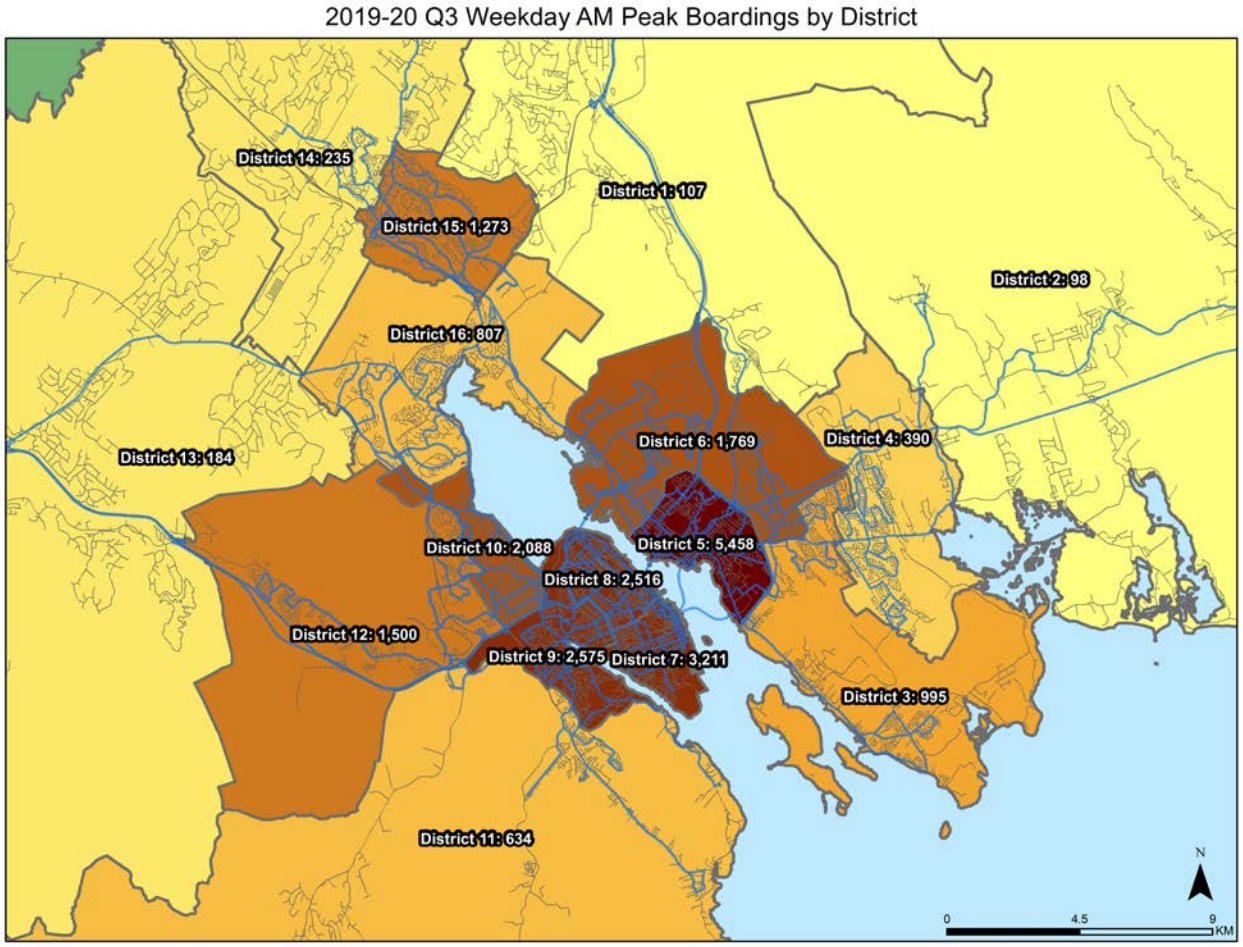
Boardings by District

To assist in visualizing where ridership demands exist, boardings have been mapped by district. The all-day boardings map illustrates typical boardings over an entire service day, whereas the AM Peak Period map represents boardings during the morning peak period only and therefore generally illustrates passenger origins.

Weekday Boardings by District – All Day



Weekday Boardings by District – AM Peak Period

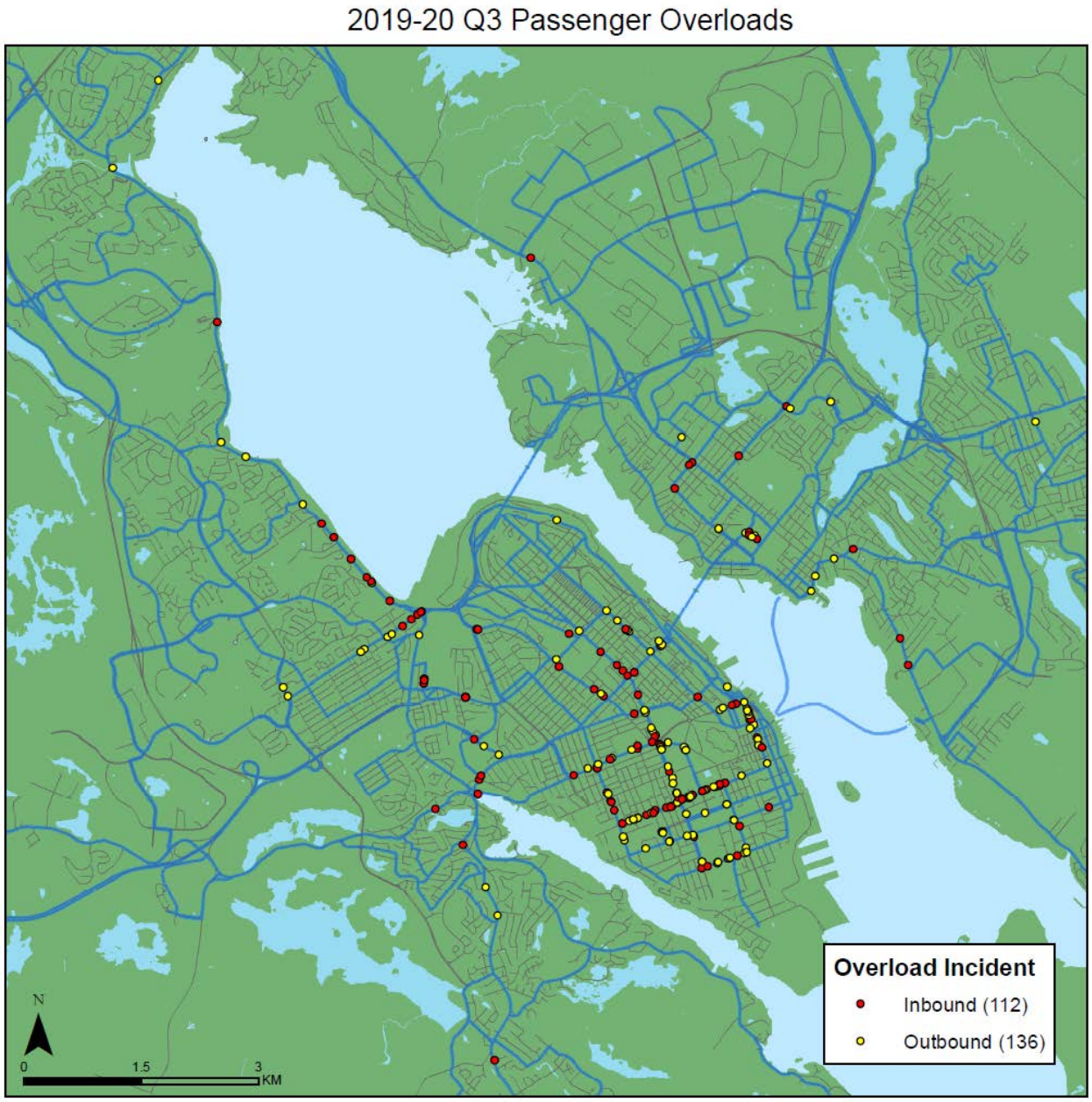


Passenger Overloads

Halifax Transit tracks overloads that are reported to help match scheduling requirements to passenger demands. Work is underway to improve the reporting process to ensure the data provides a more accurate reflection of actual conditions. All overloads may not be included, as many go unreported for a number of reasons.

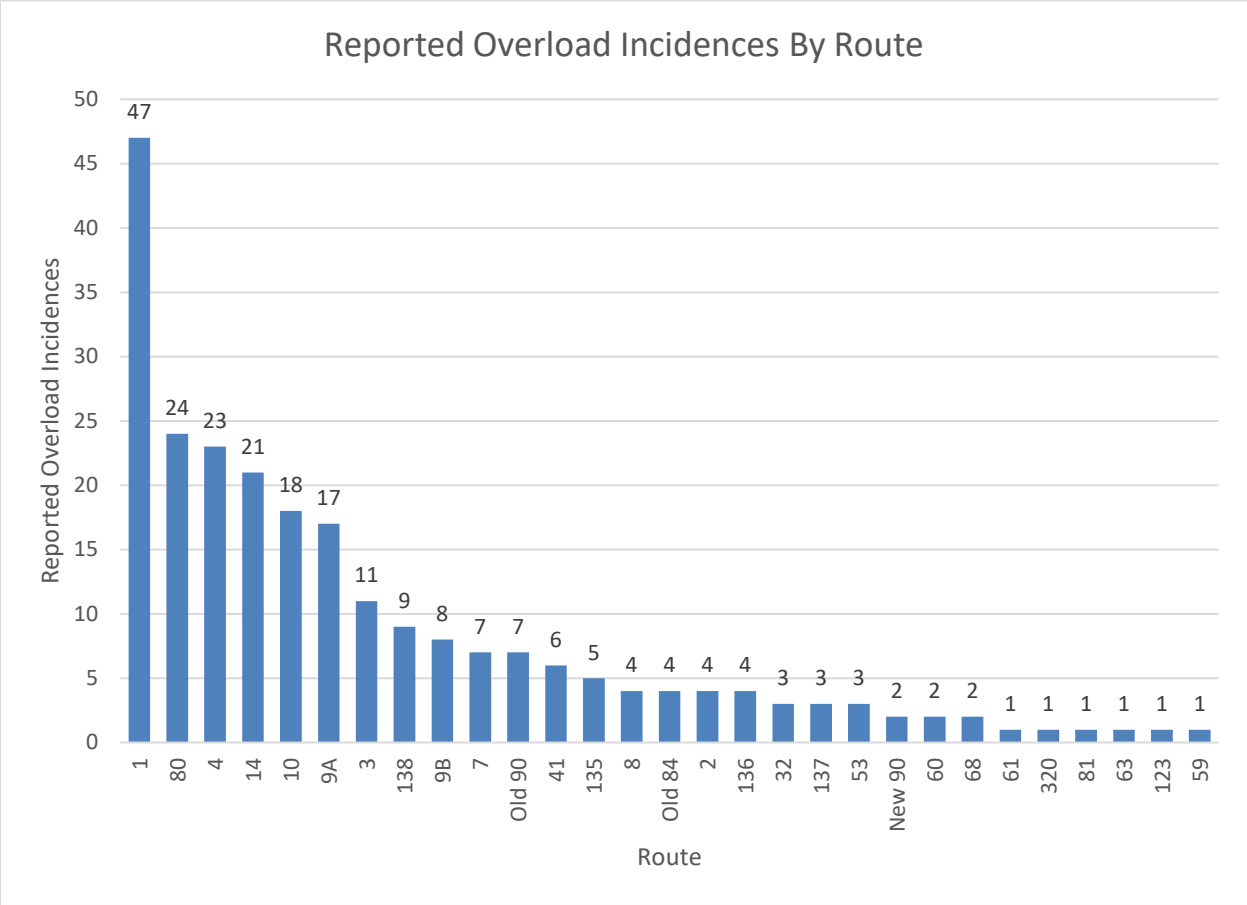
Passenger Overloads by Area

The figure below shows the locations of reported overloads during Q3.



Passenger Overloads by Route

The following graph shows overloaded routes during the quarter.



Passengers per Hour

Passengers per hour measures the volume of passengers carried per service hour by route. Due to differences in service model/design, Express Routes are measured instead by passengers per trip. Ridership fluctuates significantly by season and therefore figures are compared to the same quarter in the previous year. Conventional route targets vary by time of day and are not illustrated at this time as data is being presented over the entire service day only. Express routes have a ridership target of 20 passengers per trip, while Regional Express Routes have a target of 15 passengers per trip.

Boardings & Passengers per Hour

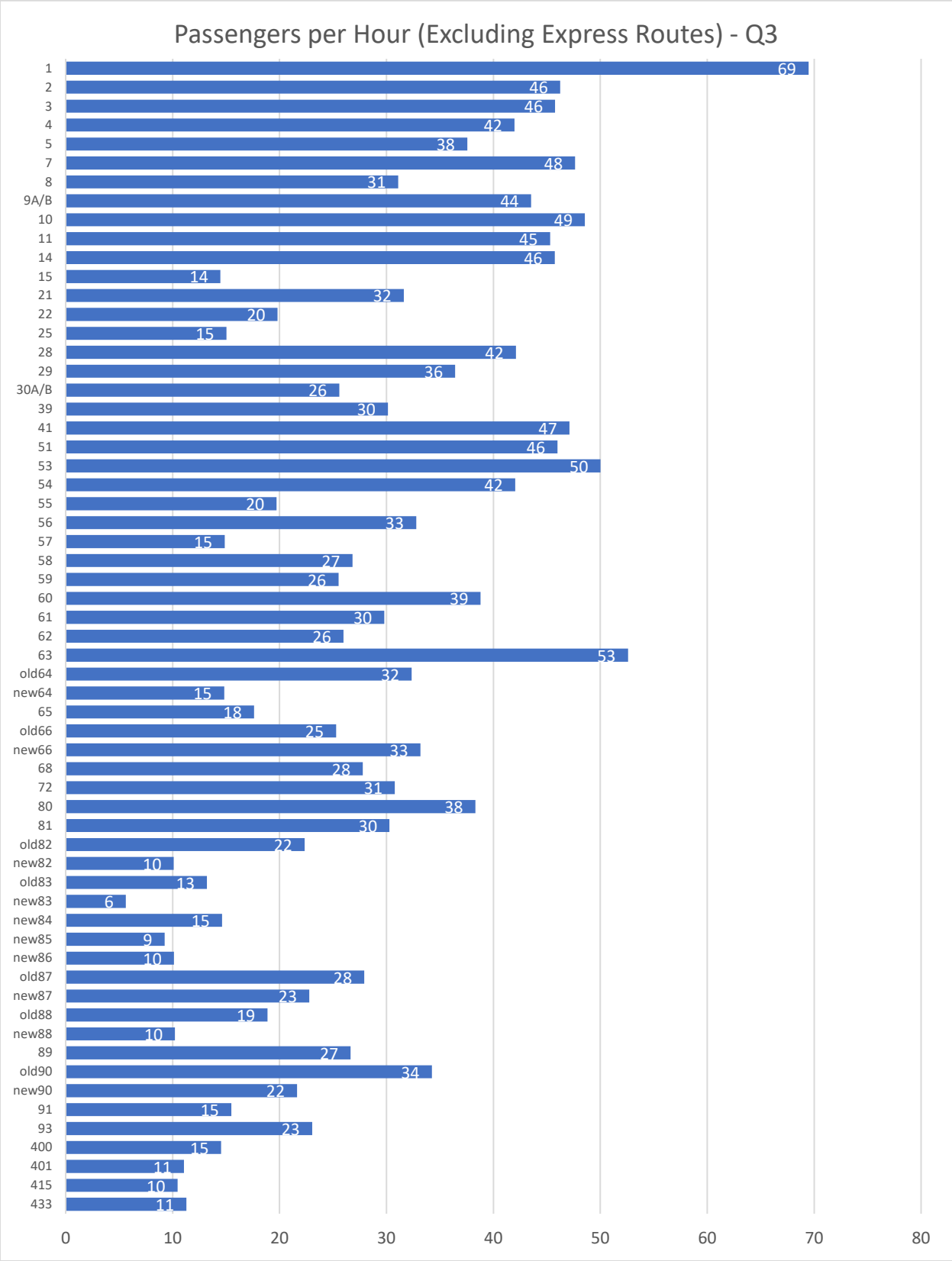
Q3 Comparison - Average Daily Boardings by Route												
Route	Weekday				Saturday				Sunday			
	18/19		19/20		18/19		19/20		18/19		19/20	
	Boardings	Pass/Hr	Boardings	Pass/Hr	Boardings	Pass/Hr	Boardings	Pass/Hr	Boardings	Pass/Hr	Boardings	Pass/Hr
1	10,361	66	10,907	69	7,978	70	8,398	75	5,283	61	5,400	51
2	4,315	40	4,966	46	3,709	37	4,199	42	2,297	30	2,599	29
3	6,208	41	6,980	46	3,114	36	3,590	41	3,360	36	3,876	33
4	4,950	39	5,383	42	2,049	41	2,196	44	1,759	39	1,816	33
5	130	32	143	38								
7	5,216	45	5,469	48	3,216	35	3,593	38	1,787	34	2,202	34
8			4,385	31			2,126	40			2,518	19
9A/B	6,740	39	7,391	44	3,580	49	3,902	53	2,886	41	3,041	35
9A	4,567	41	5,024	45	1,704	49	1,907	54	1,254	37	1,350	32
9B	2,173	36	2,367	40	1,876	50	1,994	53	1,632	45	1,691	37
10	5,056	47	5,340	49	3,259	44	3,732	50	2,009	41	2,202	37
11	111	50	115	45								
14	2,919	45	2,988	46	1,299	39	1,566	46	1,147	40	1,262	34
15	196	13	217	14	100	10	122	13	137	11	169	11
21	972	32	958	32	766	22	811	24	566	32	587	26
22	651	21	649	20	432	13	466	14	397	12	391	9
25			343	15			167	10			199	15
28	1,373	34	1,589	42	1,296	32	1,461	35	682	37	753	32
29	3,053	34	3,346	36	1,789	29	2,020	32	1,348	23	1,450	20
30A/B	825	23	929	26	497	14	576	17	330	16	405	17
30A	446	24	501	27	257	15	292	17	150	13	179	14
30B	378	21	428	24	240	14	284	16	181	21	226	21
39	1,199	27	1,374	30	815	16	967	19	389	18	426	16
41	1,505	46	1,590	47								
51	1,095	45	1,103	46	532	32	515	32	312	34	309	27
53	1,235	47	1,344	50	699	46	722	47	337	41	377	37
54	816	38	907	42	508	32	452	29	279	28	260	21
55	393	18	429	20	245	16	283	18	156	10	188	10
56	985	30	1,063	33	1,099	31	1,061	30	697	22	731	19
57	546	13	612	15	244	8	263	9	142	8	157	7
58	744	26	753	27	468	25	483	26	377	22	368	17

59	1,936	25	2,013	26	730	31	756	33	531	23	541	19
60	2,710	35	2,967	39	1,717	43	1,822	45	1,157	41	1,390	41
61	2,228	29	2,307	30	1,007	26	1,266	32	880	24	1,029	22
62	818	26	823	26	544	24	528	23	268	17	290	15
63	810	47	894	53								
Old 64	567	31	608	32								
New 64			582	15								
65	248	15	294	18	78	6	96	7	44	7	58	8
Old 66	1,424	23	1,562	25	531	33	527	33	365	23	363	18
New 66			1,016	33			465	29			337	18
68	1,326	27	1,350	28	759	26	756	26	530	19	546	15
72	1,409	31	1,433	31	1,003	21	1,064	23	509	19	512	15
80	4,218	33	4,798	38	3,351	32	3,872	37	2,605	29	2,852	25
81	1,433	27	1,608	30								
Old 82	937	20	1,041	22	201	9	234	11	90	8	102	7
New 82			206	10			147	9			118	6
Old 83	149	11	172	13	76	8	98	11	37	8	43	8
New 83			78	6			69	7			51	4
New 84			874	15			318	9			247	7
New 85			127	9			100	12			74	8
New 86			154	10			114	7			82	5
Old 87	1,210	26	1,284	28	1,050	21	1,159	24	478	16	486	13
New 87			1,266	23			790	15			457	13
Old 88	92	15	107	19	63	12	72	14	22	10	21	7
New 88			136	10			118	8			75	5
89	461	21	571	27								
Old 90	1,351	28	1,665	34	743	16	1,027	22	375	15	492	15
New 90			1,521	22			1,013	16			472	11
91			597	15			259	12			261	8
93			251	23								
400	200	16	184	15	68	10	80	11	57	7	57	6
401	137	11	136	11								
415			60	10								
433	51	9	64	11								
Alderney	2,667	89	2,935	98	2,776	159	2,863	164	1,272	73	1,093	62
Woodside	2,232	106	2,401	114								

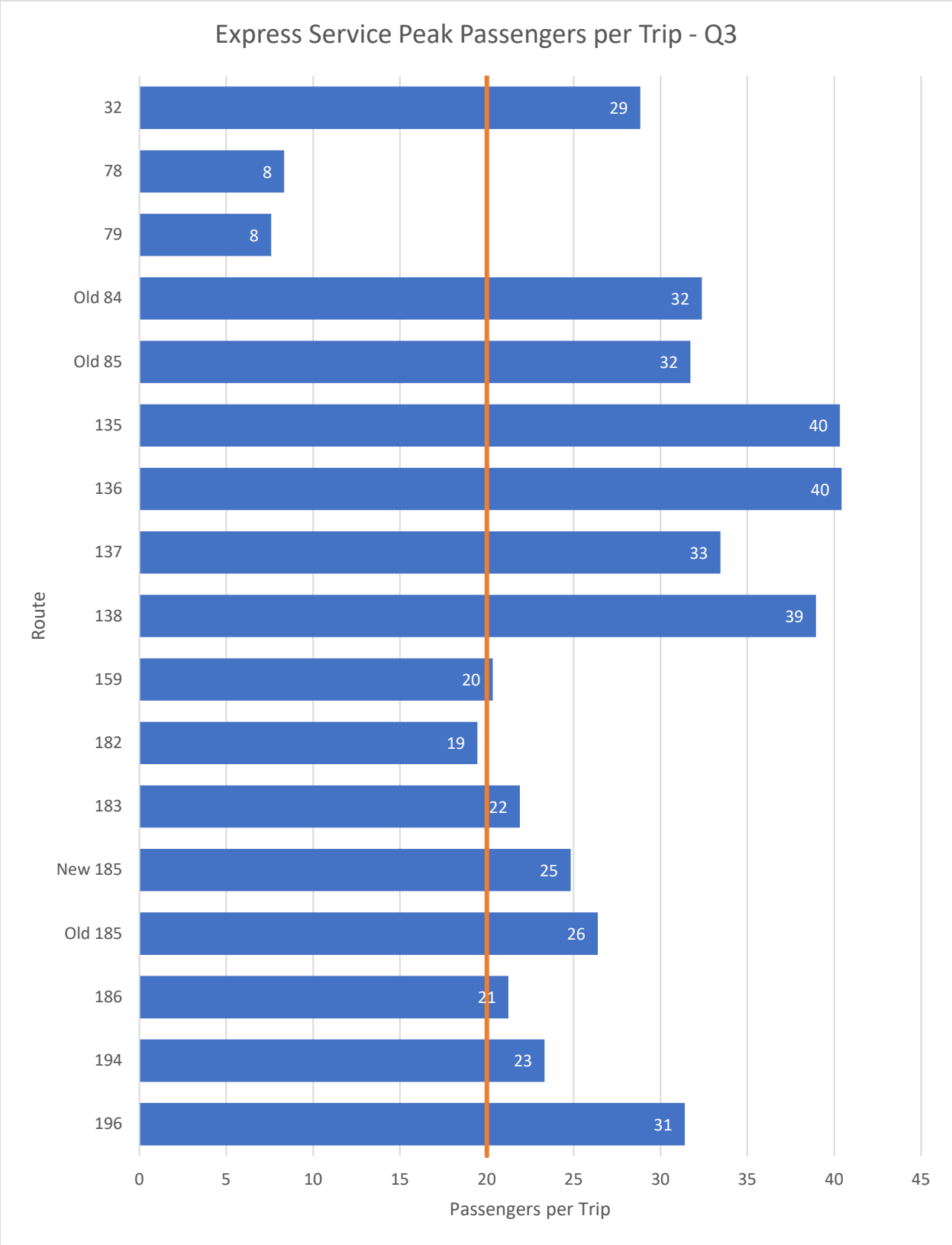
Express Service Peak Boardings and Passengers per Trip

Q3 Comparison - Average Daily Peak Boardings by Express Route				
Route	Weekday			
	18/19		19/20	
	Boardings	Pass/Trip	Boardings	Pass/Trip
32	489	28	501	29
78	94	8	112	8
79	91	8	90	8
Old 84	901	31		
Old 85	111	29		
123	253	20	318	23
135	480	35	555	40
136	531	34	631	40
137	340	29	392	33
138	487	35	530	39
159	719	18	591	20
182			489	19
183			274	22
New 185			802	25
Old 185	1,103	24	622	26
186			244	21
194	142	18	182	23
196	116	30	125	31
320	656	18	185	18
330	416	17	367	18
370	136	10	102	10

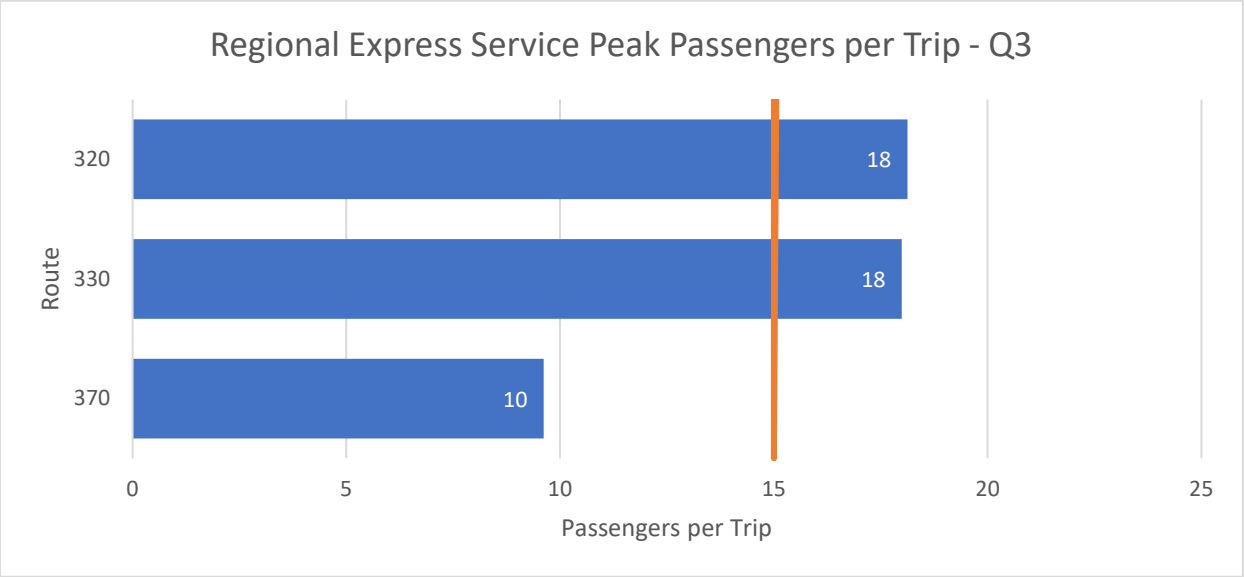
Passengers per Hour by Route



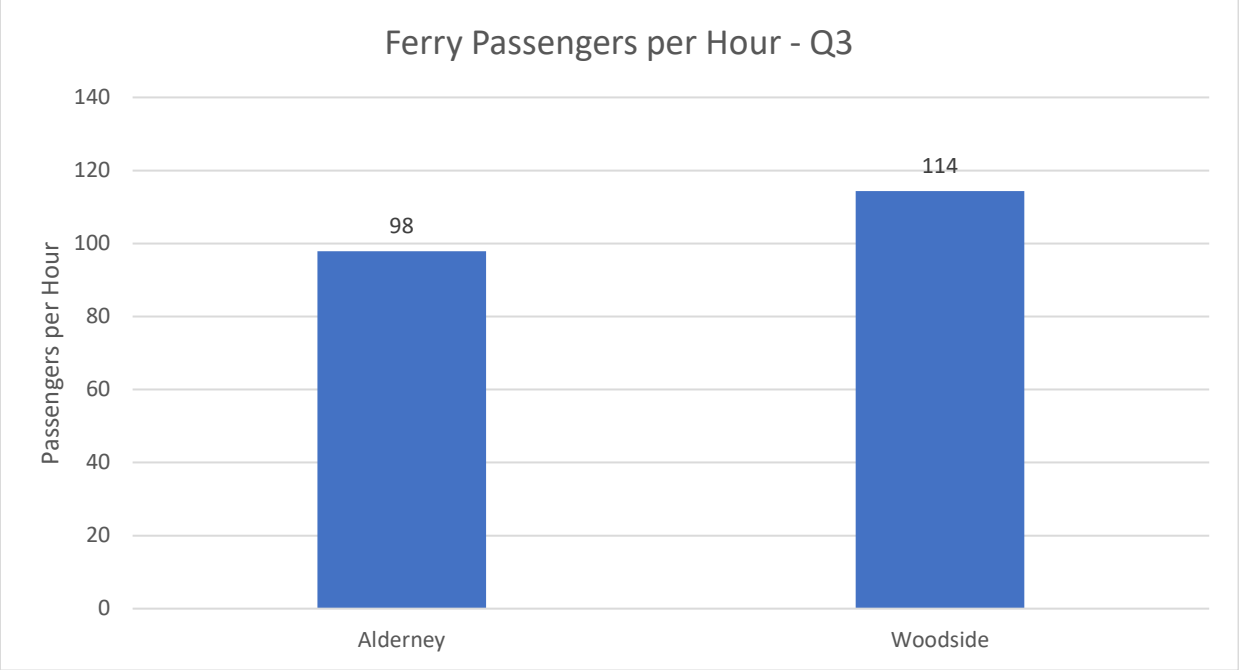
Express Service Peak Passengers per Trip by Route



Regional Express Peak Passengers per Trip by Route



Ferry Passengers per Hour



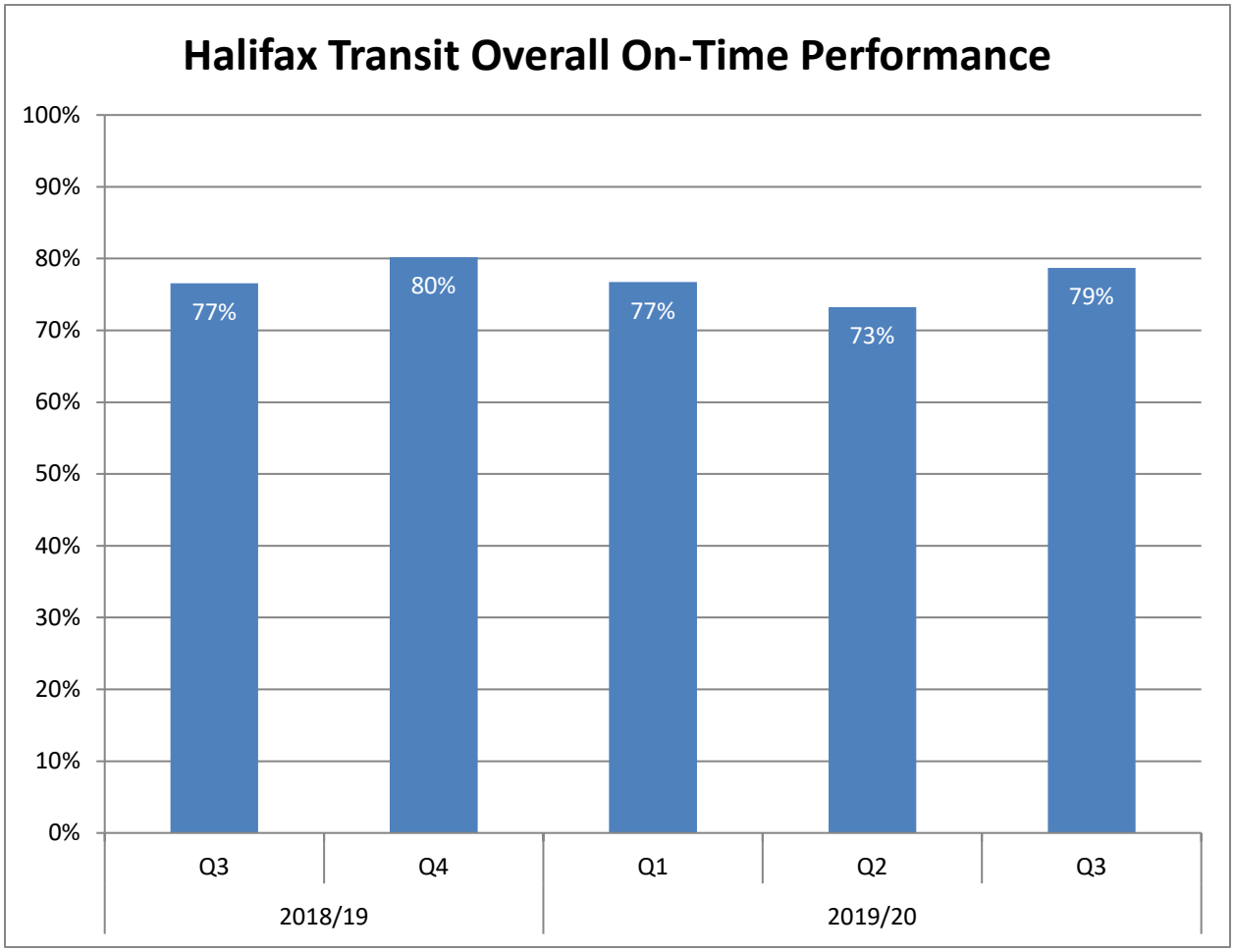
On-Time Performance

On-time performance is a measure of route reliability and is tracked monthly to demonstrate schedule adherence across the network of routes. Terminals and select bus stops along each route are classified as timepoints and have assigned and publicized scheduled arrival times. On-time performance demonstrates the percentage of observed timepoint arrivals that are between one minute early and three minutes late.

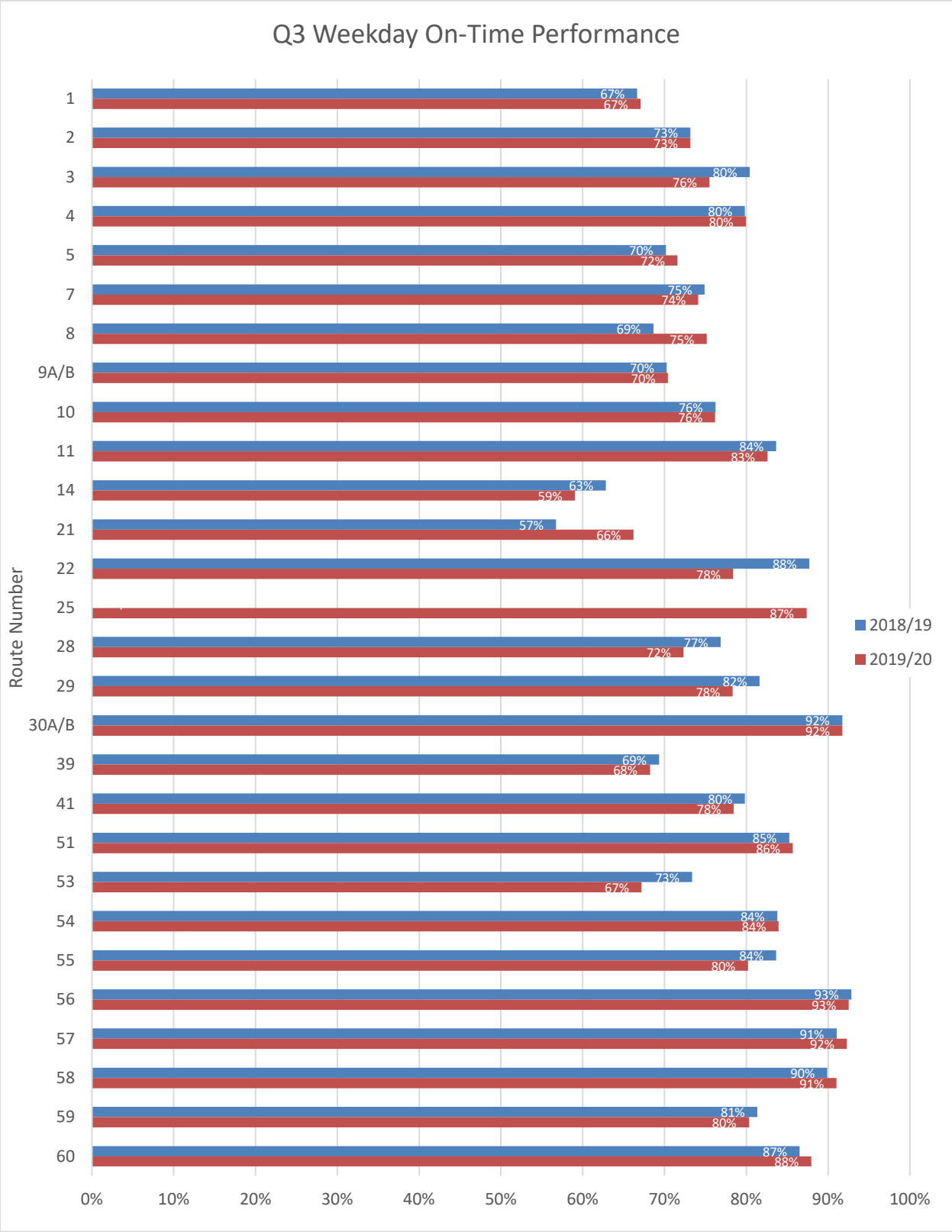
Transit industry standard targets for on-time performance tend to range between 85% and 90%, although service types are not always comparably grouped, nor are schedule adherence definitions consistent between agencies. Halifax Transit will analyze on-time performance across the network in order to establish a benchmark and target for the minimum percentage of trips to depart on time.

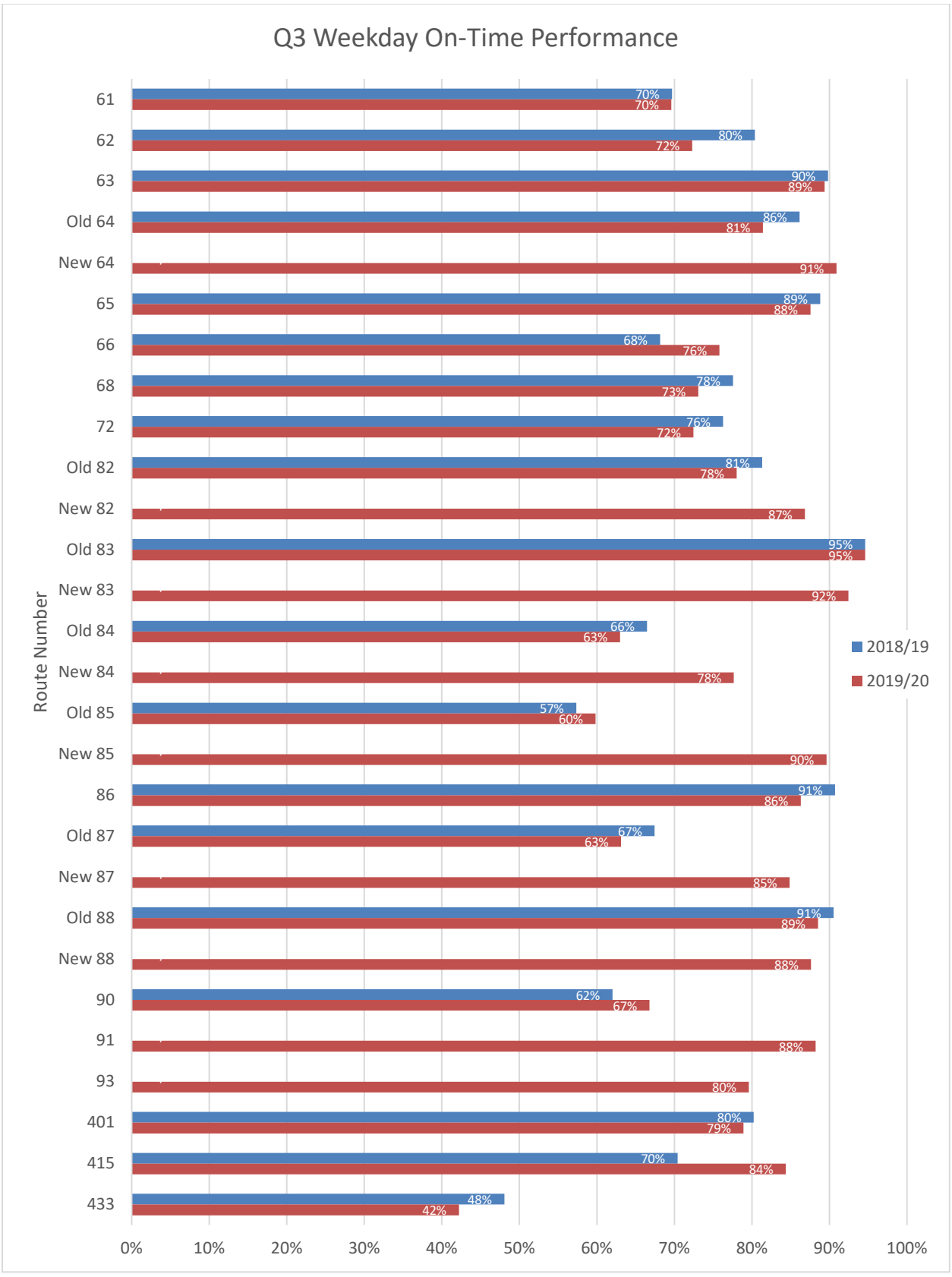
Compared to the third quarter last year, on-time performance improved 2%, from 77% to 79%. This included the implementation of new routes in November 2019, some of which were on new streets where previous transit data was unavailable.

Overall Network On-Time Performance

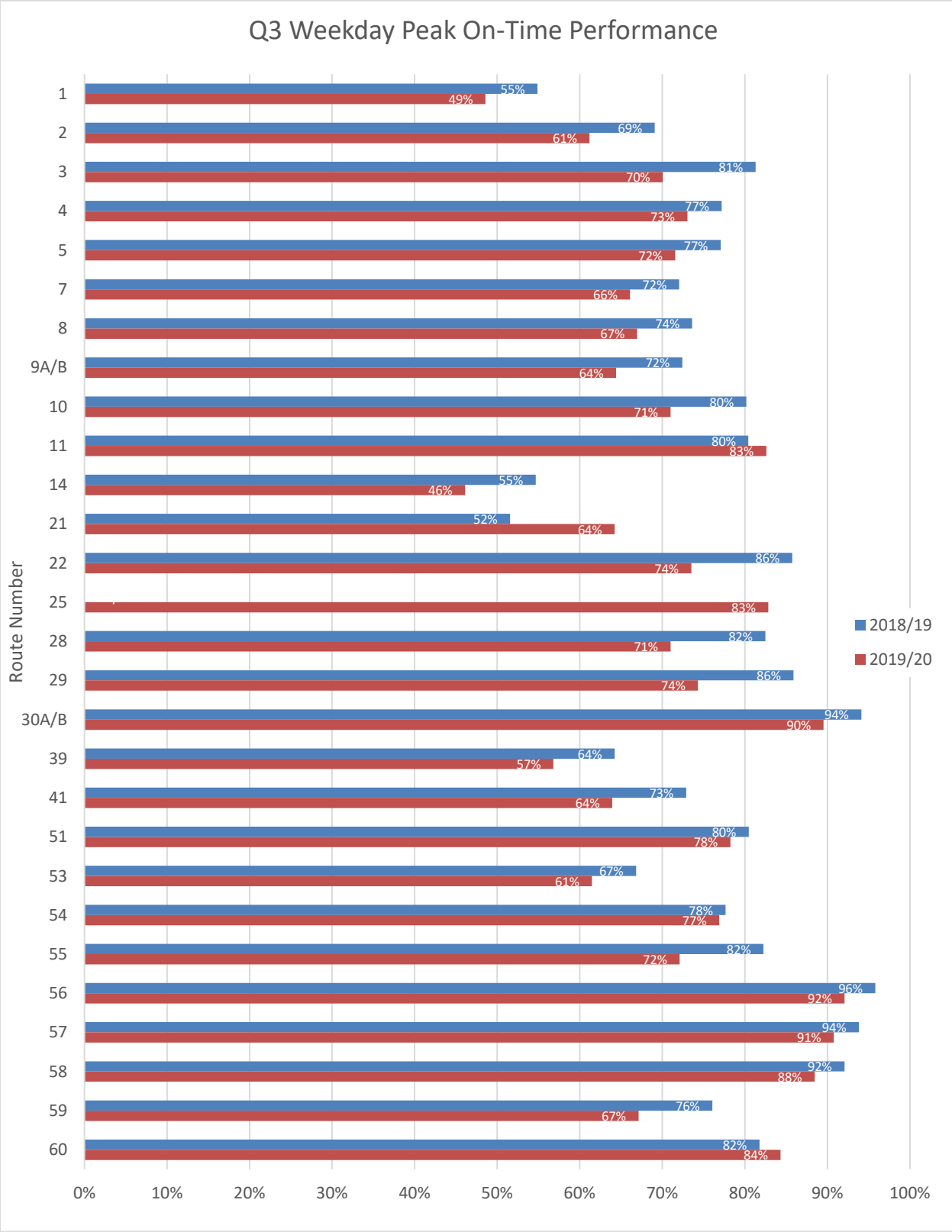


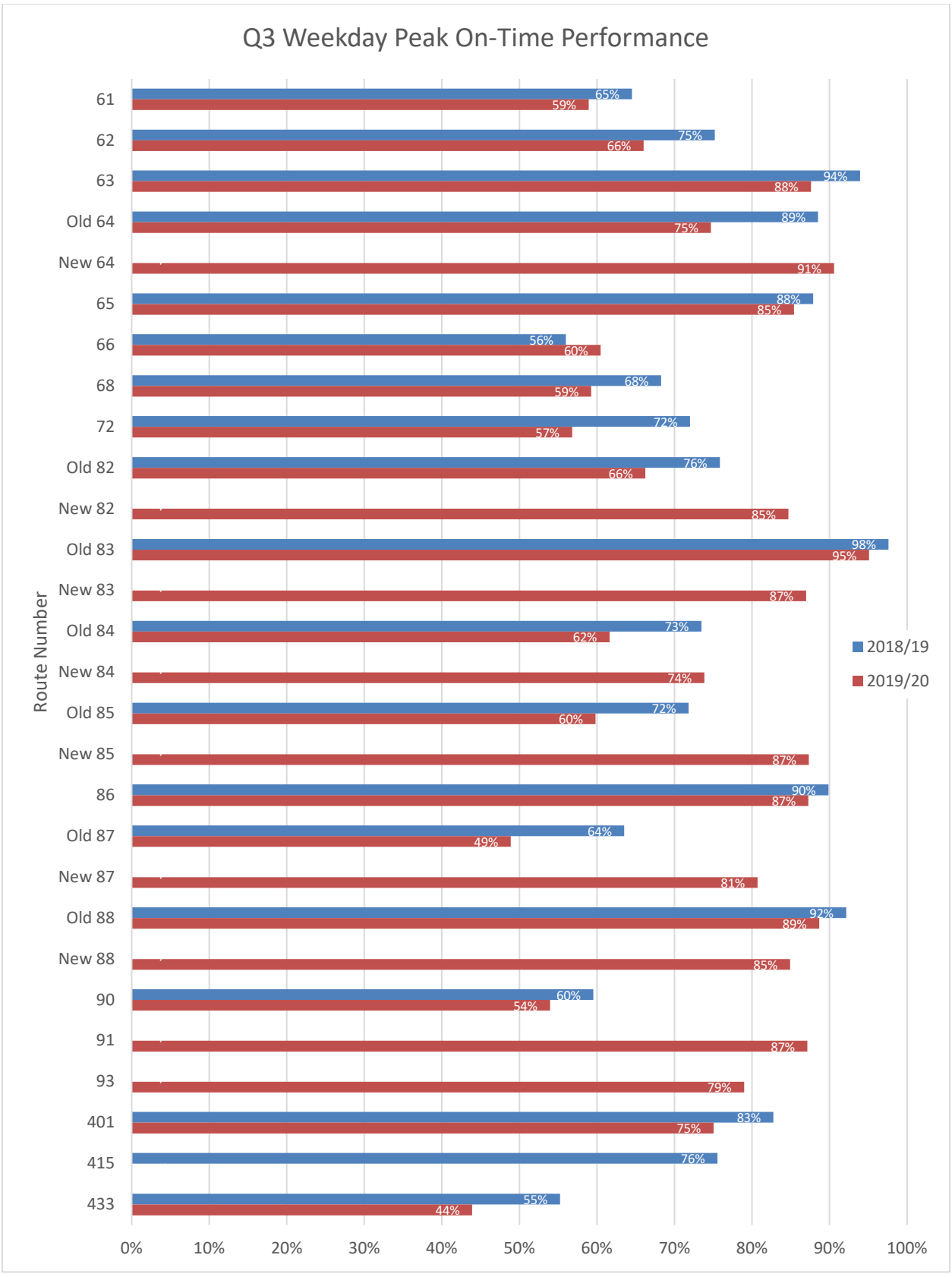
Weekday On-Time Performance




Q3 Weekday On-Time Performance
Route Number
61
62
63
Old 64
New 64
65
66
68
72
Old 82
New 82
Old 83
New 83
Old 84
New 84
Old 85
New 85
86
Old 87
New 87
Old 88
New 88
90
91
93
401
415
433
70%
70%
80%
72%
90%
89%
86%
81%
91%
89%
88%
68%
76%
78%
73%
76%
72%
81%
78%
87%
95%
95%
92%
66%
63%
78%
57%
60%
90%
91%
86%
67%
63%
85%
91%
89%
88%
62%
67%
88%
80%
80%
79%
70%
84%
48%
42%
2018/19
2019/20
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%

Weekday Peak Period On-Time Performance




Q3 Weekday Peak On-Time Performance
Route Number
61
62
63
Old 64
New 64
65
66
68
72
Old 82
New 82
Old 83
New 83
Old 84
New 84
Old 85
New 85
86
Old 87
New 87
Old 88
New 88
90
91
93
401
415
433
65%
59%
75%
66%
94%
88%
89%
75%
91%
88%
85%
56%
60%
68%
59%
72%
57%
76%
66%
85%
98%
95%
87%
73%
62%
74%
72%
60%
87%
90%
87%
64%
49%
81%
92%
89%
85%
60%
54%
87%
79%
83%
75%
76%
55%
44%
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
2018/19
2019/20

Express Service On-Time Performance

On-time performance demonstrates the percentage of timepoint arrivals that are between one minute early and three minutes late. When route schedules are created, the variability of travel times between timepoints is taken into account. Generally, routes are scheduled at the higher end of observed travel times in order to be on time. This means that on some trips, buses will layover at timepoints to avoid departing early. Schedules for express routes were created based on shorter travel times to keep buses moving toward destinations and prevent them from laying over.

The graph below demonstrates on-time performance for express routes based on timepoints at the beginning and end of the routes, as well as any terminals and park and rides. This includes Scotia Square, Summer Street, and the future Wrights Cove Terminal location on Marketplace Drive, but does not include other on-street timepoints.