

Attachment B: 2021/22 Halifax Transit Q4 Performance Measures Report

2021/22 – Q4

Performance Measures Report

HALIFAX
TRANSIT

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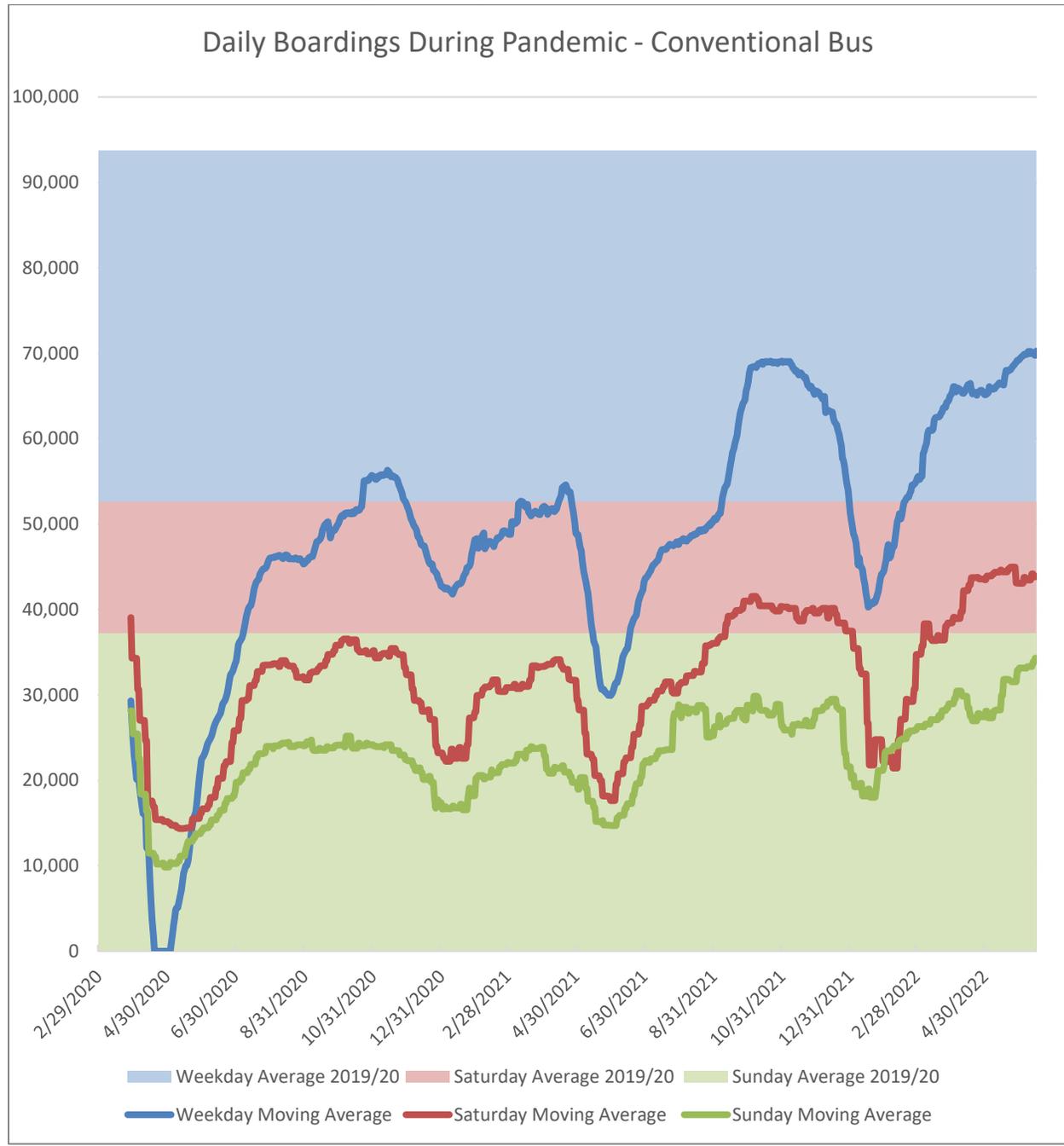
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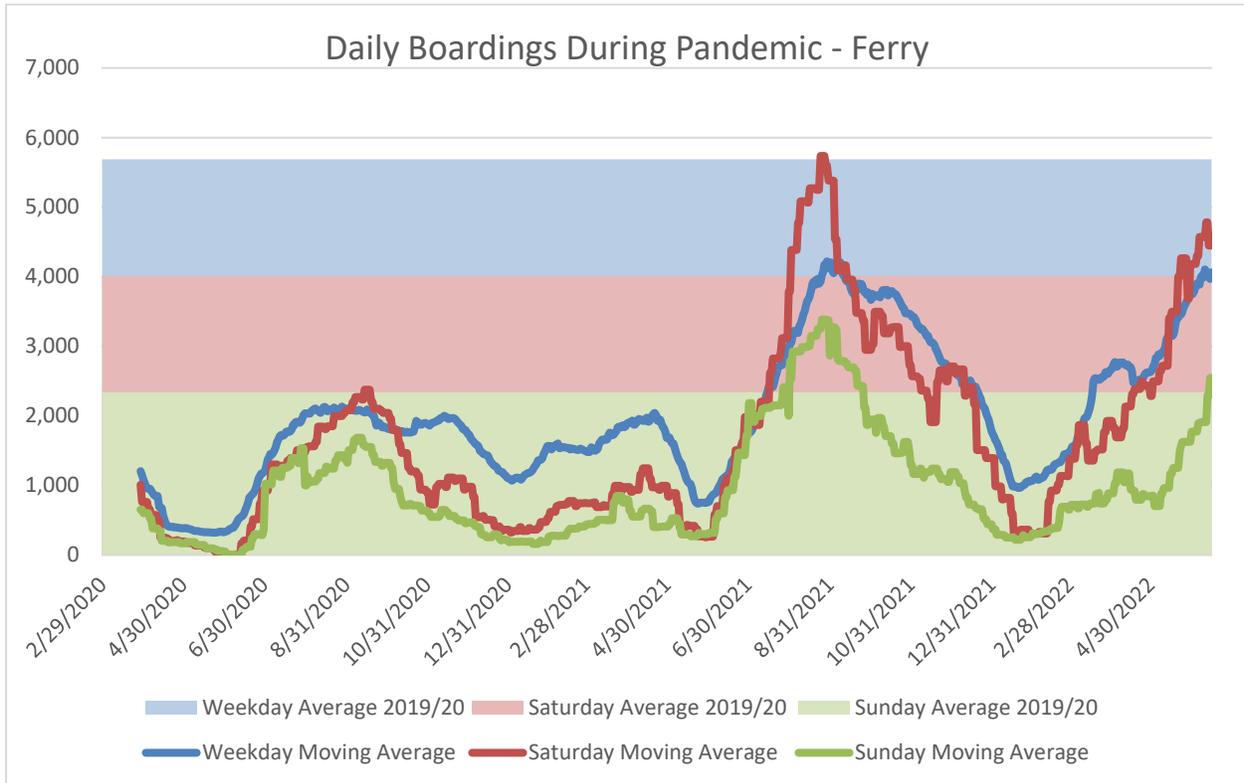
COVID-19 Pandemic Data Impacts

The onset of the COVID-19 pandemic in early 2020 has significantly impacted service provision and usage. The most recent wave of the pandemic beginning December 2021 and lasting through the winter resulted in service loss due to illness and isolation requirements. As of June 6, 2022 all service has been reinstated to full service levels for the first time since the onset of the pandemic, while ridership levels continue to recover. The following graphs show the 30 day moving averages for boardings on the different service types, compared with the average daily boarding figures from before Covid impacts in 2019/20.

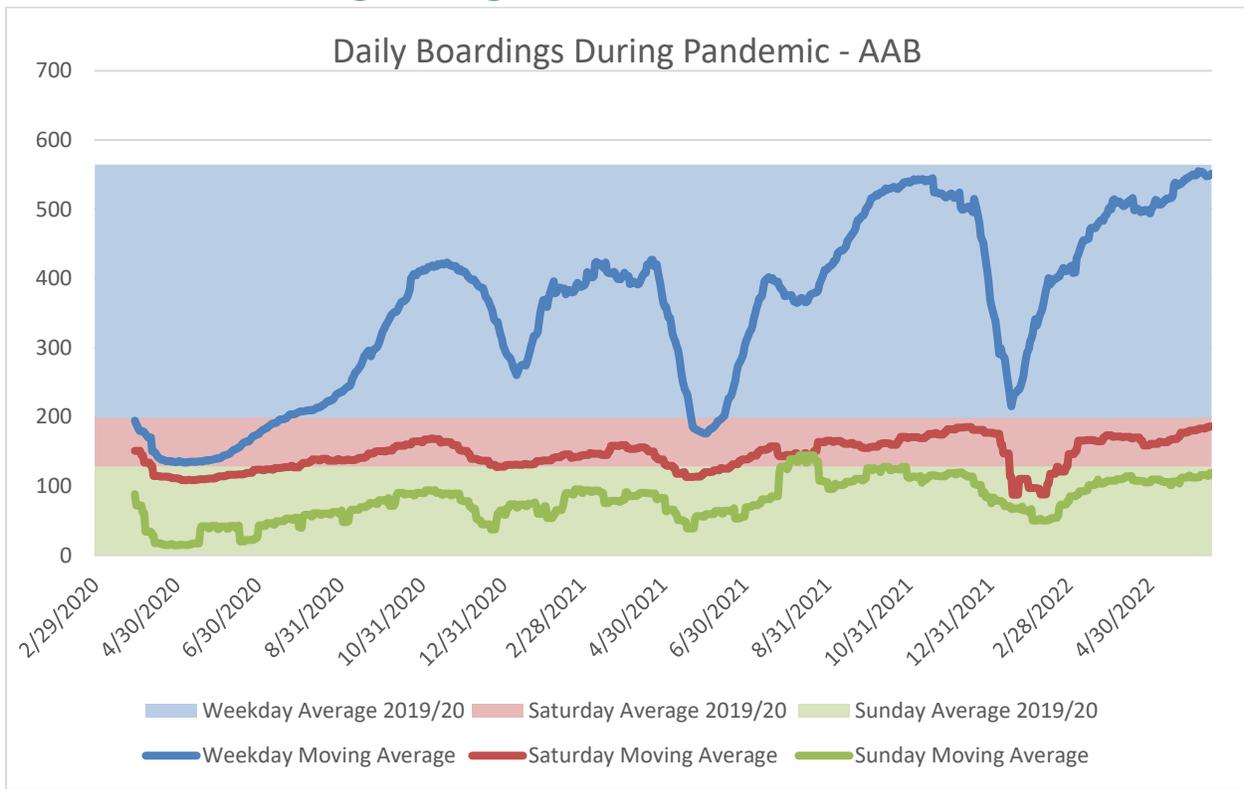
Conventional Bus Boardings During Pandemic



Ferry Boardings During Pandemic



Access-A-Bus Boardings During Pandemic

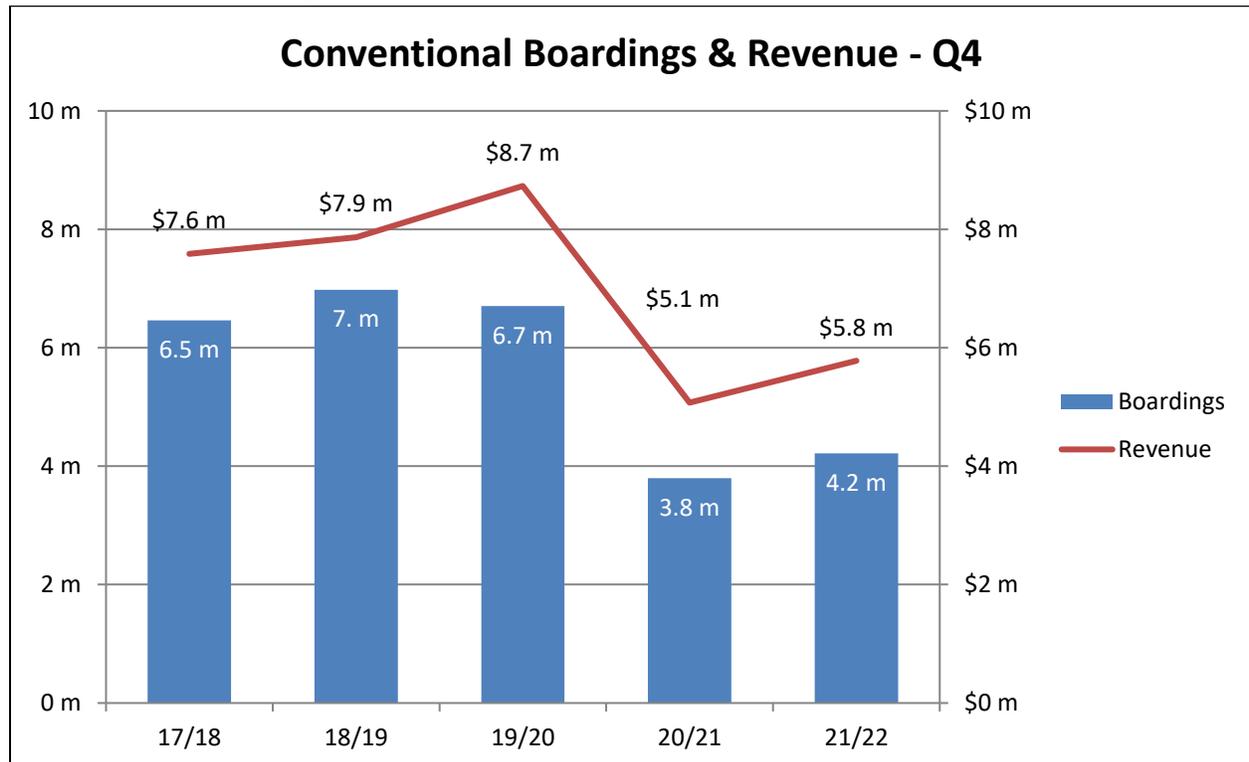


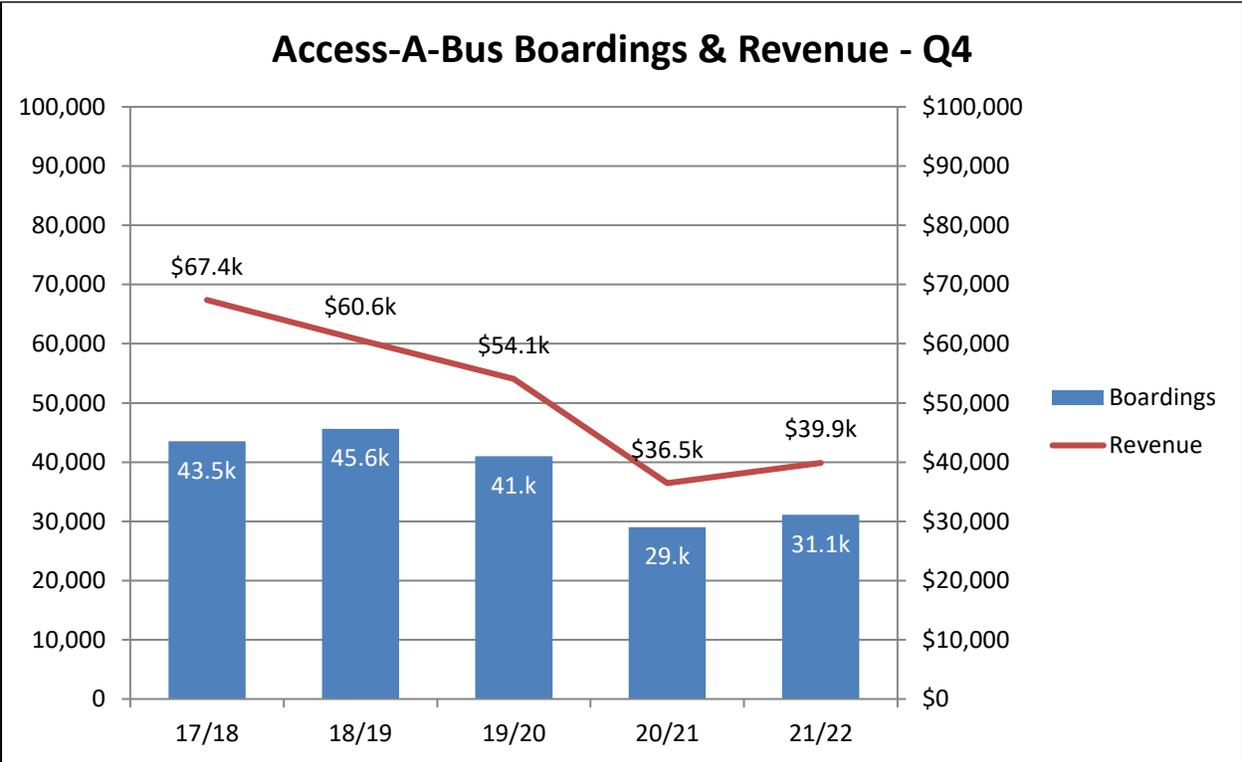
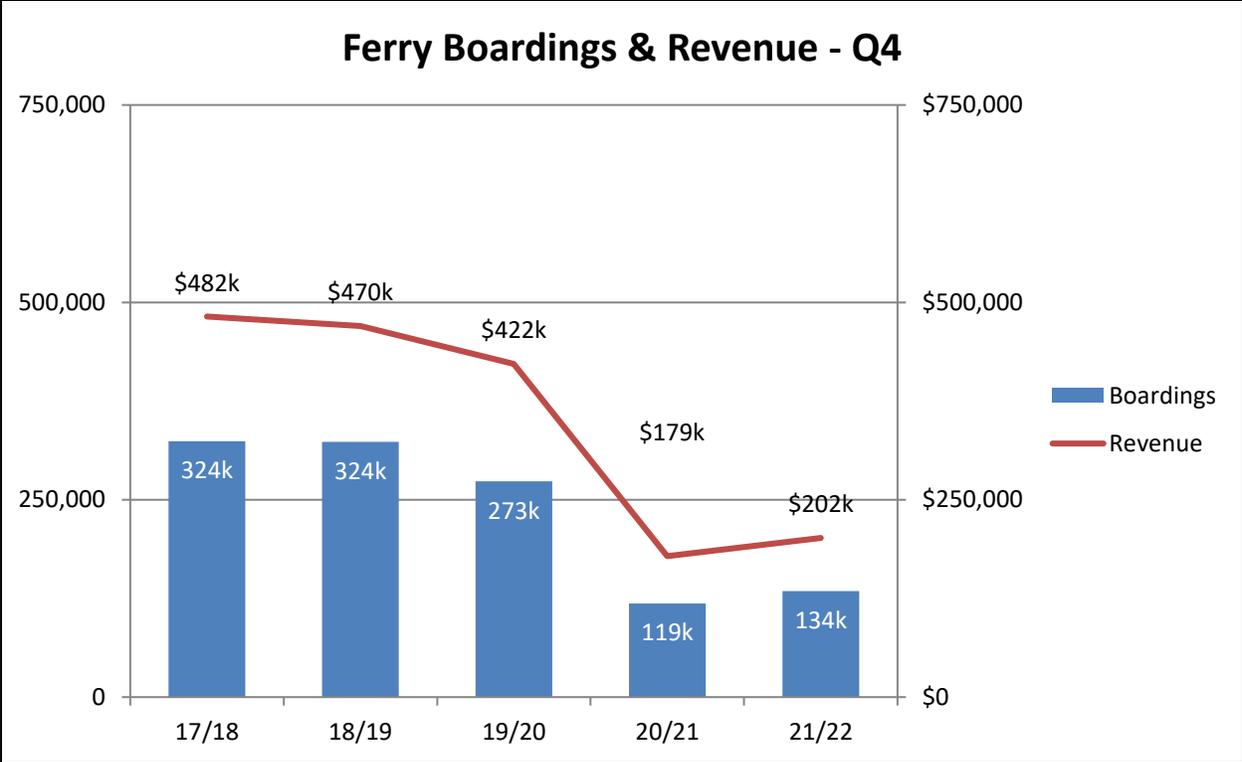
Boardings & Revenue

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.

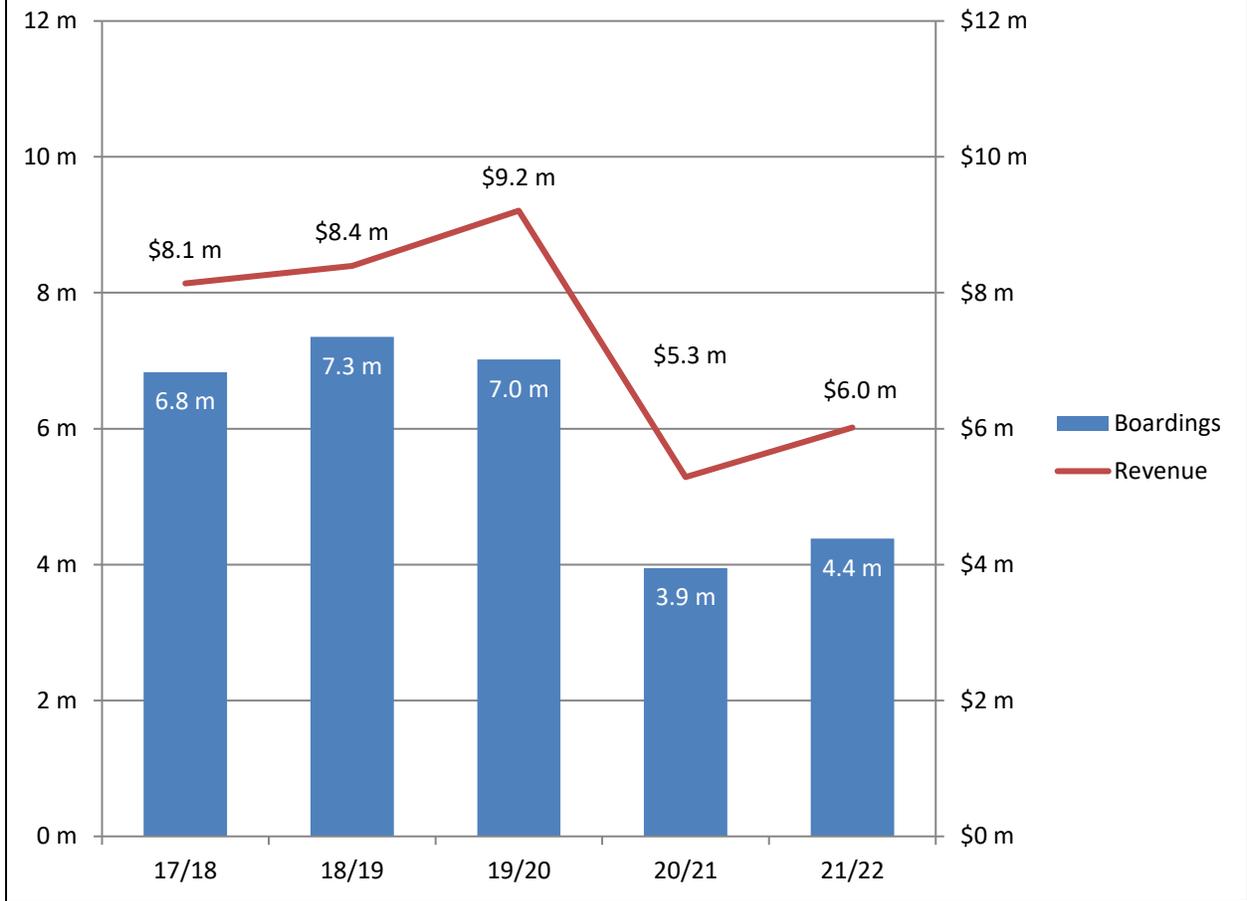
COVID-19 continued to have a significant impact during the fourth quarter of 2021/22. Conventional boardings increased 11% from this quarter last year, Ferry boardings increased 13.3% and Access-A-Bus boardings increased 7.2%. Overall, system wide boardings increased this quarter by 11% compared to last year, which is still 37.6% lower than fourth quarter 2019/20. Overall revenue this quarter increased 13.8% from last year, but remains 34.6% lower than fourth quarter 2019/20.

Historical Boardings & Revenue



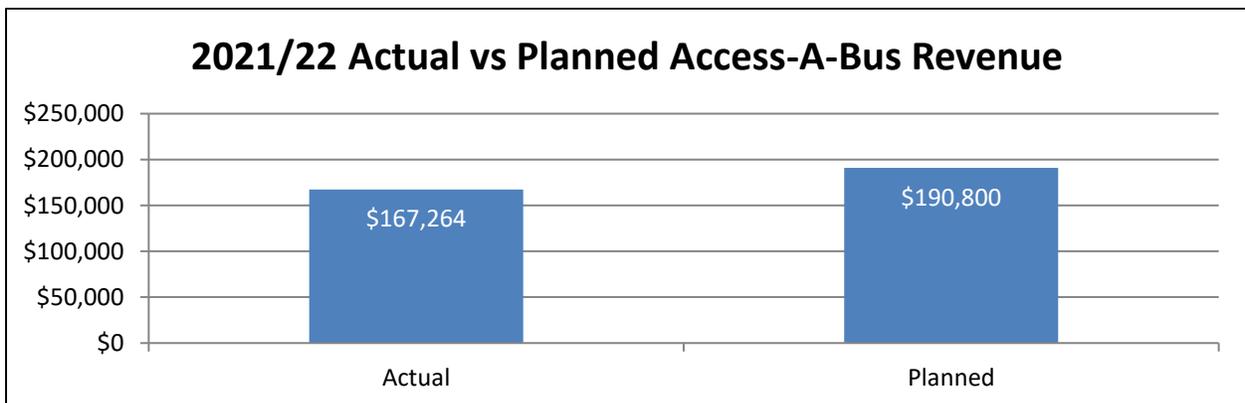
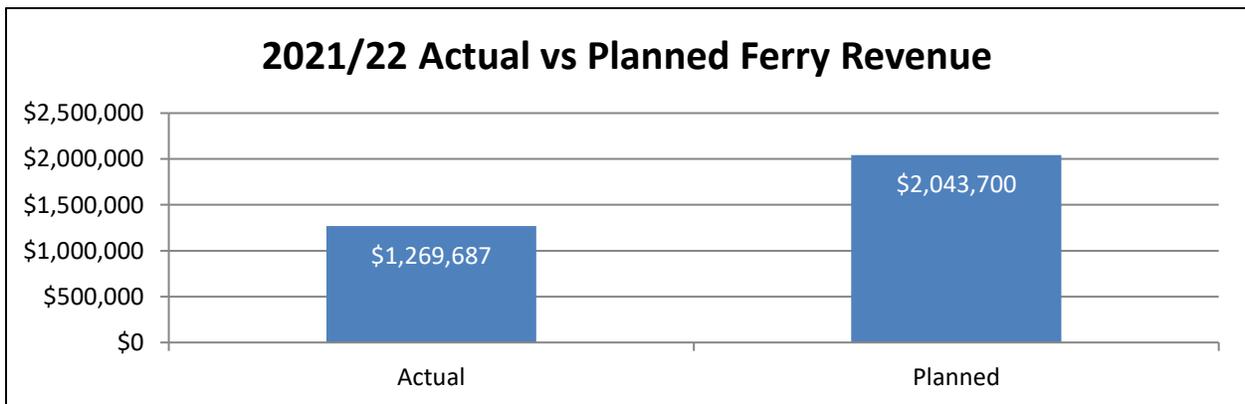
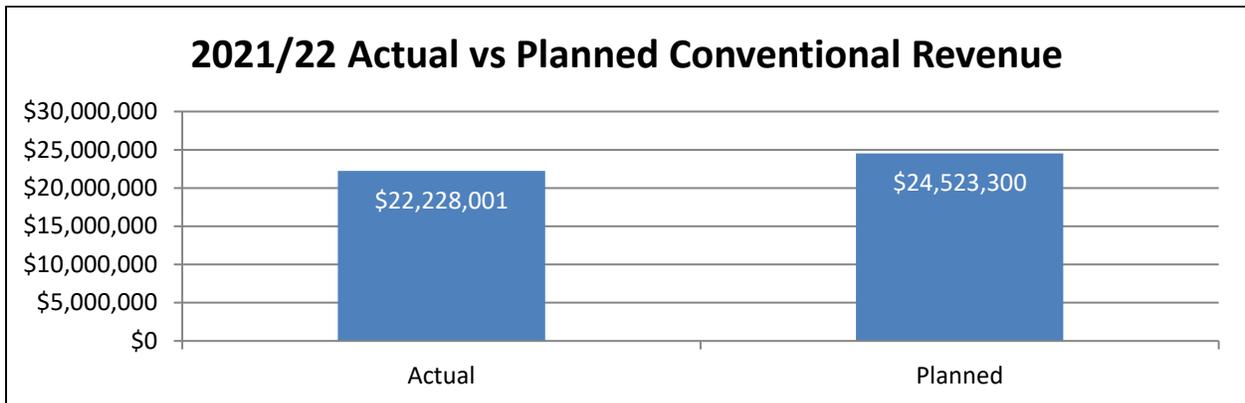


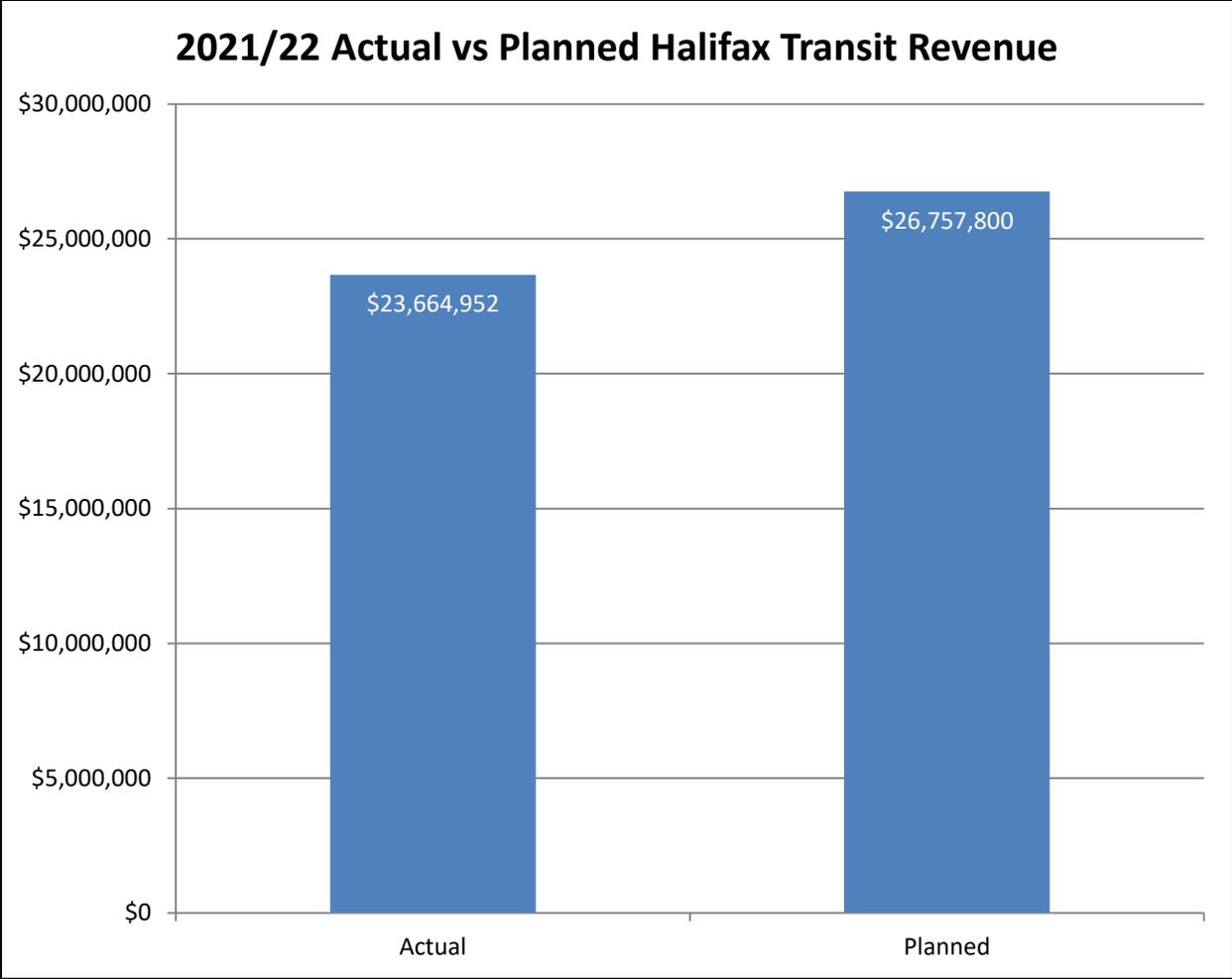
Halifax Transit Boardings & Revenue - Q4



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 overall in comparison to the planned budget revenue. As of the end of 2021/22 conventional revenue has increased 46.9% over last year and is 9.4% below the planned amount. Ferry revenue has increased 87.9% and is 37.9% below the planned amount. Access-A-Bus revenue this year increased 79.7% over last year and is 12.3% below the planned amount. Overall revenue this year has increased 48.8% over last year, but fell 11.6% below the planned amount. Revenue projections are made prior to the beginning of the fiscal year; prior to April 2021 COVID cases were relatively low in the province. Further waves of COVID cases in Spring/Summer 2021, and Winter 2021/22 have caused actual revenue to be lower than projected.

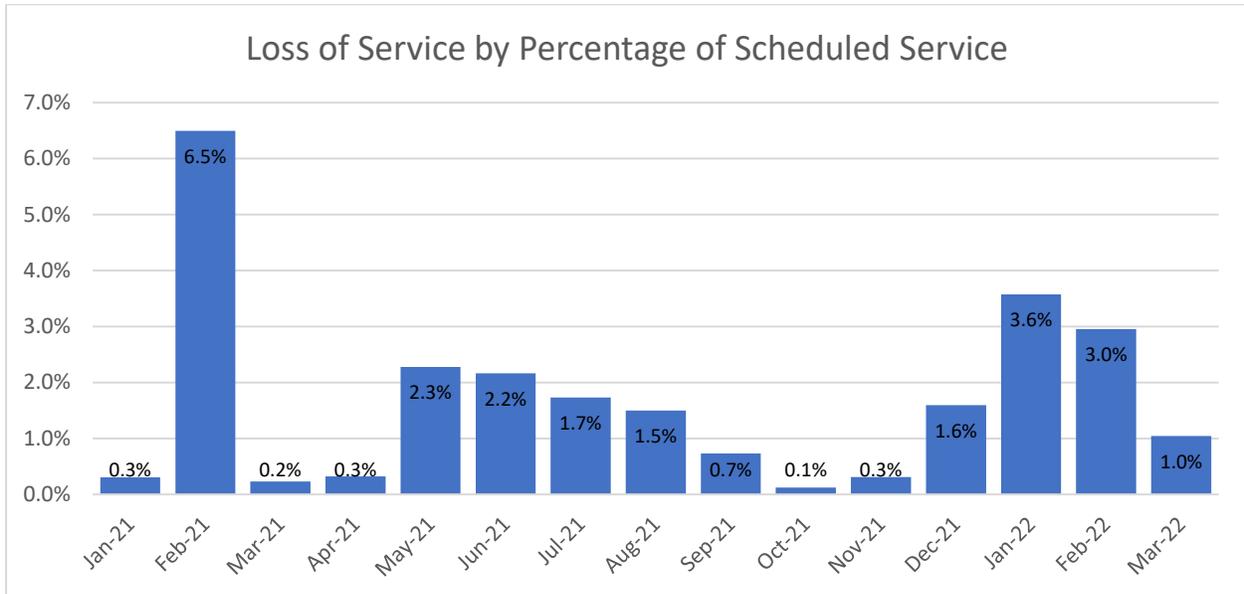




Loss of Service

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.

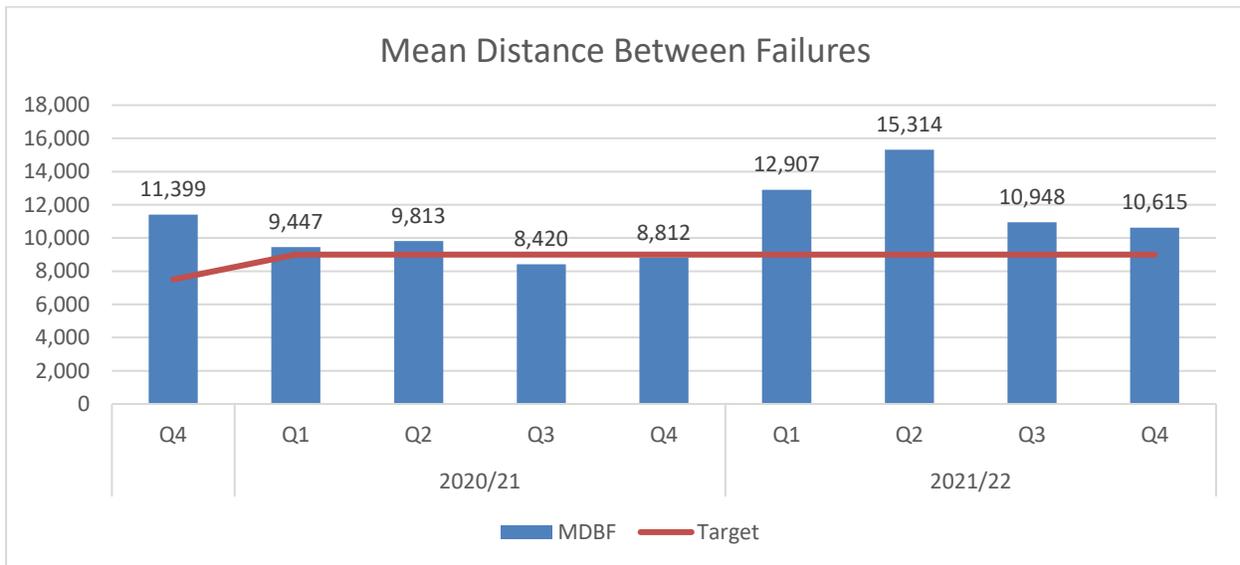
In the fourth quarter, the total loss of service was 5,064 hours, which is 2.5% of the quarterly revenue hours. The table below shows the total loss of service for each month. The increase in lost service through winter 2021/22 is attributable to the most recent wave of the pandemic, which resulted in staffing shortages due to illness and isolation requirements.



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.

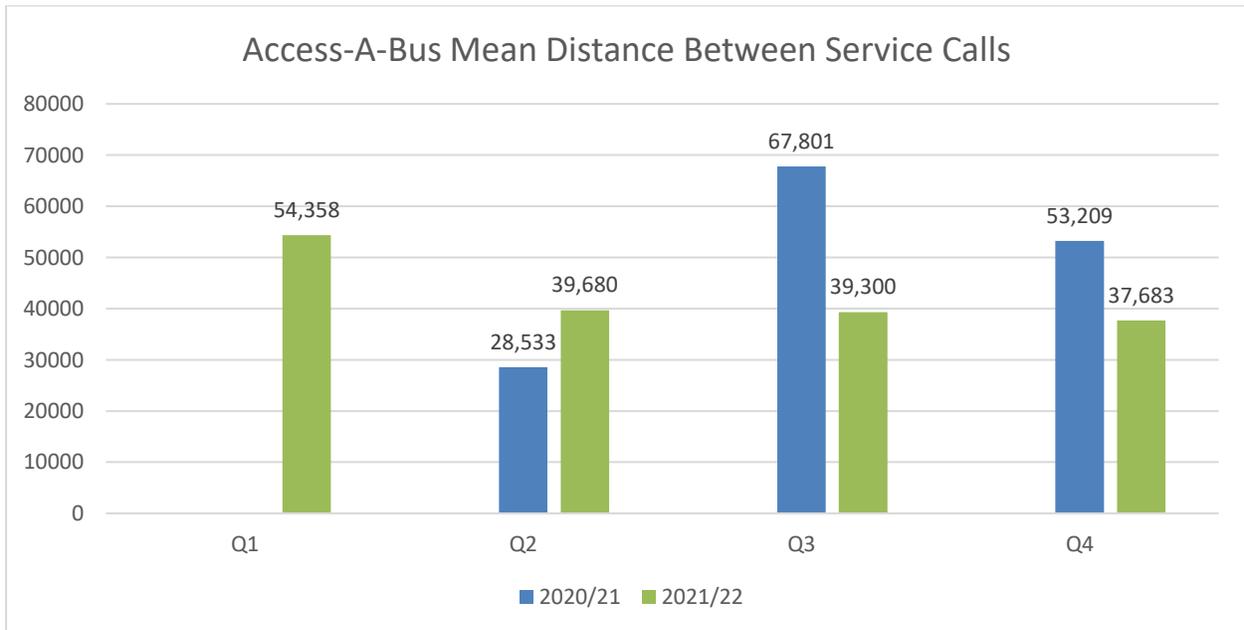
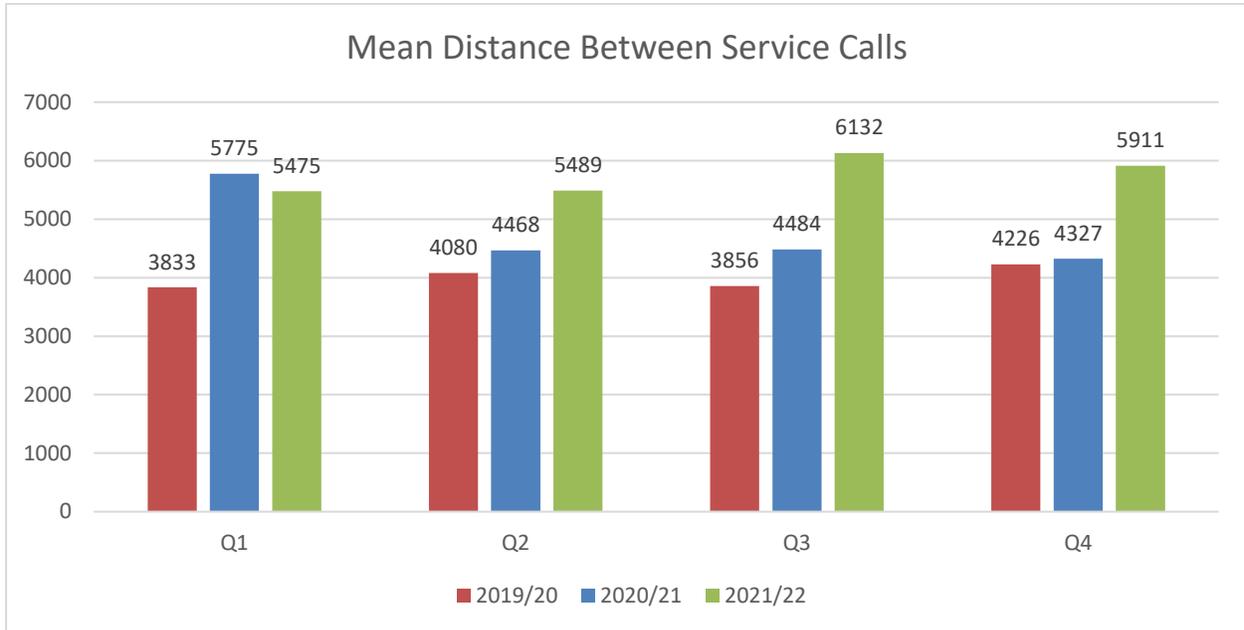
For the fourth quarter of 2021/22, the MDBF for conventional transit was 10,615 kms. This is a 20% increase from the fourth quarter of the previous year.



Mean Distance Between Service Calls

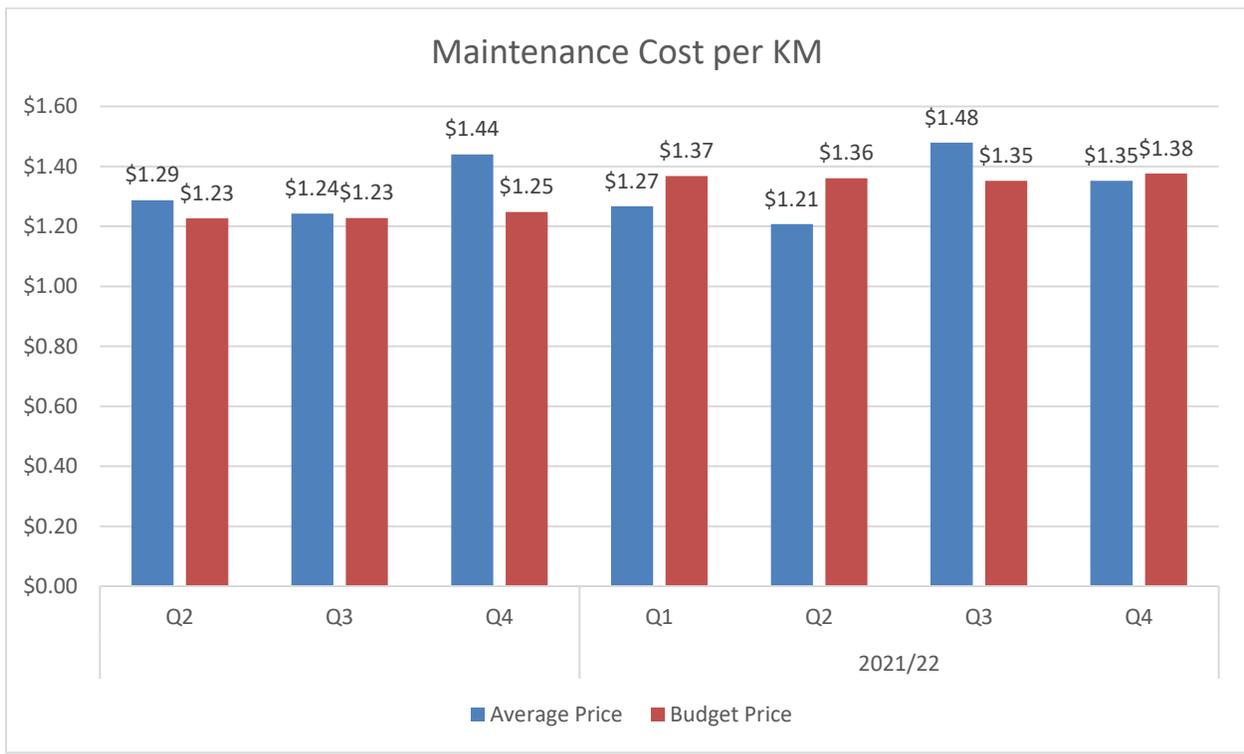
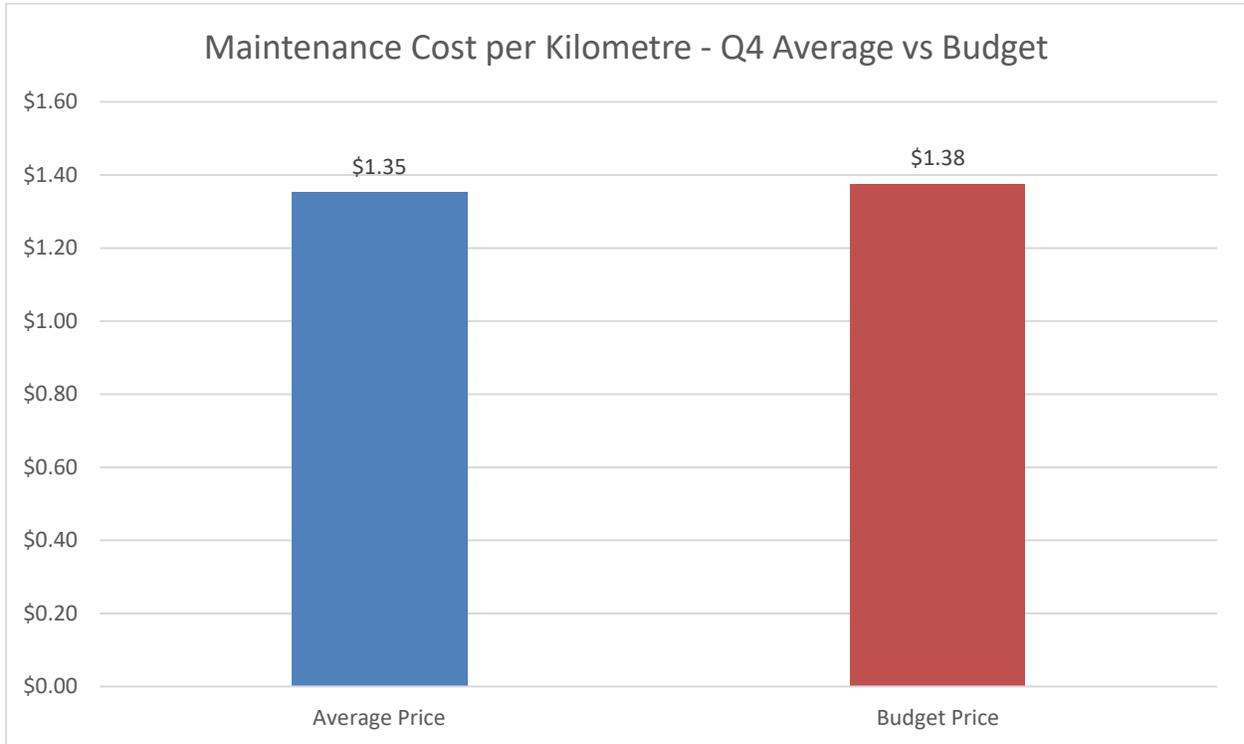
Mean Distance Between Service Calls (MDBS) reflects the average distance in kilometres covered between maintenance service calls. This metric includes all instances of service calls, including issues with secondary equipment, passenger-related events and damages to the bus resulting from minor accidents.

For the fourth quarter of 2021/22, the MDBS for conventional transit was 5,911 kms. In comparison to the fourth quarter of 2020/21 (4,327), this is an increase of 37%. The MDBS for Access-A-Bus service was 37,683 kms.



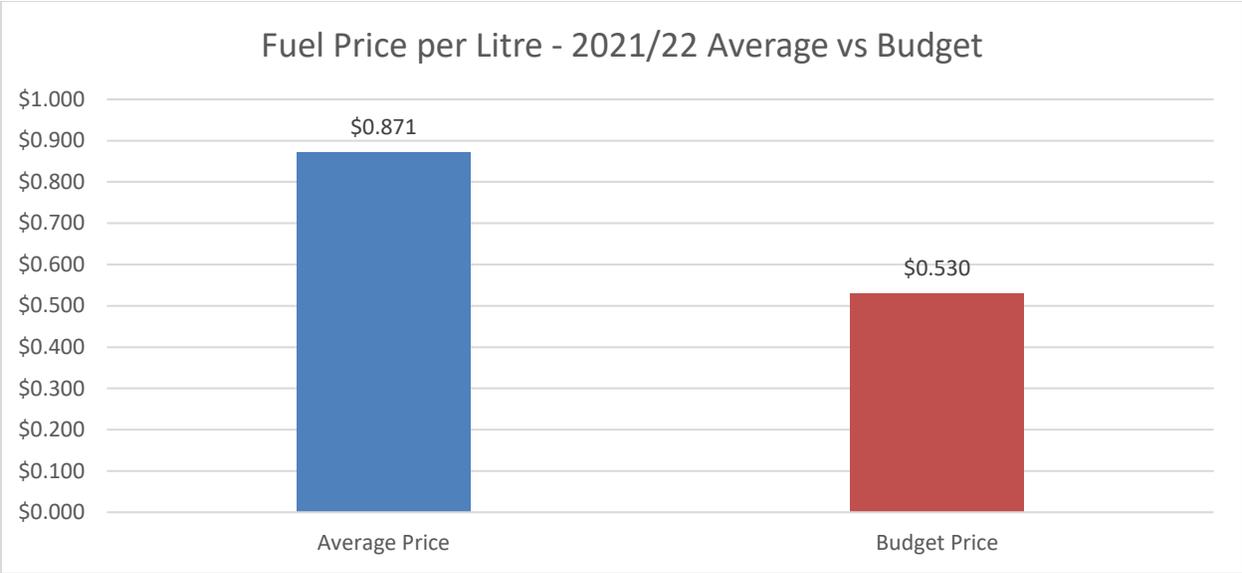
Bus Maintenance Cost – Quarter Average vs Budget

In the fourth quarter, bus maintenance costs were \$1.35/km, while the budgeted maintenance cost was \$1.38/km.



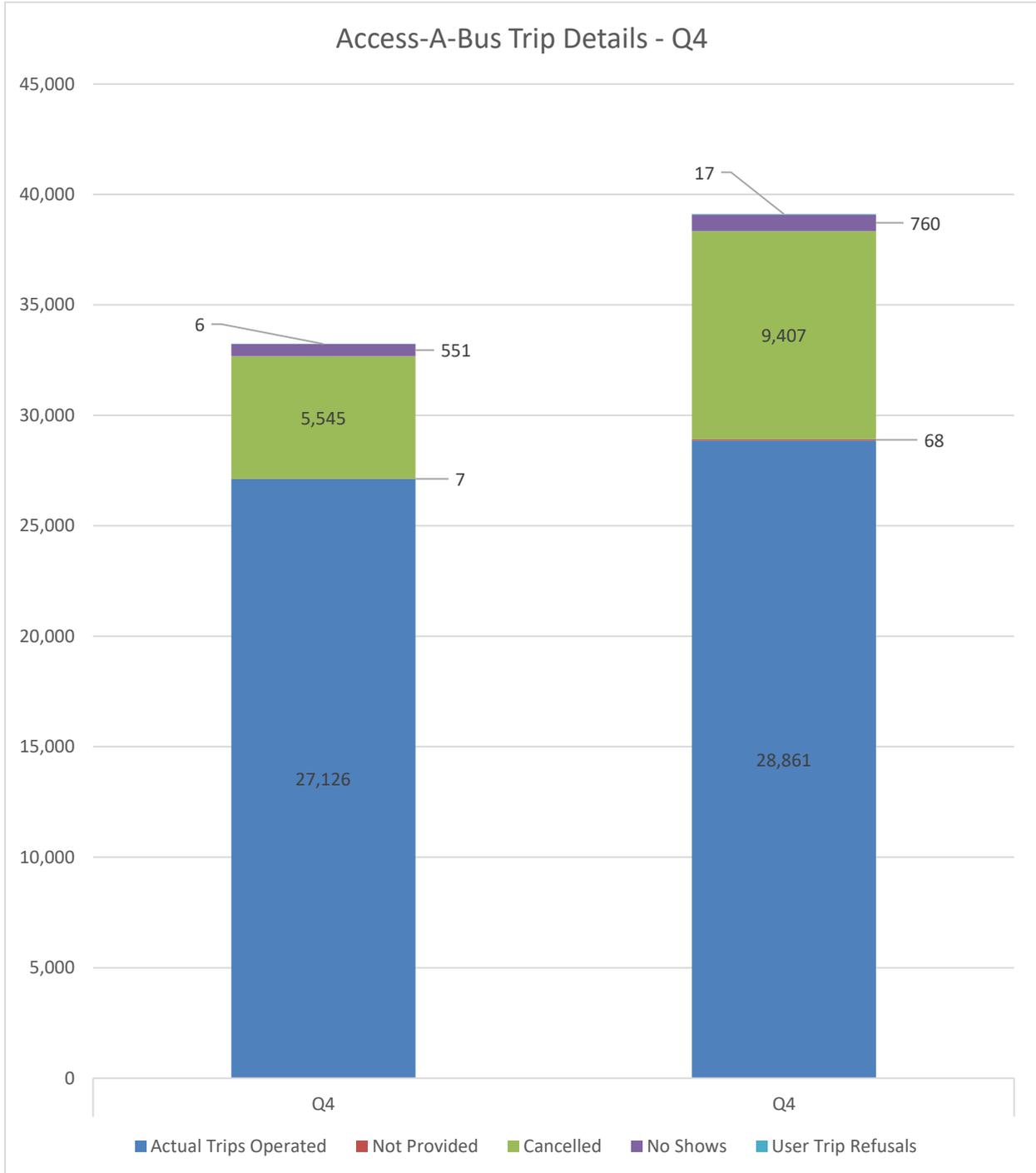
Fuel Price – Annual Average vs Budget

The budgeted fuel price for 2021/22 was set at 53 cents/litre. The average fuel price for 2021/22 as of the end of 2021/22 was 87 cents/litre, 34 cents higher than the budgeted price per litre.

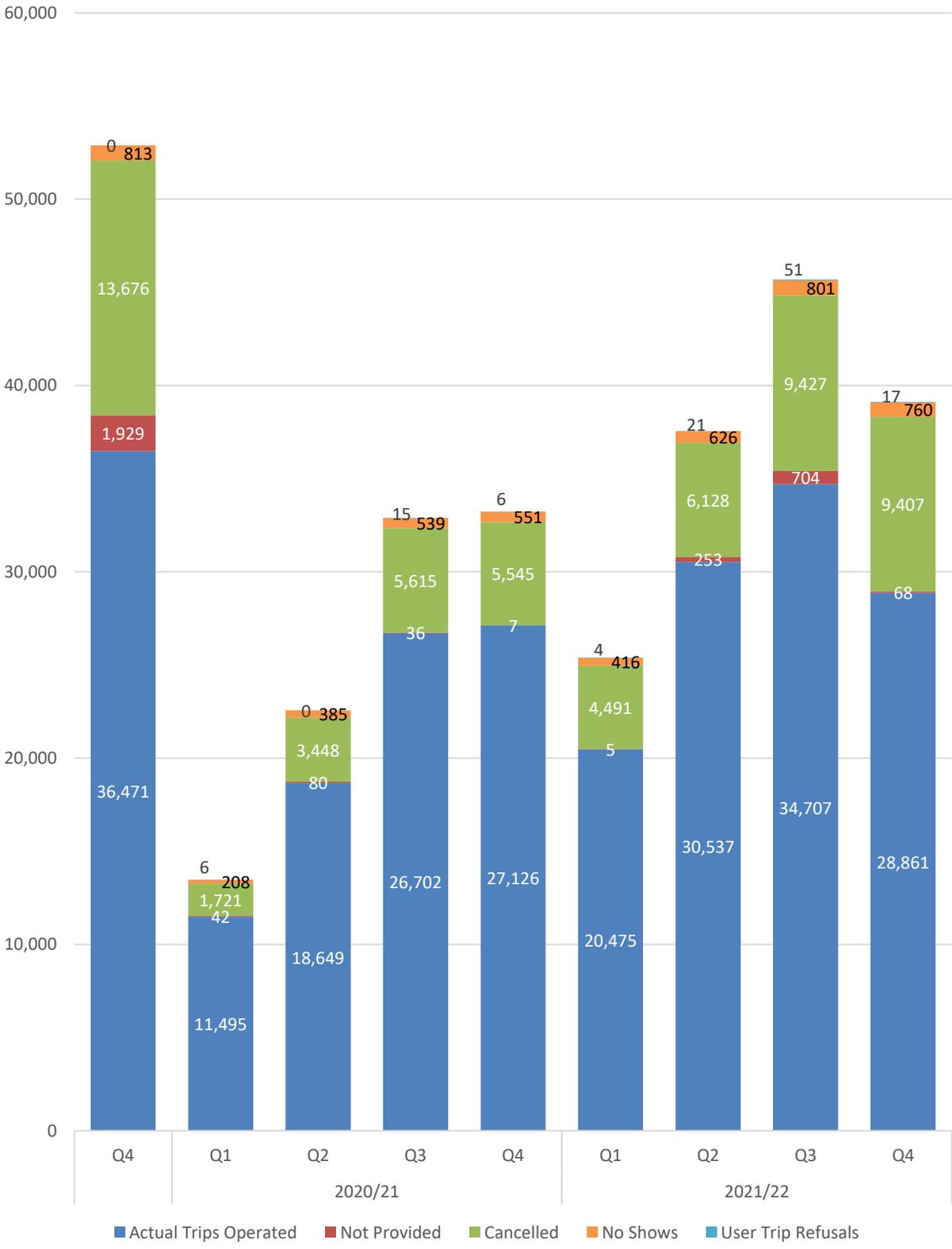


Access-A-Bus Trip Details

Access-A-Bus trip details are tracked monthly to provide an indication of efficiency in Access-A-Bus usage and booking. In the fourth quarter of 2021/22 a total of 28,861 trips were operated, an increase of 6% compared to the fourth quarter last year.



Access-A-Bus Trip Details

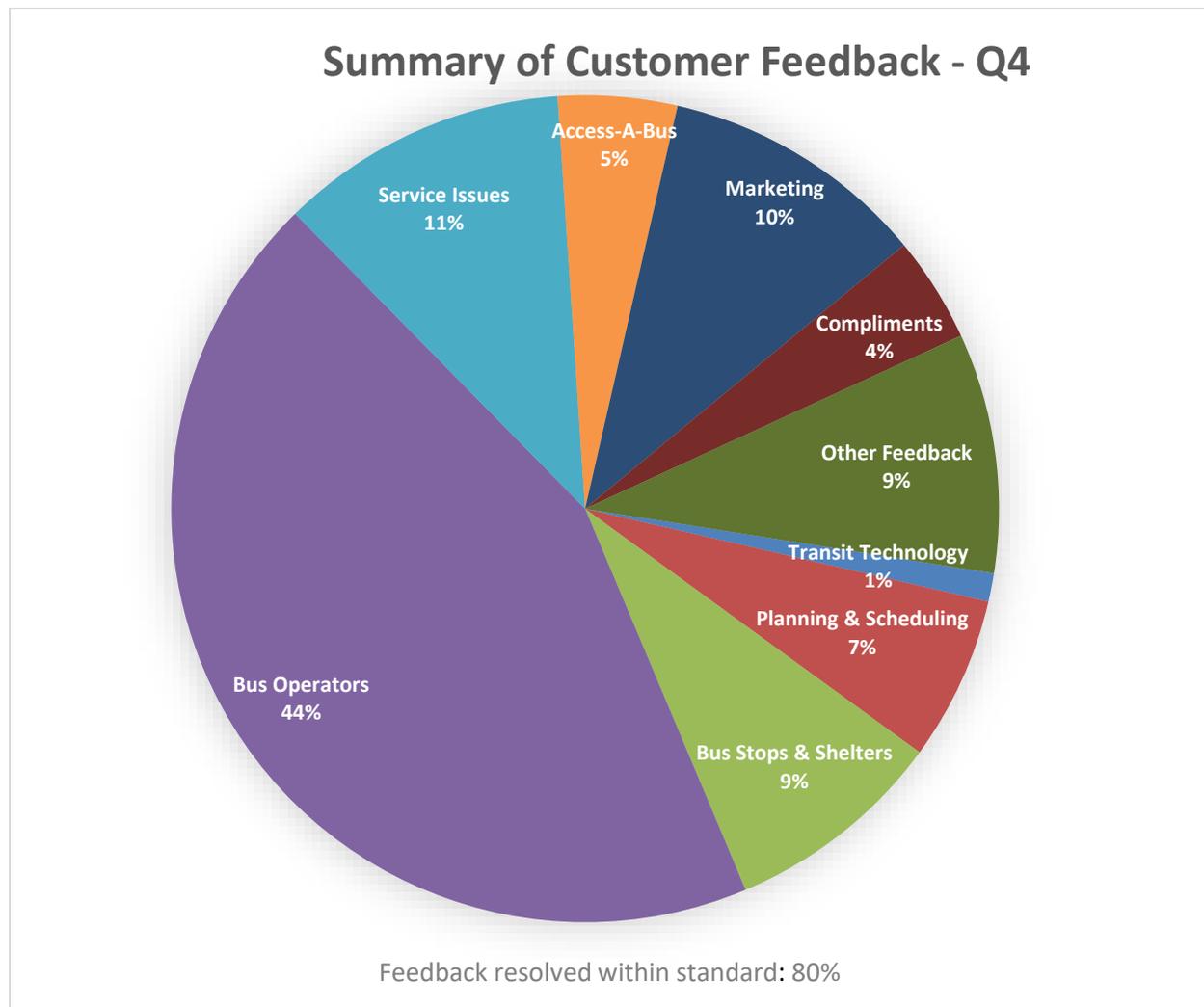


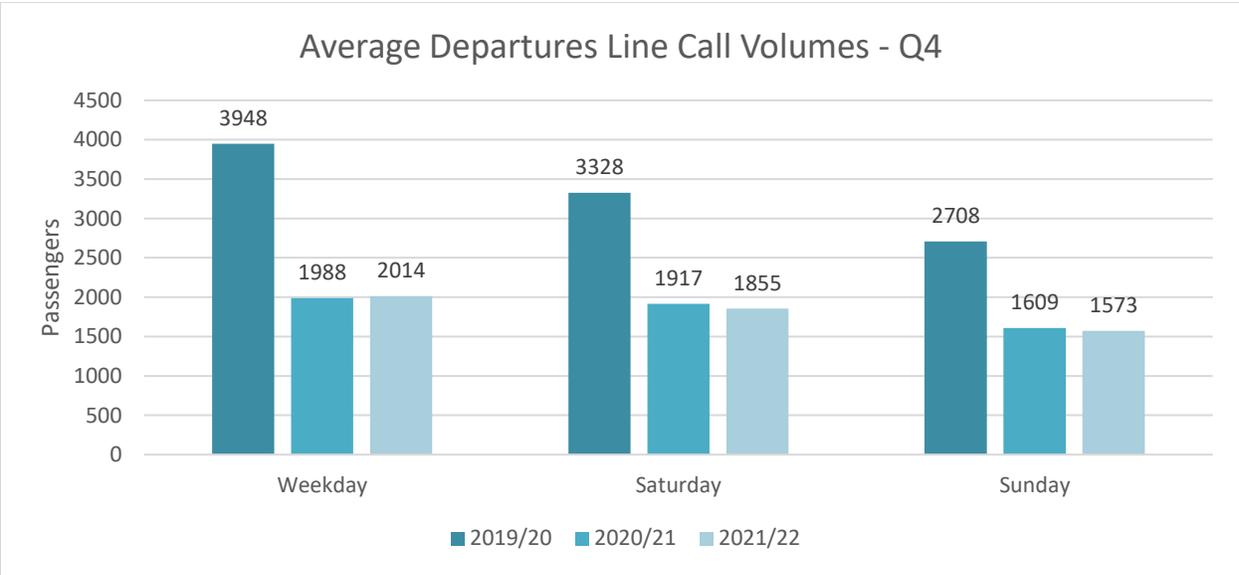
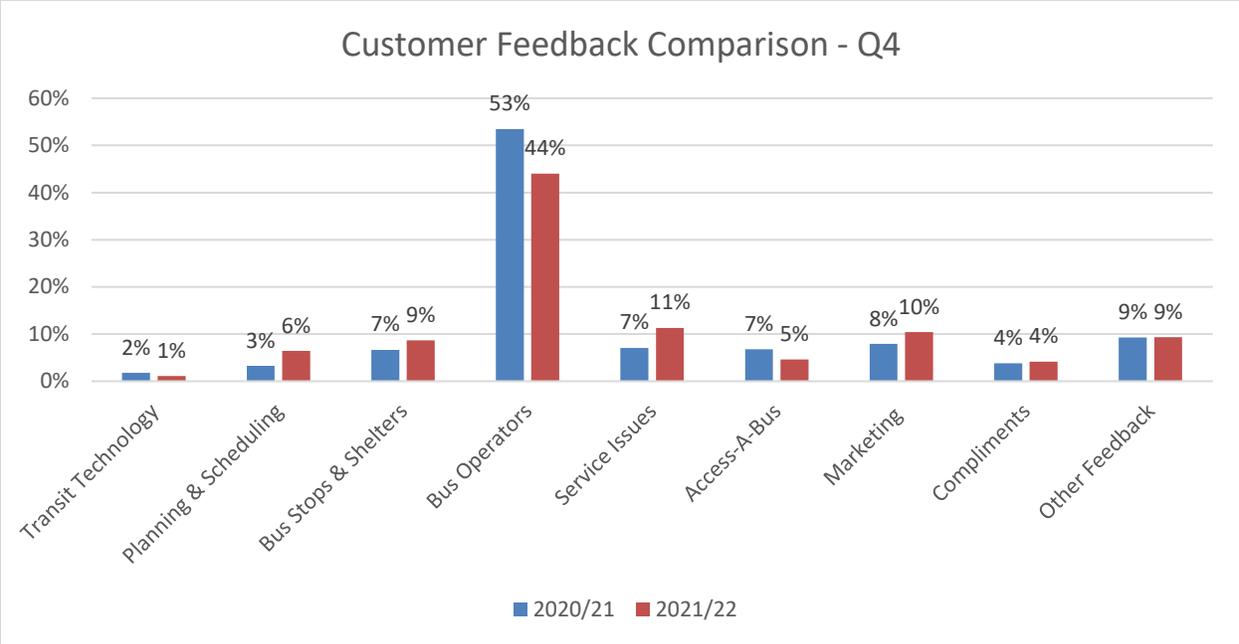
Customer Service – All Services

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 fourth quarter, 44% of feedback received was related to Bus Operators. The remaining 56% 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 80% 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 second quarter of 2021/22, average call volumes were slightly lower than this time last year for weekdays as well as for Saturdays and Sundays.



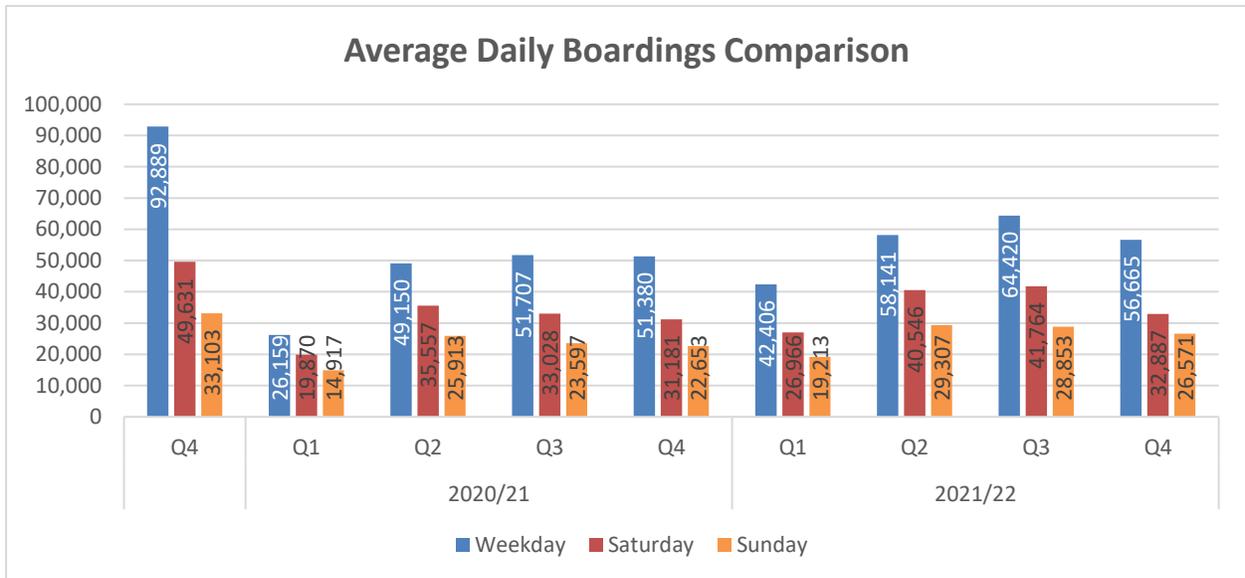


Service Utilization

Boardings

Average weekday boardings in the fourth quarter were 56,665 ± 12,759 (22.5% variance). Average Saturday boardings this quarter were 32,887 ± 10,526 (32% variance). Average Sunday boardings this quarter were 26,571 ± 3,125 (11.8% variance).

Average Daily Boardings by Service Day

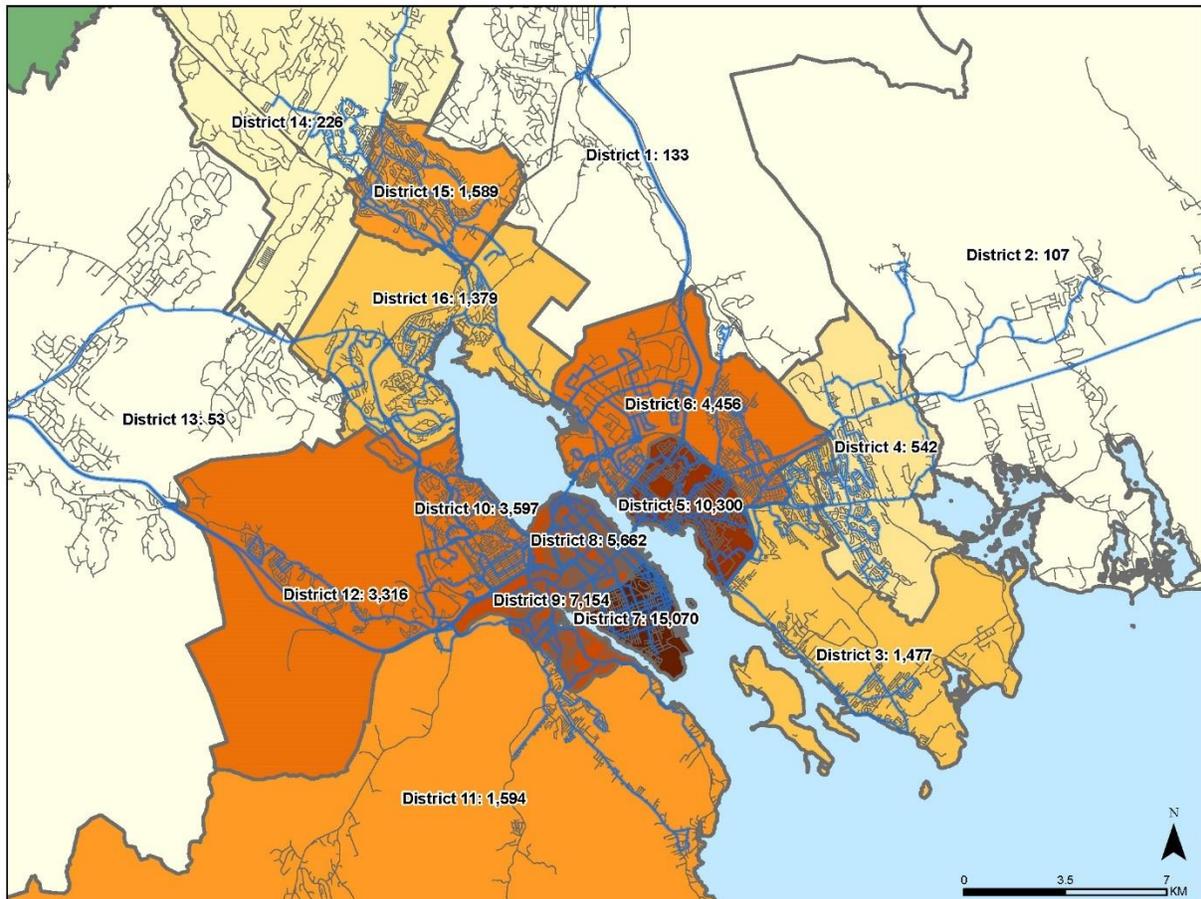


Boardings by District

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.

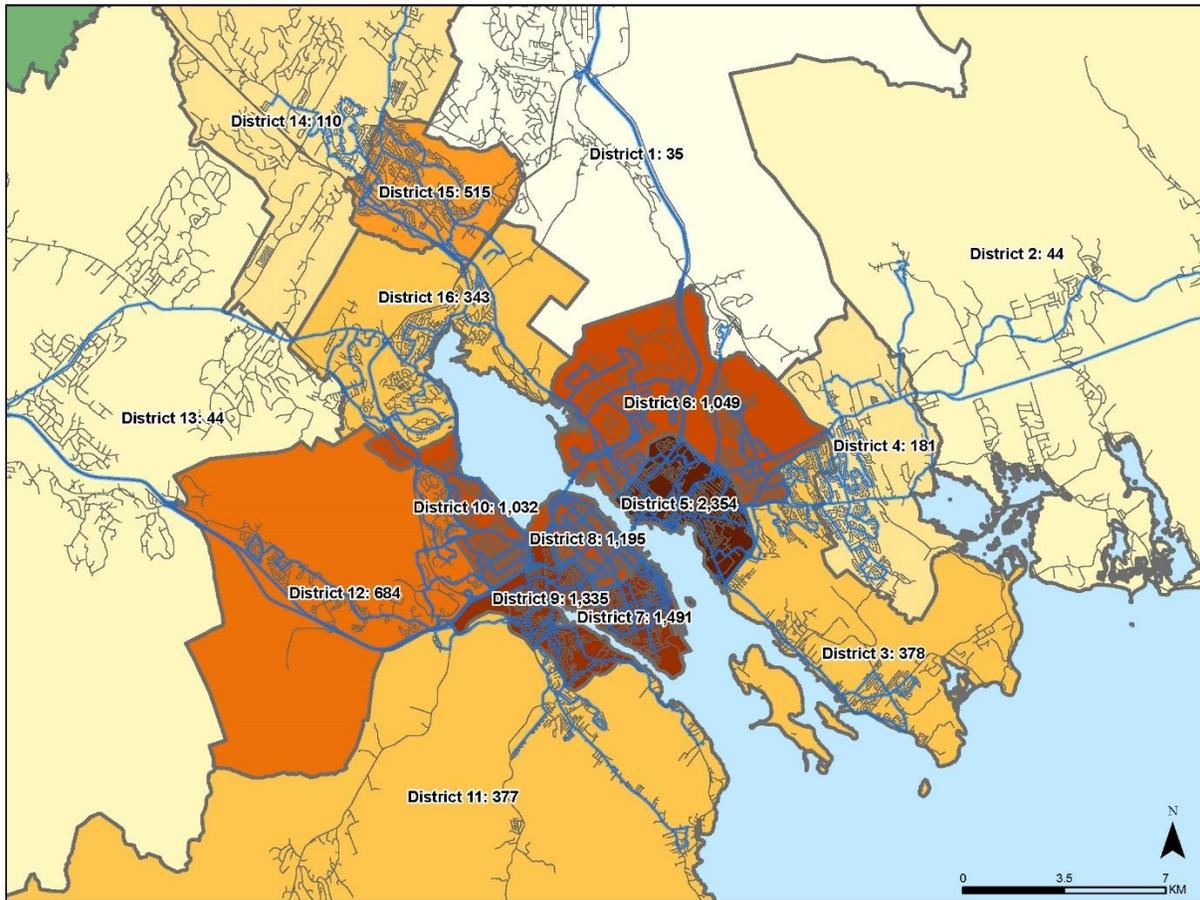
Weekday Boardings by District - All Day

2021-22 Q4 Weekday Boardings by District



Weekday Boardings by District – AM Peak Period

2021-22 Q4 Weekday AM Peak Boardings by District



Passengers per Hour

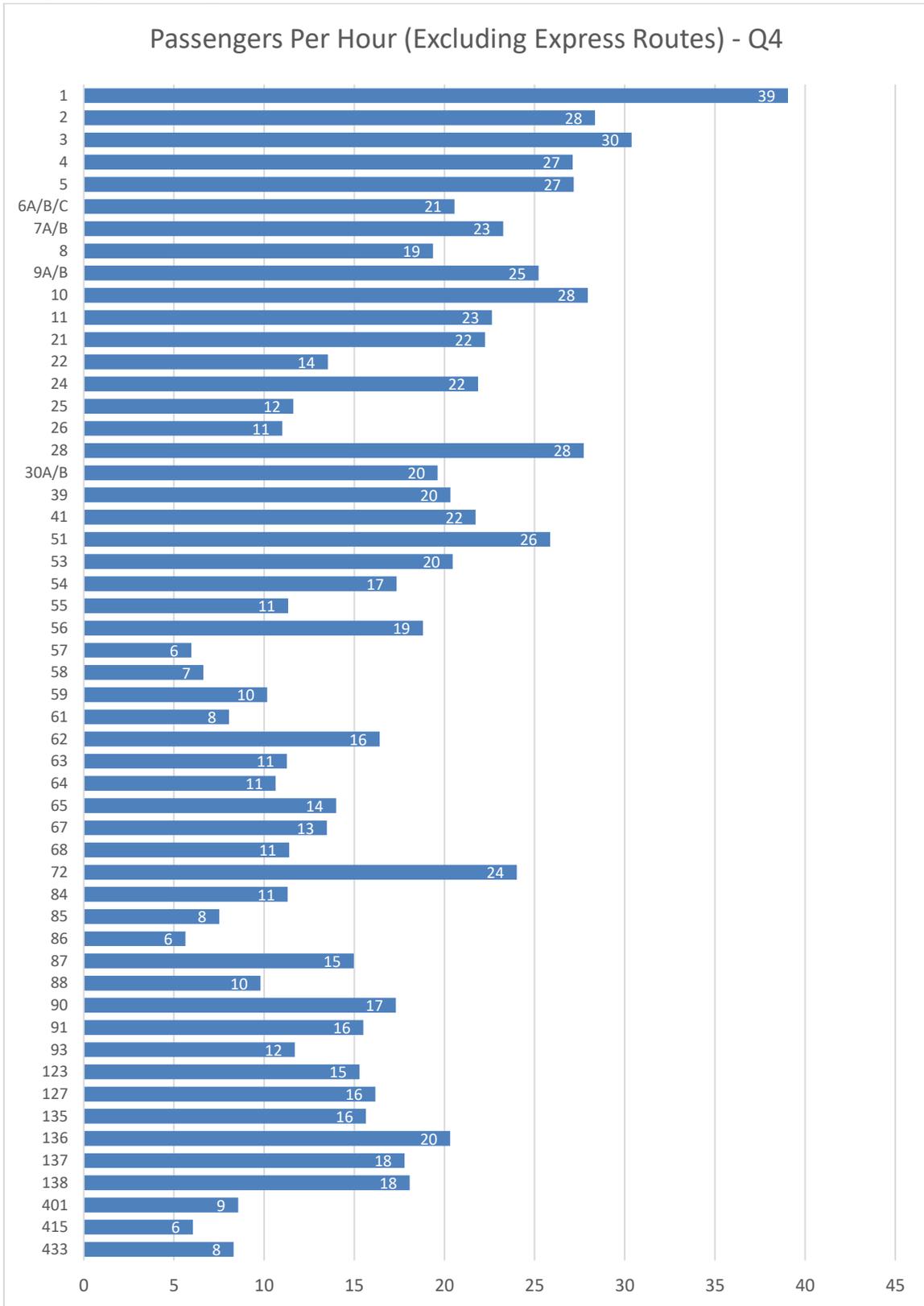
Passengers per hour measures the volume of passengers carried per service hour by route. Due to differences in service model/design, Express Routes are measured instead by passengers per trip. Ridership fluctuates significantly by season and therefore figures are compared to the same quarter in the previous 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. Significant service changes were implemented during the third quarter on November 22, 2021. The following data reflects both the former routes prior to that date, and the new routes following that date.

Boardings & Passengers per Hour

Q4 Comparison - Average Daily Boardings by Route												
Route	Weekday				Saturday				Sunday			
	2020/21		2021/22		2020/21		2021/22		2020/21		2021/22	
	Boardings	Pass/Hr										
1	4,818	31	6,009	39	4,167	37	4,390	41	2,765	34	3,199	39
2	2,788	26	3,085	28	2,394	24	2,603	27	1,523	22	1,812	26
3	4,177	28	4,509	30	2,249	26	2,258	28	2,263	25	2,560	27
4	2,411	19	3,486	27	1,136	23	1,427	31	975	22	1,216	26
5			2,453	27			1,595	25			1,133	27
6A/B/C			1,895	21			884	21			767	19
6A			405	17								
6B			712	22			401	19			367	19
6C			778	22			483	22			400	19
Former 60	1,480	20			952	24			695	25		
Former 63	446	26										
7	2,621	23			1,993	21			1,074	21		
7A/B			3,147	23			2,001	21			1,365	19
7A			1,678	24			1,048	22			690	20
7B			1,469	23			954	20			675	19
8	2,380	18	2,678	19	1,799	16	1,855	18	1,422	13	1,666	16
9A/B	4,148	25	4,236	25	2,260	31	2,077	30	1,737	25	1,998	28
9A	2,817	26	2,891	26	1,100	31	980	30	809	24	943	27
9B	1,331	23	1,345	23	1,160	31	1,097	31	928	26	1,056	28
10	2,302	21	2,837	28	1,821	25	1,877	27	1,172	24	1,449	30
11	75	35	48	23								
14	1,271	21			731	22			602	21		
21	561	19	653	22	479	14	533	16	339	19	417	21
22	457	14	443	14	293	9	276	9	246	7	267	8
24			1,194	22			1,067	20			931	17
25	220	10	235	12	130	8	133	9	104	10	123	9
Former 5	66	18										
26			27	11								
28	978	26	1,060	28	810	18	836	21	418	21	543	27
29	1,540	17	1,939	21	994	16	1,109	19	743	13	901	15
30A/B	583	16	688	20	356	10	402	12	220	12	319	16
30A	329	18	367	21	180	11	207	13	104	12	145	12
30B	254	14	321	18	176	10	195	12	116	13	174	23
39	788	18	876	20	674	14	646	14	291	14	326	15
41	513	15	717	22								
51	625	27	642	26	306	19	307	20	189	18	184	12

Q4 Comparison - Average Daily Boardings by Route												
Route	Weekday				Saturday				Sunday			
	2020/21		2021/22		2020/21		2021/22		2020/21		2021/22	
	Boardings	Pass/Hr										
Former 53	733	29			417	27			198	25		
53			698	20			521	17			300	15
54	458	22	527	17	287	18	290	14	156	16	222	14
55	191	9	232	11	112	7	172	12	87	6	128	9
56	633	20	636	19	732	21	594	20	465	15	451	15
Former 57	334	9			184	6			111	6		
57			27	6								
Former 58	388	14			228	12			195	12		
58			101	7			73	5			54	4
Former 59	1,086	14			489	21			347	15		
59	1,086	14	108	10	489	21	77	11	347	15	69	11
Former 61	1,331	17			682	17			532	14		
61			129	8			119	8			98	6
Former 62	435	14			276	12			150	10		
62			386	16			208	13			208	14
63			256	11			134	9			105	7
64	372	9	408	11								
65	177	11	98	14	57	4	47	5	31	5	53	5
66	646	21			363	23			212	14		
67			374	13			151	10			116	7
Former 68	728	15			469	15			320	11		
68			180	11			129	8			88	6
72	840	18	1,105	24	606	13	695	16	310	12	418	16
82	129	7	143	8	99	6	95	6	71	5	74	5
83	62	5	61	5	48	5	46	5	43	4	38	4
84	571	10	615	11	222	6	214	8	176	6	192	6
85	92	7	100	8	52	6	56	7	45	6	50	7
86	86	6	81	6	65	4	65	5	64	5	57	4
87	752	14	816	15	475	9	527	11	288	11	291	11
88	128	9	130	10	99	6	78	5	70	5	56	4
90	826	12	1,125	17	575	9	710	12	316	9	431	13
91	415	11	481	16	216	10	244	12	203	7	253	12
93	105	10	114	12								
401	81	6	89	9			26	7			24	4
415	38	6	37	6								
433	34	6	54	8								
Alderney	866	32	964	39	737	45	1,206	72	531	35	582	36
Woodside	787	39	799	40								

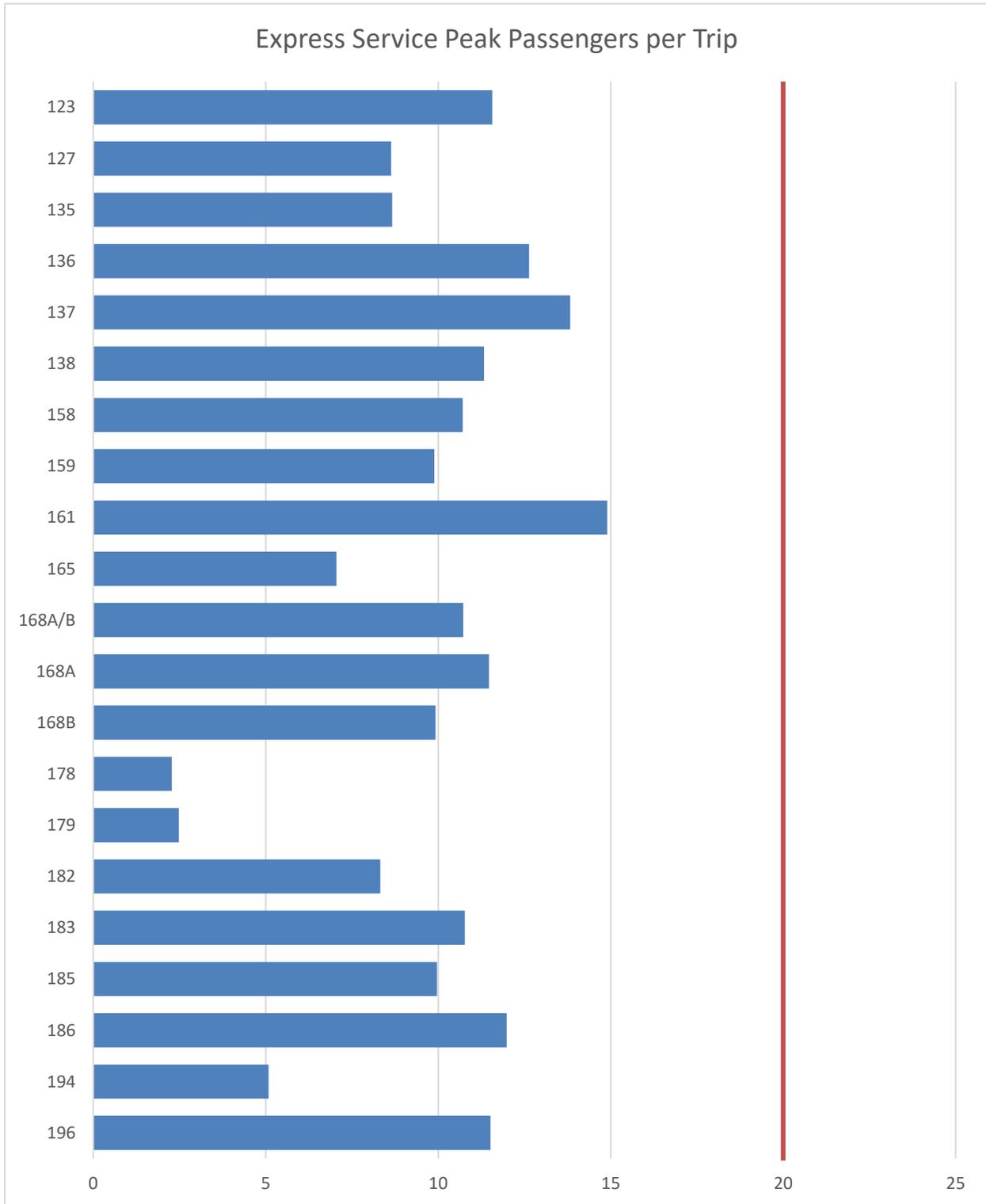
Passengers per Hour by Route



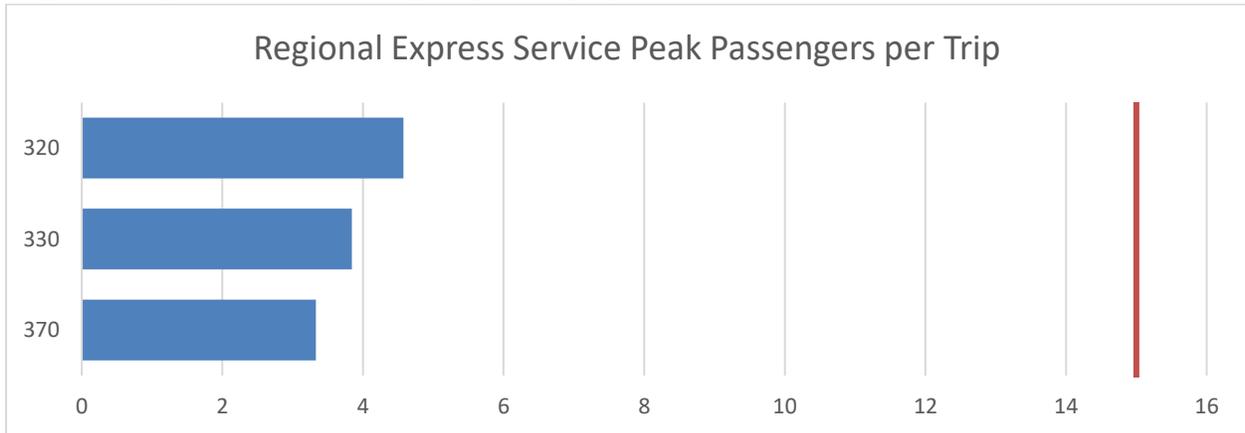
Express Service Peak Boardings and Passengers per Trip

Q4 Comparison - Average Daily Peak Boardings by Express Route				
Route	Weekday			
	2020/21		2021/22	
	Boardings	Pass/Trip	Boardings	Pass/Trip
123	140	10	150	12
127			155	9
135	205	15	121	9
136	250	16	202	13
137	139	12	166	14
138	186	13	159	11
158			86	11
Former 159	166	6		
159			178	10
161			179	15
165			85	7
168A/B			268	11
178	40	3	20	2
179	35	3	20	2
182	260	9	233	8
183	138	11	140	11
185	301	12	259	10
186	132	11	144	12
194	58	7	66	5
196	37	9	46	12
320	68	5	73	5
330	92	4	96	4
370	67	5	43	3

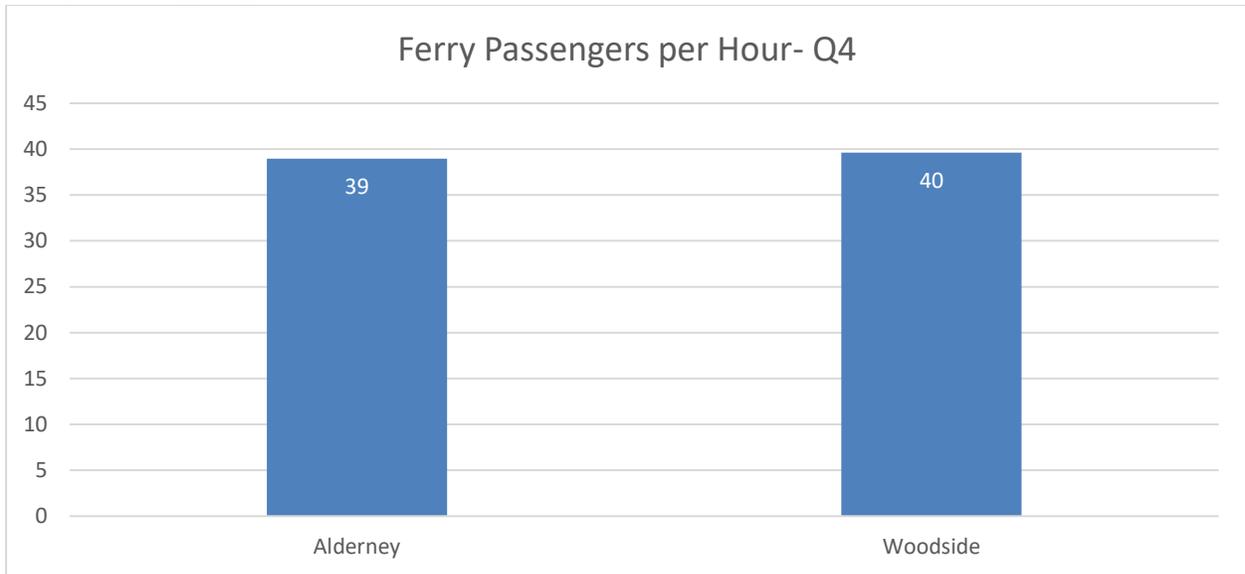
Express Service Peak Passengers per Trip by Route



Regional Express Peak Passengers per Trip by Route



Ferry Passengers per Hour

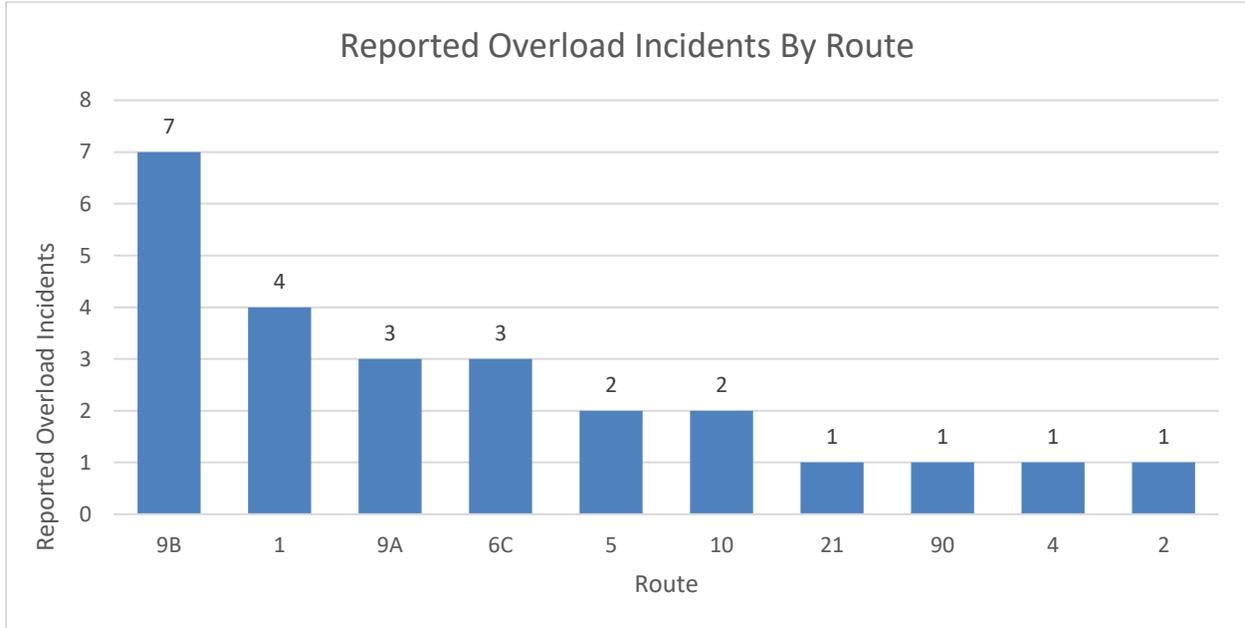


Passenger Overloads

Halifax Transit tracks overloads that are reported to help match scheduling requirements to passenger demands.

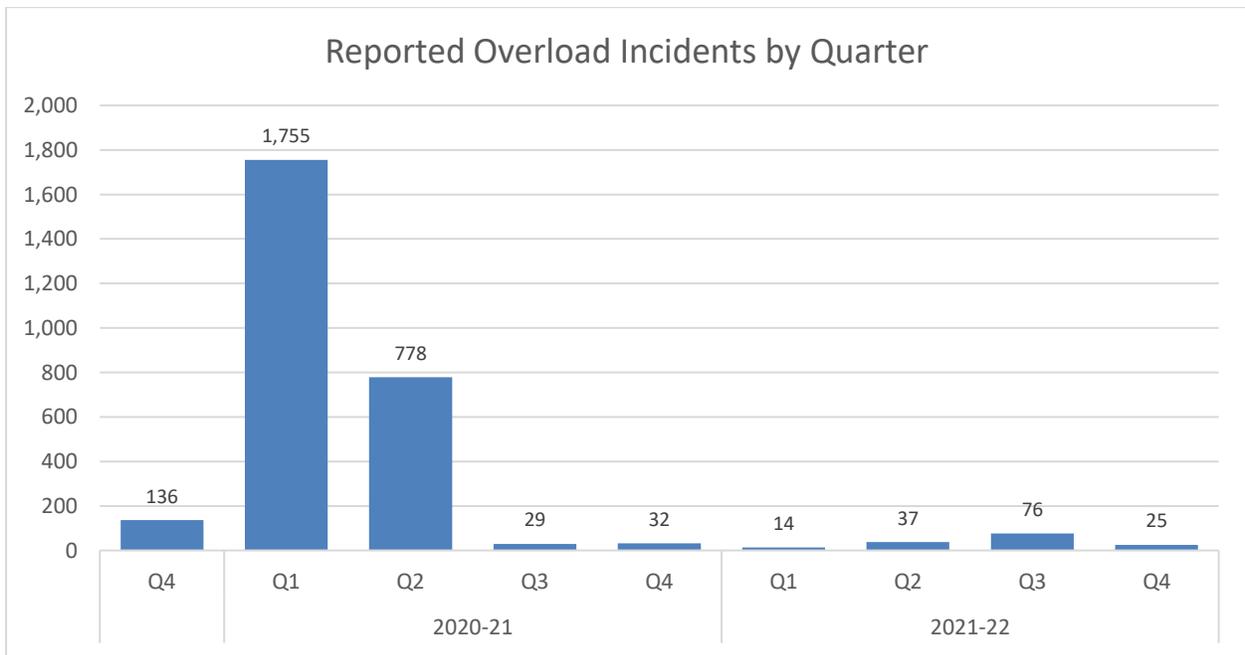
Passenger Overloads by Route

The following graph shows overloaded routes during the fourth quarter. 25 overload incidents were reported during the fourth quarter of 2021/22.



Passenger Overloads by Quarter

The following graph shows reported overload incidents over the past two years.



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.

Halifax Transit has established a target for on-time performance of 85%, which is in line with Transit industry standards. While this target has been exceeded in recent periods throughout the pandemic, this is largely due to reduced traffic demands, these conditions have mostly subsided. During these times when on time performance has exceeded 90% issues with excessive layovers and buses arriving early have been problematic for on street operations and customer experience, indicating that too high of a target for on time performance may cause unintended side effects. A target of 85% encourages improvement on many services, adjustments will be made as part of future service changes in order to bring poor performing routes to this target.

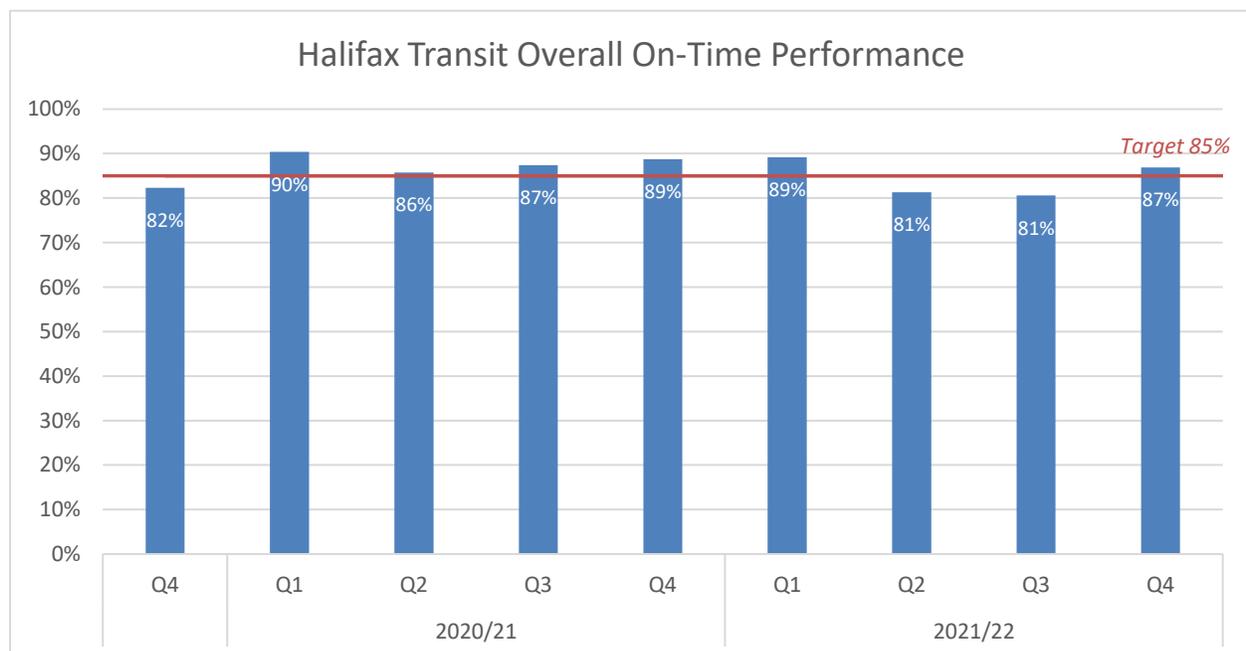
Overall most routes performed above or close to the target during the fourth quarter, in part due to the wave of COVID coinciding with this quarter resulting in reduced traffic conditions and transit demand.

Route 433 Tantallon again performed well below the target over this period, this route is having running time adjustments made alongside major service changes this year in November 2022.

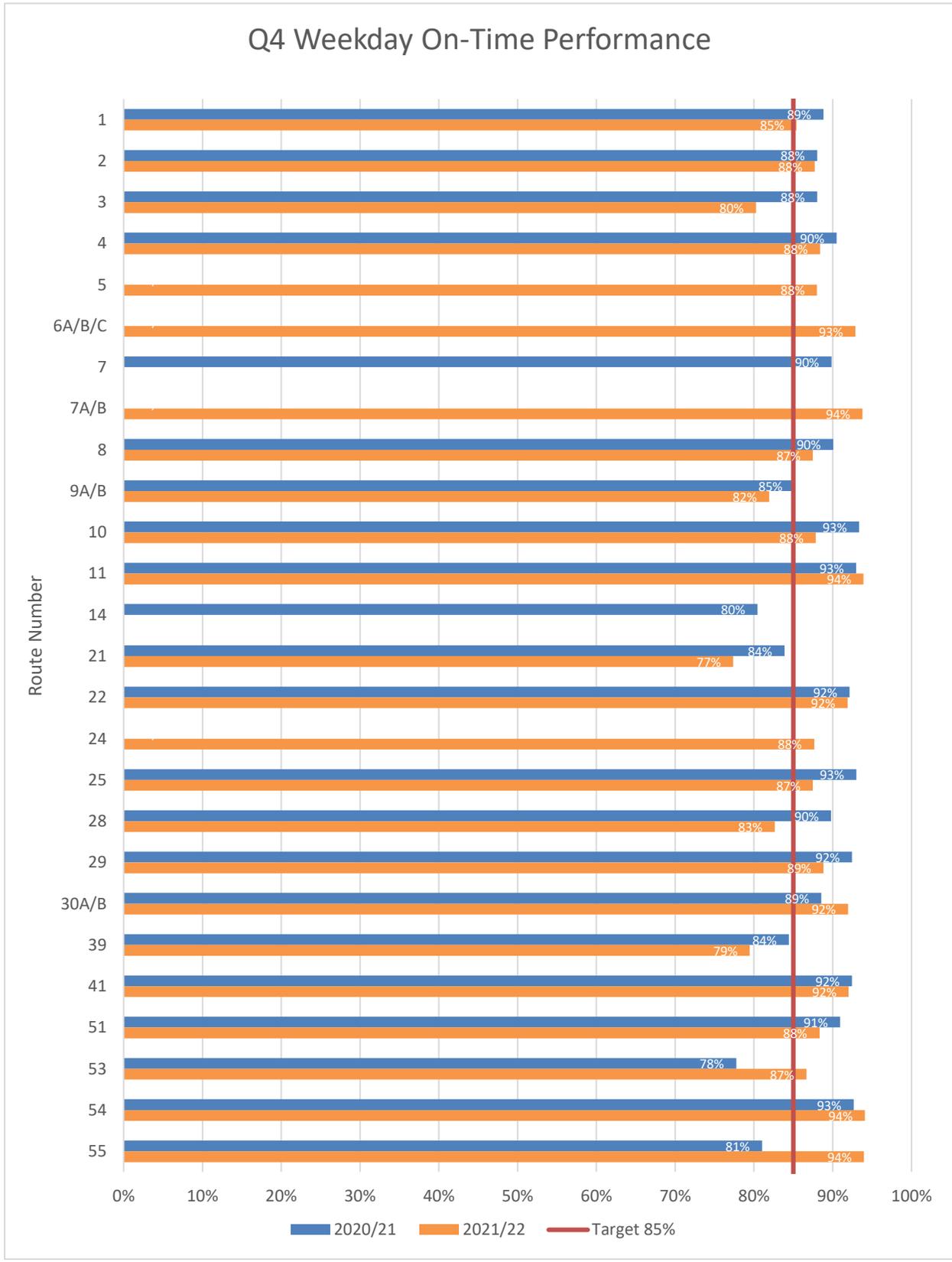
Route 91 Hemlock Ravine also performed well below the standard during this period, this poor performance appears to have been temporary and has improved in recent months, this will continue to be monitored.

Several of the new Dartmouth express routes introduced in November 2021 again performed well below the target over this period. Some of these routes, particularly Route 158 Woodlawn Express may require future running time adjustments.

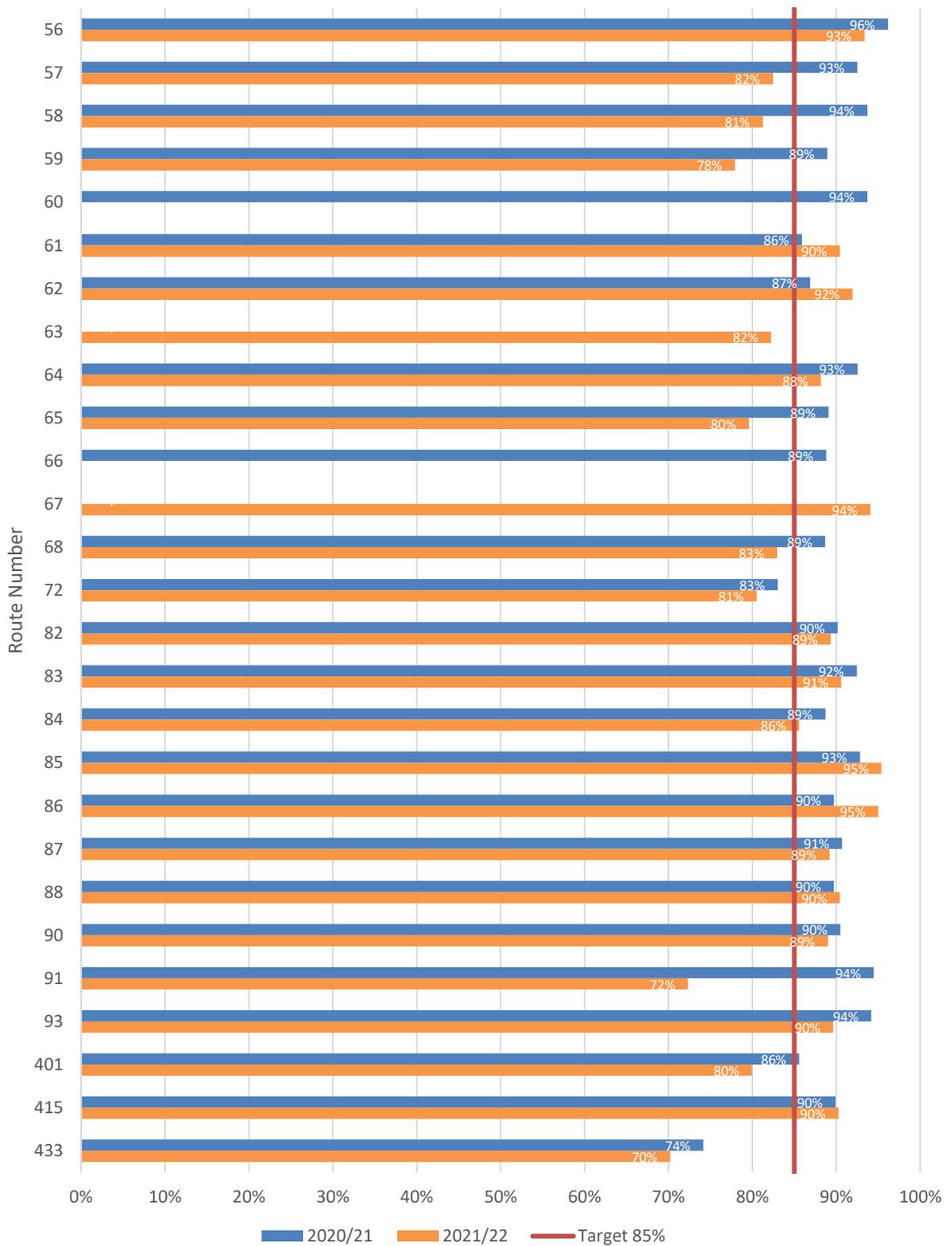
Overall Network On-Time Performance



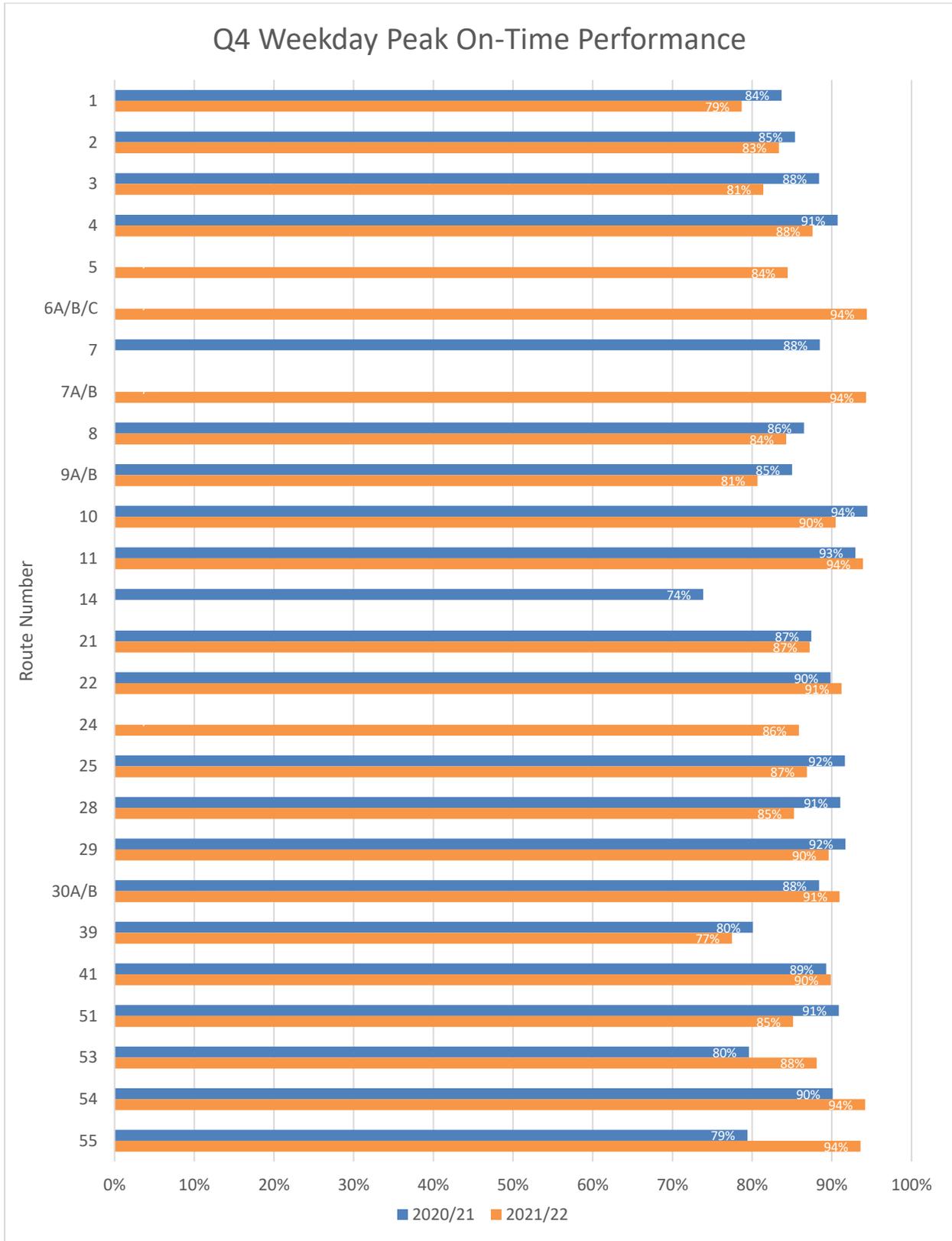
Weekday On-Time Performance



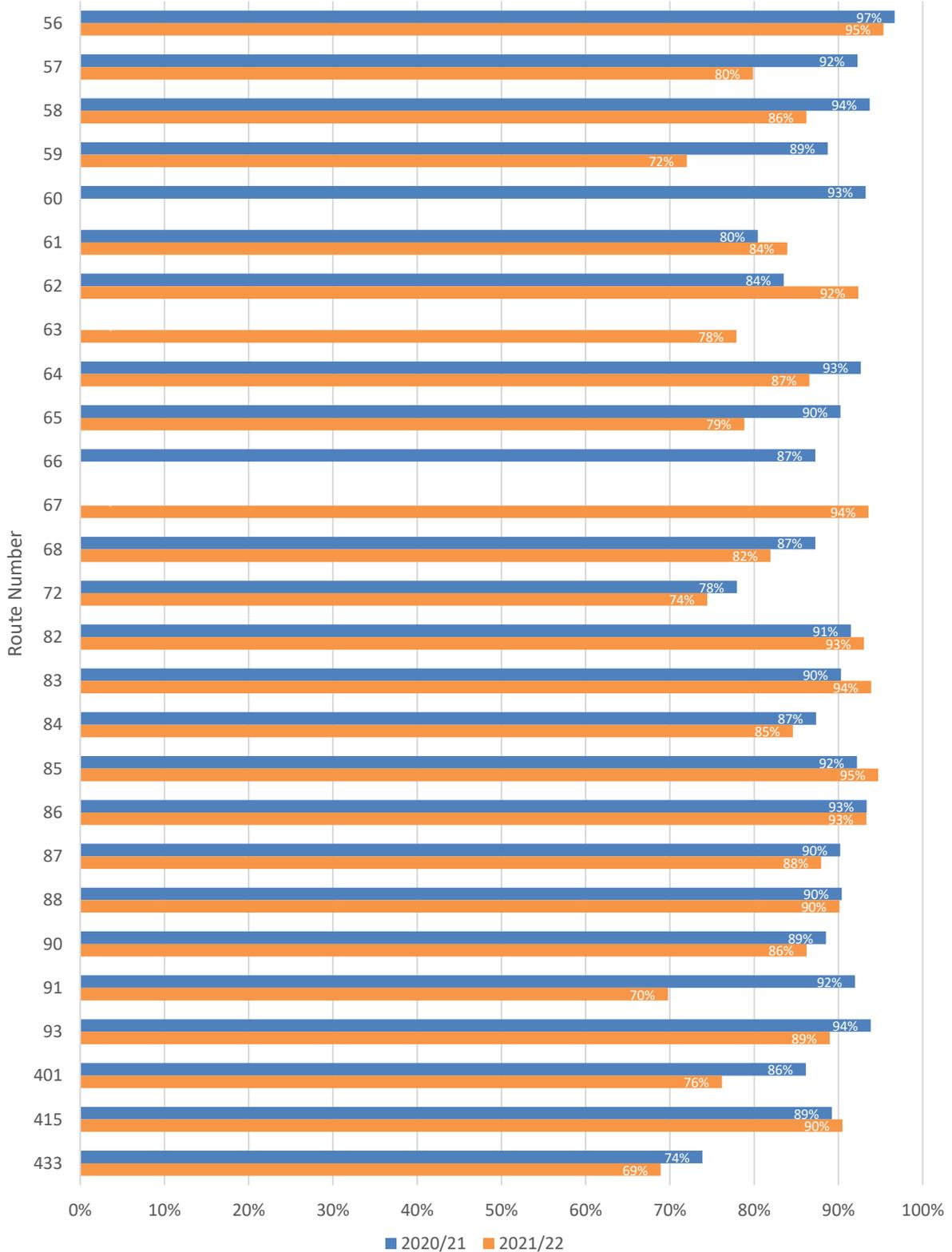
Q4 Weekday On-Time Performance



Weekday Peak Period On-Time Performance



Q4 Weekday Peak On-Time Performance



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.

