



P.O. Box 1749
Halifax, Nova Scotia
B3J 3A5 Canada

Item No. 12.1.1
Transportation Standing Committee
August 25, 2022

TO: Chair and Members of Transportation Standing Committee

SUBMITTED BY: **- Original Signed -**

Denise Scofield, Acting Chief Administrative Officer

DATE: August 18, 2022

SUBJECT: **2021/22 Q4 Halifax Transit KPI Report**

INFORMATION REPORT

ORIGIN

July 3, 2013 Transportation Standing Committee motion (item 7.1.1):

MOVED by Councillor Mason, seconded by Councillor Watts

THAT the Transportation Standing Committee receive a quarterly report and presentation regarding Metro Transit strategic planning and operations.

MOTION PUT AND PASSED

LEGISLATIVE AUTHORITY

Section 4(a) of the Terms of Reference for the Transportation Standing Committee provides that the Transportation Standing Committee is responsible for “overseeing HRM’s Regional Transportation Objectives and Transportation outcome areas”.

BACKGROUND

This report provides a summary of activities in the fourth quarter of the year and includes reporting on key performance measures. These include measures of revenue, ridership, boardings, overloads, on-time performance, loss of service, customer service, service levels, and Access-A-Bus service details.

DISCUSSION

Halifax Transit is committed to advancing the following Regional Council's priority outcomes:

- a) Safe & Accessible Integrated Mobility Network
- b) Connected & Healthy Long-Range Mobility Planning
- c) Net-Zero Emissions

To assist in achieving these priority outcomes, multi year initiatives were identified in the 2021/22 Halifax Transit Business Plan. Updates on relevant projects and programs that support these goals are outlined in this report. Attachment A includes a detailed description of the deliverables identified in the business plan to support these priority outcomes.

a) Safe & Accessible Integrated Mobility Network

Safe & Accessible Integrated Mobility Network	
Business Plan Deliverables	Status
Review of Access-A-Bus Eligibility Criteria	In Progress
Installation of Mobile Data Terminals on Access-A-Bus Vehicles	In Progress
Accessible Bus Stop Inventory & Assessment	Complete
Anti-racism and Passenger Conduct Campaign	Complete
On Demand Private Accessible Transportation	Complete

Q4 Highlights

The implementation of phase 2 of the Paratransit project, the installation of mobile data terminals (MDTs) on each Access-A-Bus vehicle is progressing. Back-end system installation, end-user training, and the hardware installation plan are complete. Operator training began in July 2022 and hardware installation is planned for Aug/Sept 2022.

The Accessible Bus Stop Inventory & Assessment categorized bus stops by effort required to upgrade the stops. A prioritization workshop was held in February with internal HRM stakeholders. The target for accessible upgrades as part of the 2022/2023 budget was identified as 50 bus stops. The recommendation from the prioritization workshop was to complete stops from multiple categories each year. Opportunities for upgrades to 22 bus stops through capital project integration were identified and are proceeding. Low and medium effort categorized stops are to be evaluated for 2022 eligibility through current standing offers. The remainder of the target is to be completed from the high or very high effort categories through design consultants.

The Transit Code anti-racism campaign successfully launched and the anti-racism full bus wrap continues to be in market. A Transit Code anti-littering campaign was deployed in November 2021. The Transit Code anti-sexual harassment campaign launched July 11, 2022, and included a PSA, bus advertising, transit shelters, Spotify ads, paid digital marketing ads, social media, and posters. New, updated prohibited conduct signs were developed and installed at all transit terminals and facilities in January-February 2022. Immersive wall murals featuring the Transit Code eight principles were installed in late July at the Barrington and Duke indoor passenger waiting area. Two passenger courtesy campaigns focused on bags and backpacks and food and beverages are planned for September/October 2022.

Regional Council approved a vendor, SeniorsTransit Inc., for the provision of accessible taxi service on March 1, 2022. The new service, branded 'Extra Care Taxi', was introduced with a limited/trial service on July 11th, 2022. Between July 11th and 27th, over 100 trips were completed. Web and app booking capabilities opened up on July 27, 2022.

There are more than 900 approved participants in the 2021/22 Affordable Access Transit Pass Program, with significant capacity to accommodate additional applicants. Approximately 53% of the monthly passes were sold to program participants.

b) Connected & Healthy Long-Range Mobility Planning

Connected & Healthy Long-Range Mobility Planning	
Business Plan Deliverables	Status
Implementation of Moving Forward Together Plan Transit Network Changes	Complete
Transit Priority Measures - Bayers Road	Complete
West Bedford Park & Ride	In Progress
Rapid Transit Strategy - Pursue Funding & Prepare Functional Designs for Bus Rapid Transit	In Progress
Rapid Transit Strategy - Complete Technical Studies & Design for Ferry Service	In Progress
Woodside Ferry Terminal Renovation - Phase 2 Construction	In Progress

Q4 Highlights

An outbound transit lane on Bayers Road from Windsor Street to Connolly Street was opened in late May 2022 as an interim solution to improve transit operations as the Phase 2 construction between Windsor Street and Connaught Avenue is delayed to 2023/24. Routing changes were also made to Regional Express Route 330 and Express Route 194 to allow these routes to benefit from this new transit priority measure.

Phase 1 of Halifax Transit's Mill Cove Ferry Service is ongoing. Work will continue regarding the suite of studies through 2022/23, and the project team continues to refine the project schedule to complete these items.

The West Bedford Park & Ride is nearing completion. While the facility became operational on November 22, 2021, some elements of the design are not expected to be completed until 2022/23. The remaining portion of the parking lot has been paved but some elements, including the heated shelters are still outstanding. Most of the final design elements are anticipated to be completed in summer 2022. A launch event is being planned.

The Woodside Ferry Terminal renovation project achieved substantial completion in June 2022. The final escalator inspection identified a code issue which requires the installation of escalator guards. Design and installation of these guards will take approximately eight weeks which will delay the opening of the escalators to fall 2022. A launch event will be scheduled to celebrate the completion of this project once a firm date for escalator completion is confirmed.

Due to ongoing staffing shortages, the decision has been made to postpone the final Moving Forward Together Plan (MFTP) service changes scheduled for November 2022, apart from implementing the new Route 50, which will provide service between Bridge Terminal and the Dockyard and Irving Shipyard in Halifax, during peak hours on weekdays only.

In addition to the changes outlined in the *2022/23 Annual Service Plan*, Routes 4 Universities and 10 Dalhousie will be adjusted to travel on University Avenue between Lemarchant Street and Robie Street to improve on-street operations.

c) **Net-Zero Emissions**

Net-Zero Emissions	
Business Plan Deliverables	Status
Develop & Issue a Request for Proposals for the Procurement of Battery Electric Buses	Complete
Begin Assessment for the Elimination of Internal Combustion Engine Vehicles	In Progress

Q4 Highlights

The Ragged Lake Transit Centre design phase began in March 2022. The schematic design phase is anticipated to be completed before the end of August 2022, with the detailed design and the construction documents to follow before the end of November 2022.

During the May 17, 2022, Regional Council meeting, Council approved the award of up to sixty (60), 40 foot battery Electric Transit Buses and charges to Nova Bus Ltd. The final pre-production meeting is expected to take place before the end of September 2022.

Q4 Performance Measures Highlights

Please see Attachment B, *Halifax Transit 2021/22 Q4 Performance Measures Report*, covering January, February, and March; and Attachment C *2021/22 Year End Performance Report* for additional performance measures and detailed route level statistics.

- Overall boardings increased 11% this quarter from last year (remaining 37.6% below 2019/20 Q4), while revenue increased 13.8% (remaining 34.6% below 2019/20 Q4).
- Average daily boardings in Q4 were 56,665 (weekday), 32,887 (Saturday) and 26,571 (Sundays).
- System wide on-time performance was 87%, 2% lower than Q4 last year.
- The Departures Line received over 2,000 passenger calls on a typical weekday this quarter.
- Access-A-Bus operated 6% more trips this quarter when compared to Q4 last year.
- This quarter 80% of customer feedback was resolved within service standards.
- The Mean Distance Between Failures (MDBF) for conventional service was 10,615 km, a 20% increase from Q4 last year.
- The Mean Distance Between Service Calls (MDBS) for conventional service was 5,911 kms, an increase of 37% from Q4 last year.
- The MDBS for Access-A-Bus was 37,683 kms, a 29% decrease from Q4 last year
- The maximum daily number of buses that could not complete their scheduled service due to a mechanical defect was 12, while the daily average was 4.7.
- Maintenance cost was \$1.352/km, 2.4 cents lower than the budgeted cost of \$1.376/km.

Annual Highlights

- Annual on-time performance was 84%, a decrease of 4% from last year.
- In 2021/22 overall boardings increased 24% from the previous year, remaining 42.6% below 2019/20 boardings.
- In 2021/22 revenue increased 49% overall compared to the previous year, remaining 35.5% below 2019/20 revenue.
- Average daily boardings in 2021/22 were 55,485 (weekday), 35,469 (Saturday) and 25,930 (Sundays).
- Trips provided by Access-A-Bus in 2021/22 increased 36.5% from last year, remaining 28.5% below 2019/20 trips provided.

- The average fuel price in 2021/22 was 87 cents/litre, 34 cents higher than the budgeted cost per litre.
- The annual mean distance between failures for 2021/22 was 12,446, increasing 36% compared to the previous year.
- The maintenance cost per kilometer in 2021/22 was \$1.33/km, 3 cents lower than the budgeted cost of \$1.36/km.

FINANCIAL IMPLICATIONS

No financial implications.

COMMUNITY ENGAGEMENT

No community engagement was required.

ATTACHMENTS

Attachment A: Halifax Transit 2021/22 Q4 Business Plan Deliverables

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

Attachment C: Halifax Transit 2021/22 Year End Performance Measures Report

A copy of this report can be obtained online at halifax.ca or by contacting the Office of the Municipal Clerk at 902.490.4210.

Report Prepared by: Colin Redding, Transit Planning Technician, Halifax Transit, 902.490.6632
David Massey, Transit Planning Technician, Halifax Transit, 902.719.7217

Attachment A Halifax Transit 2021/22 Business Plan Deliverables

Halifax Transit 2021/22 Business Plan & Director Deliverables		
Deliverable	Description	Status
Review of Access-A-Bus Eligibility Criteria	To ensure service offerings are focused on client's abilities, the Access-A-Bus (AAB) client eligibility criteria will be reviewed and better matched to functional abilities, aligning the availability of AAB services to those who require it. This alignment is anticipated to create capacity for those who cannot use the services of the now fully accessible conventional fleet.	In Progress. Access-A-Bus registration criteria is being reviewed, with a revised target for recommendations by end of Q4 2022/23.
Installation of Mobile Data Terminals on Access-A-Bus Vehicles	To improve service delivery through the introduction of new technology, Mobile Data Computers will be installed on all Access-A-Bus Vehicles. The implementation of the new technology will include physical hardware installation, compatibility software integration, current-state process documentation, process updating, testing, user-training and adoption.	In Progress. The implementation of phase 2 of the Paratransit project, the installation of mobile data terminals (MDTs) on each Access-A-Bus vehicle is progressing. Back-end system installation, end-user training, and the hardware installation plan are complete. Operator training began in July 2022 and hardware installation is planned for August/September 2022.
Accessible Bus Stop Inventory & Assessment	Halifax Transit will engage a consultant to assist with preparing a full inventory of all remaining non-accessible bus stops, along with proposed improvements and costs with upgrading all stops.	Complete. All site visits have been completed and all bus stops have been inventoried and assessed. The final upgrade costing, strategies and recommendations were completed in Q4.
Anti-racism and Passenger Conduct Campaign	Halifax Transit will launch an external (public) campaign to address public conduct, with a focus on anti-racism, to promote diversity and inclusion, and support respectful passenger conduct on transit.	Complete. The Transit Code anti-racism campaign successfully launched and the anti-racism full bus wrap continues to be in market. A Transit Code anti-littering campaign was deployed in November 2021. The Transit Code anti-sexual harassment campaign launched in July 2021. New, updated prohibited conduct signs were developed and installed at all transit terminals and facilities in January/February 2022. Immersive wall murals featuring the 8 Principles of the Transit Code were installed at the Barrington and Duke passenger waiting area. Two passenger courtesy campaigns focused on bags and backpacks and food and beverages are planned for September/October, 2022.

Attachment A Halifax Transit 2021/22 Business Plan Deliverables

<p>On-demand Private Accessible Transportation</p>	<p>To complement existing taxi service in Halifax, Halifax Transit will procure a vendor to provide private, accessible, on-demand transportation services.</p>	<p>Complete. Regional Council approved a vendor, SeniorsTransit Inc., for the provision of the service on March 1, 2022, and a contract has been signed.</p> <p>The new service, branded 'Extra Care Taxi', was introduced with a soft launch on July 11, 2022, and an official launch and promotions are being planned.</p>
<p>Implementation of Moving Forward Together Plan Transit Network Changes</p>	<p>The next large route network change is targeted to take place in November 2021, resulting in changes to more than a third of transit routes.</p>	<p>Complete. The service changes were successfully implemented on November 22, 2021. This latest round of service changes introduced 26 additional routes from the MFTP, bringing the total plan completion to 85%.</p> <p>Due to ongoing staffing shortages, the decision has been made to postpone the final MFTP service changes scheduled for November 2022, with the exception of implementing the new Route 50, which will provide service between Bridge Terminal and the Dockyard and Irving Shipyard in Halifax, during peak hours on weekdays only.</p>
<p>Transit Priority Measures - Bayers Road</p>	<p>Halifax Transit will continue to pursue the implementation of transit priority measures on major strategic multimodal corridors. Specifically, construction will continue Bayers Road, with inbound and outbound lanes from Connaught Avenue to Coleman Court being completed in 2021/22.</p>	<p>Complete (Phase 1). Construction of Phase 1 was completed in full in November 2021.</p> <p>An interim outbound transit lane on Bayers Road from Windsor St. to Connolly St. opened in late May 2022 to improve transit operations in the interim as the Phase 2 construction (between Windsor St. and Connaught Ave.) is delayed to 2023/24.</p>
<p>West Bedford Park & Ride</p>	<p>This new Park & Ride facility, including a four bay bus platform with heated shelters, will be constructed in 2021, targeting a November 2021 opening date.</p>	<p>In Progress. The West Bedford Park & Ride became operational on November 22, 2021. Some elements of the design were not expected to be completed until 2022/23 and are still outstanding.</p>
<p>Rapid Transit Strategy - Pursue Funding & Prepare Functional Designs for Bus Rapid Transit</p>	<p>The Rapid Transit Strategy, approved in 2020, describes a network of four bus rapid transit (BRT) lines that cover approximately 50km, connecting peninsular Halifax and Downtown Dartmouth with developing suburbs on both sides of the harbour. In 2021/22, Halifax Transit will continue to pursue</p>	<p>In Progress. Staff continue to engage in discussions with potential funding partners. Work continues on Functional Plans which explore corridor-wide street designs to support future BRT service.</p>

Attachment A Halifax Transit 2021/22 Business Plan Deliverables

	potential funding opportunities to advance the BRT project and will work with other business units on functional designs in key corridors to further refine transit priority information and costs.	
Rapid Transit Strategy - Complete Technical Studies & Design for Ferry Service	The Rapid Transit Strategy, approved in 2020, proposes three new ferry routes from three new terminals: Mill Cove, Larry Uteck, and Shannon Park. In 2021/22, Halifax Transit will complete a number of technical studies and design work to inform future implementation of the Mill Cove ferry service.	In Progress. The market analysis is now complete. Work will continue on the suite of studies through 2022/23 and the project team are continuing to refine the project schedule to complete these Phase 1 studies.
Woodside Ferry Terminal Renovation – Phase 2 Construction	The Woodside Ferry Terminal requires significant rehabilitation to all aspects of the building, including envelope, mechanical and electrical systems, and customer waiting areas. Construction will continue throughout 2021/22.	In Progress. The Woodside Ferry Terminal renovation project achieved substantial completion in June 2022. However, the final escalator inspection identified a code issue which requires the installation of escalator guards. The design and installation of these guards will take approximately eight weeks which will delay the opening of the escalators to the fall 2022.
Develop and Issue a Request for Proposals for the Procurement of Battery Electric Buses	To begin decarbonizing public transit, Halifax Transit will issue a Request for Proposals (RFP) for the procurement of battery electric buses (BEBs).	Complete. Council approved the proposal to purchase up to 60 Battery Electric Buses and Chargers in May 2022. The contract has been awarded to the successful bidder (Nova Bus).
Begin Assessment for the Elimination of Internal Combustion Engine Vehicles	To determine sustainable alternatives for the future, Halifax Transit will begin to assess the elimination of internal combustion engine vehicles.	In Progress: Halifax Transit is researching the available products in the market to better understand adoption and operational requirements.

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

2021/22 – Q4

Performance Measures Report

HALIFAX
TRANSIT

Contents

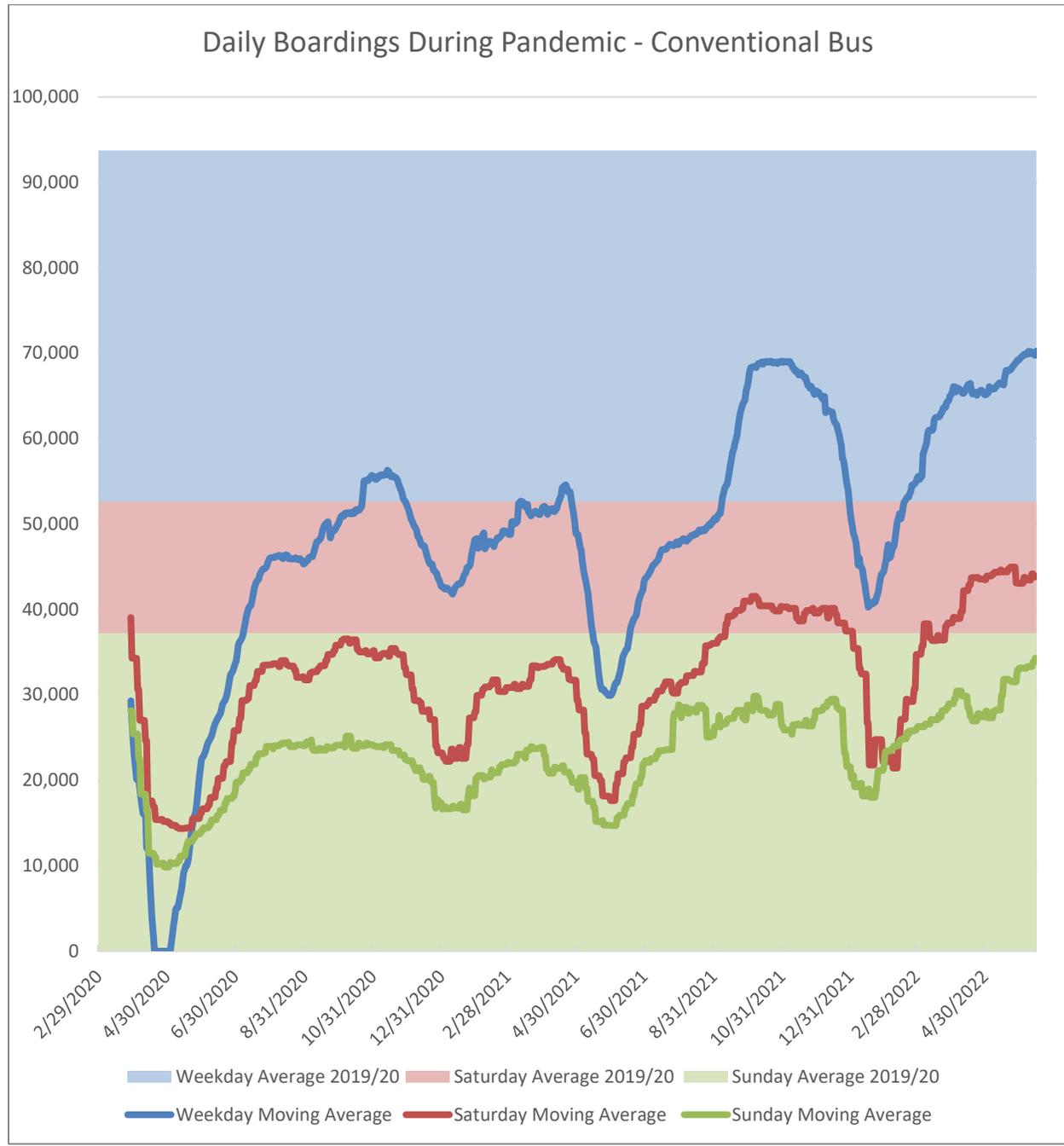
- COVID-19 Pandemic Data Impacts..... 3
 - Conventional Bus Boardings During Pandemic..... 3
 - Ferry Boardings During Pandemic 4
 - Access-A-Bus Boardings During Pandemic..... 4
- Boardings & Revenue..... 5
 - Historical Boardings & Revenue..... 5
 - Revenue – Actual vs. Planned 8
- Loss of Service..... 10
- Mean Distance Between Failures 11
- Mean Distance Between Service Calls 12
- Bus Maintenance Cost – Quarter Average vs Budget..... 12
- Fuel Price – Annual Average vs Budget..... 14
- Access-A-Bus Trip Details 15
- Customer Service – All Services 17
- Service Utilization 19
 - Boardings 19
 - Average Daily Boardings by Service Day 19
 - Boardings by District 20
 - Weekday Boardings by District – All Day 20
 - Weekday Boardings by District – AM Peak Period 21
- Passengers per Hour 22
 - Boardings & Passengers per Hour..... 22
 - Passengers per Hour by Route..... 24
 - Express Service Peak Boardings and Passengers per Trip..... 25
 - Express Service Peak Passengers per Trip by Route 26
 - Regional Express Peak Passengers per Trip by Route..... 27
 - Ferry Passengers per Hour 27
- Passenger Overloads..... 28
 - Passenger Overloads by Route 28
 - Passenger Overloads by Quarter 28
- On-Time Performance..... 29
 - Overall Network On-Time Performance 29

Weekday On-Time Performance..... 30
Weekday Peak Period On-Time Performance 32
Express Service On-Time Performance 34

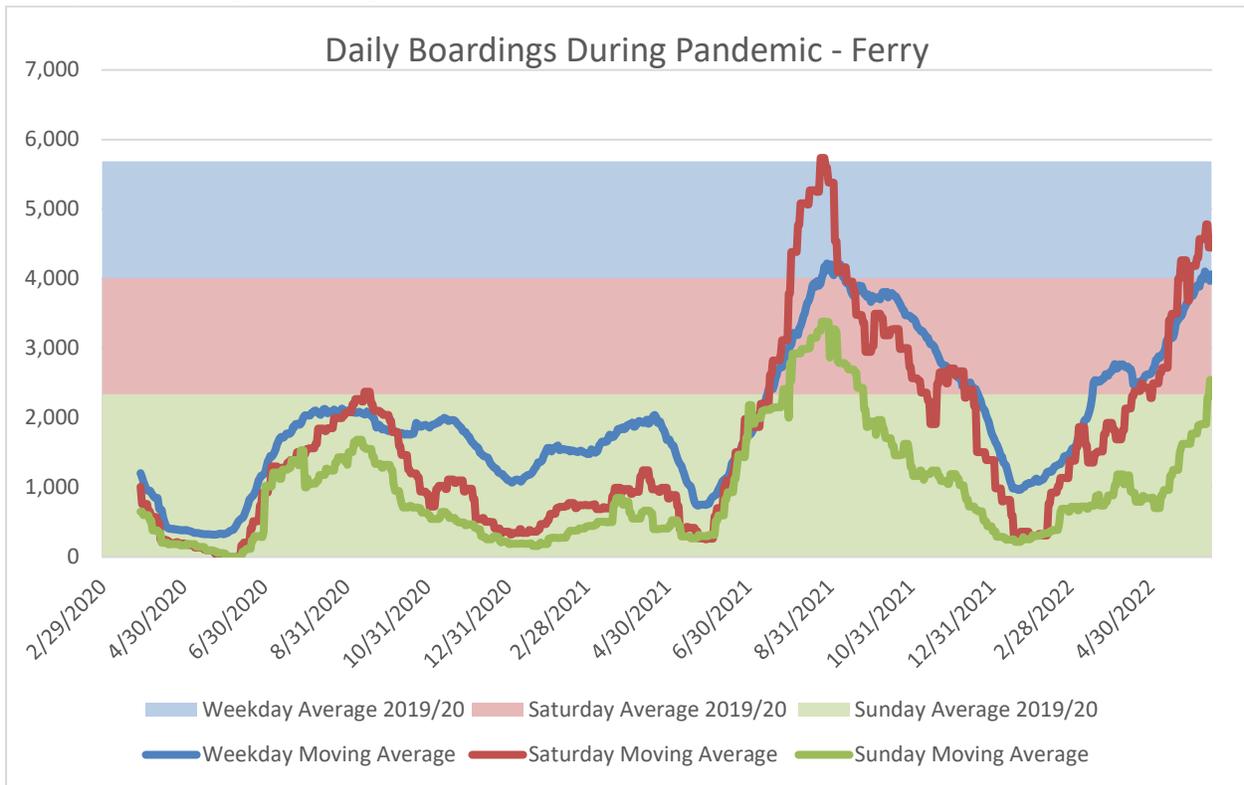
COVID-19 Pandemic Data Impacts

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.

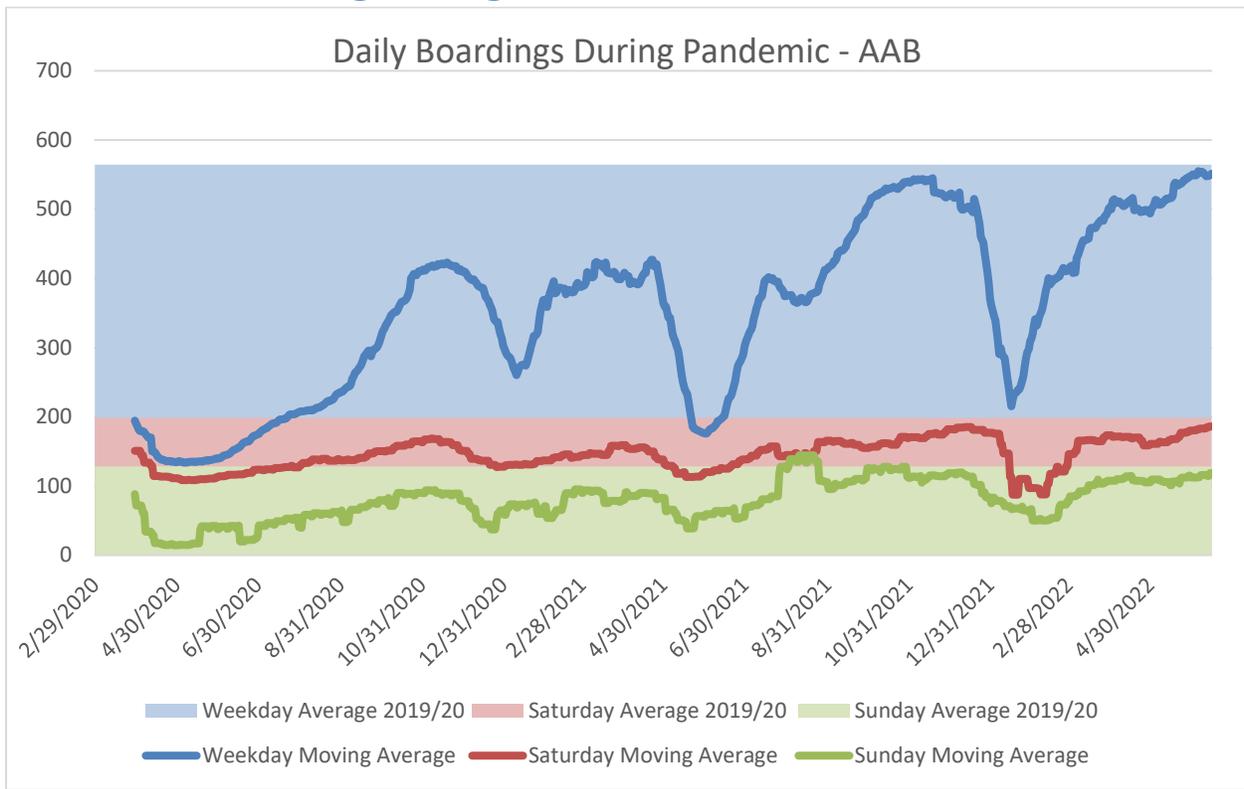
Conventional Bus Boardings During Pandemic



Ferry Boardings During Pandemic



Access-A-Bus Boardings During Pandemic

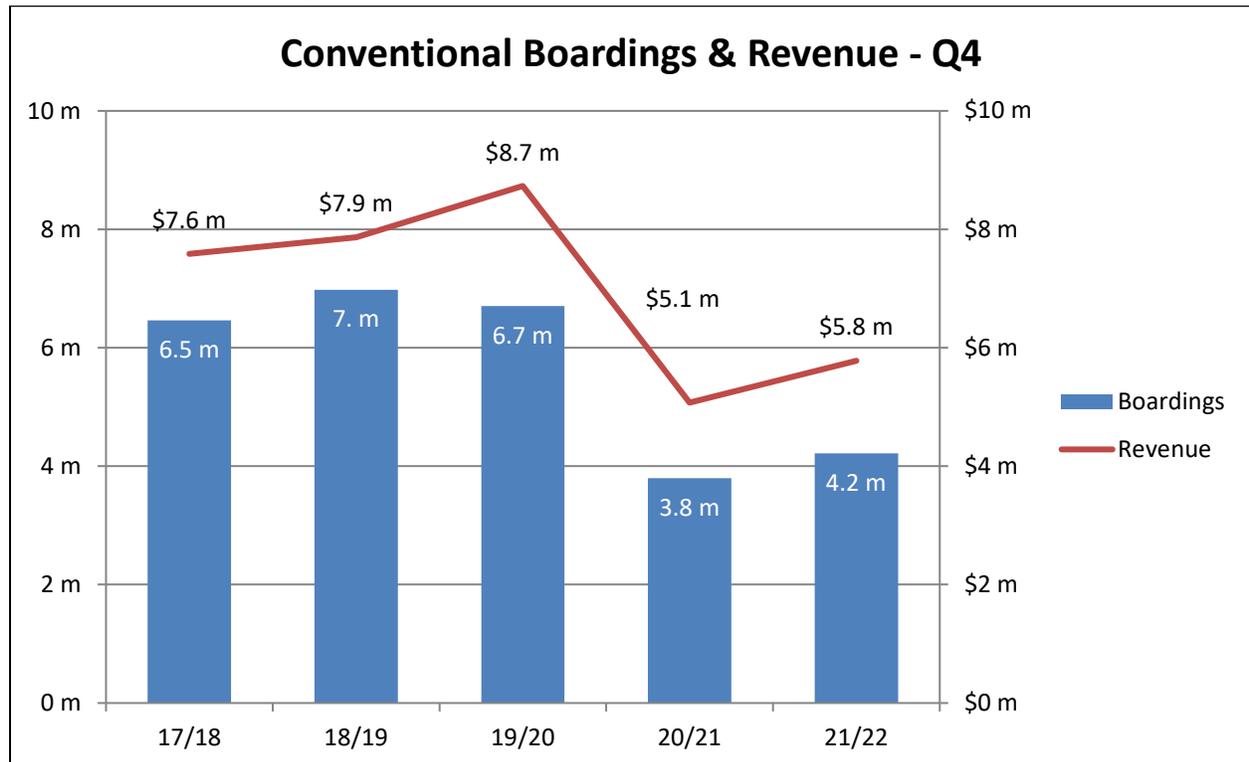


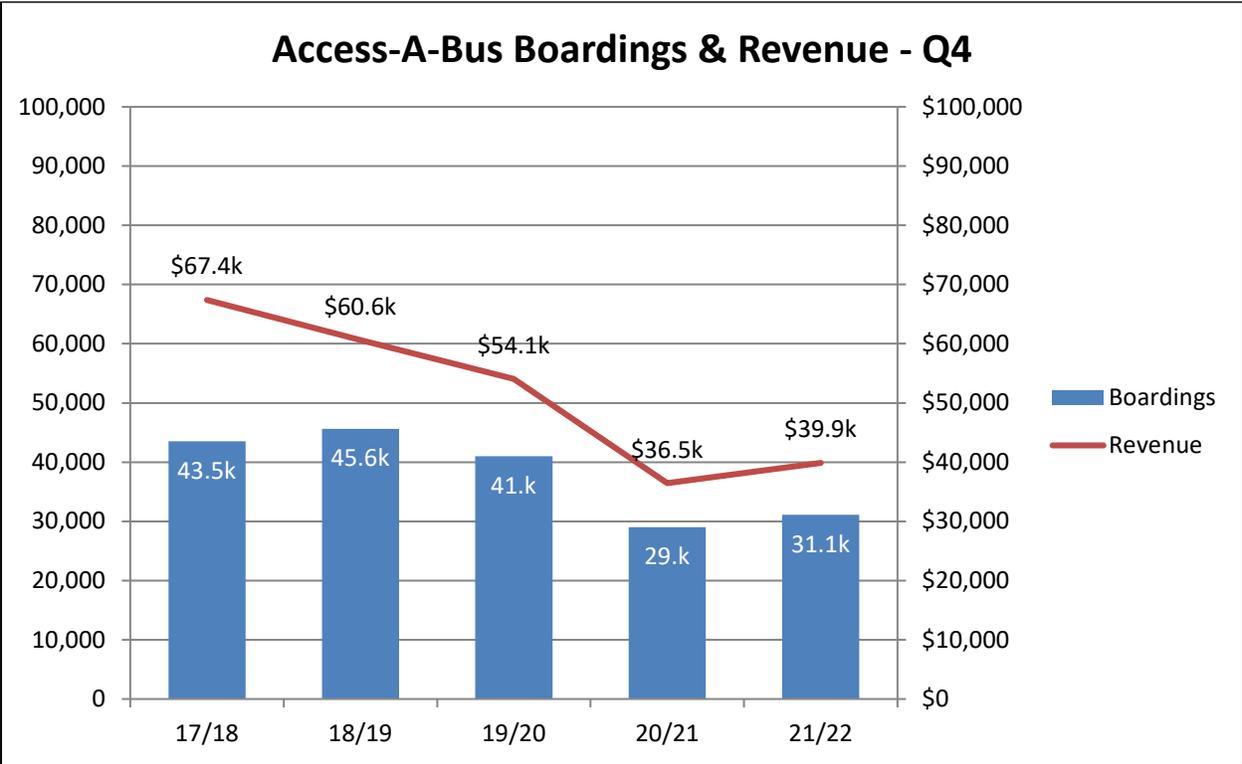
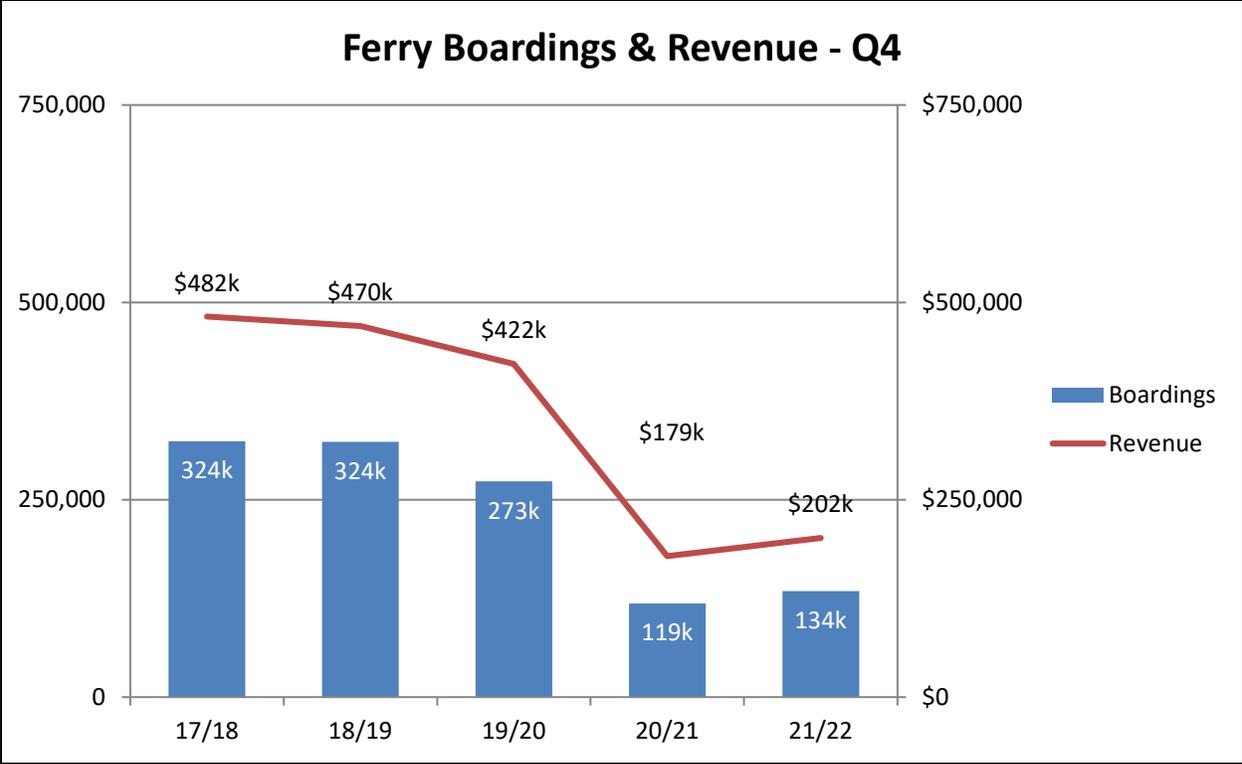
Boardings & Revenue

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.

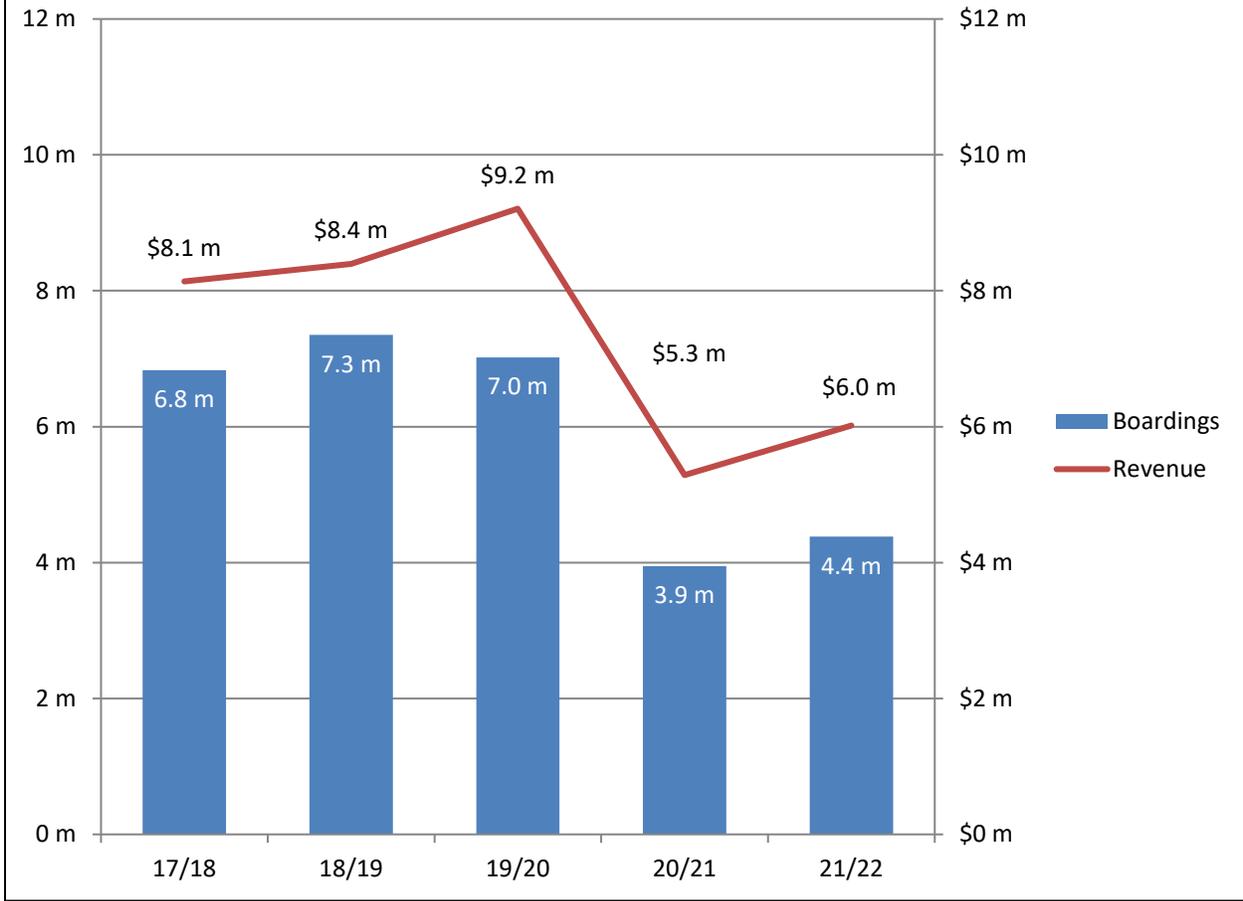
COVID-19 continued to have a significant impact during the fourth quarter of 2021/22. Conventional boardings increased 11% from this quarter last year, Ferry boardings increased 13.3% and Access-A-Bus boardings increased 7.2%. Overall, system wide boardings increased this quarter by 11% compared to last 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



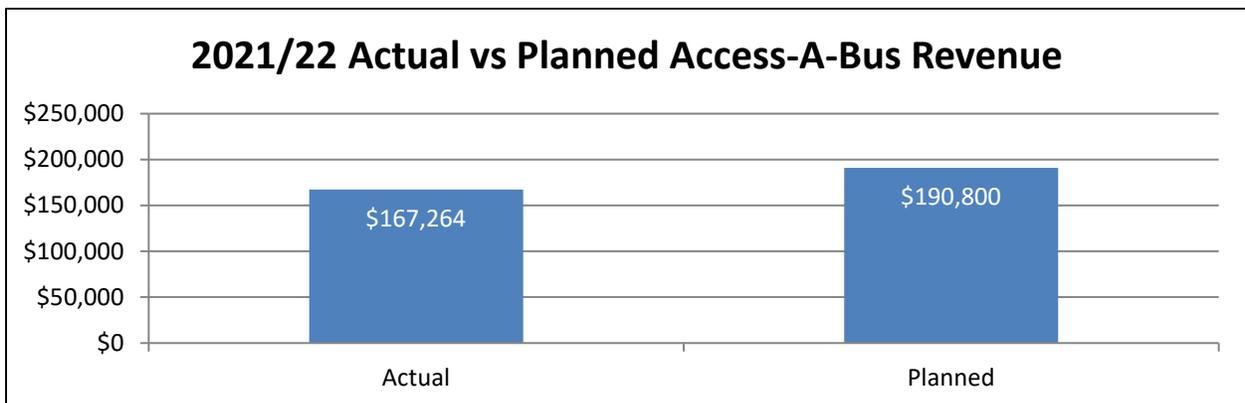
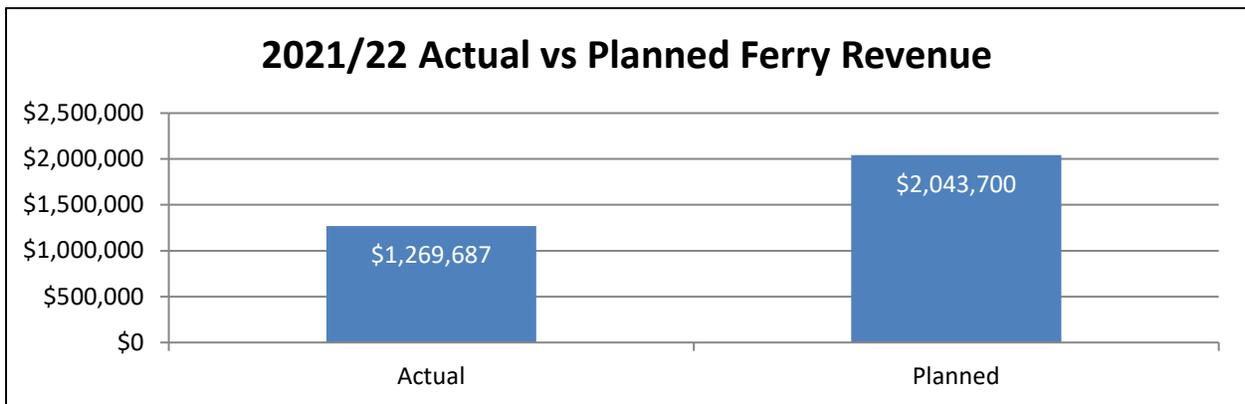
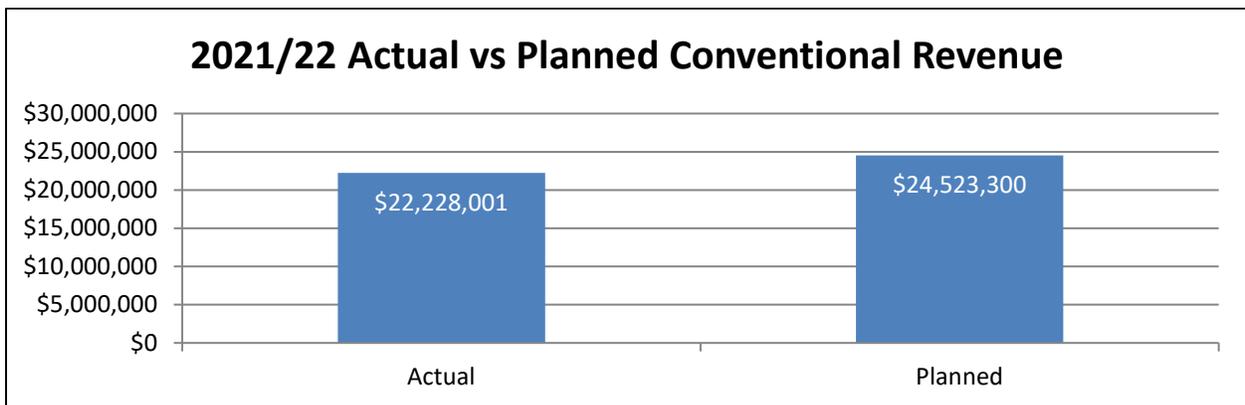


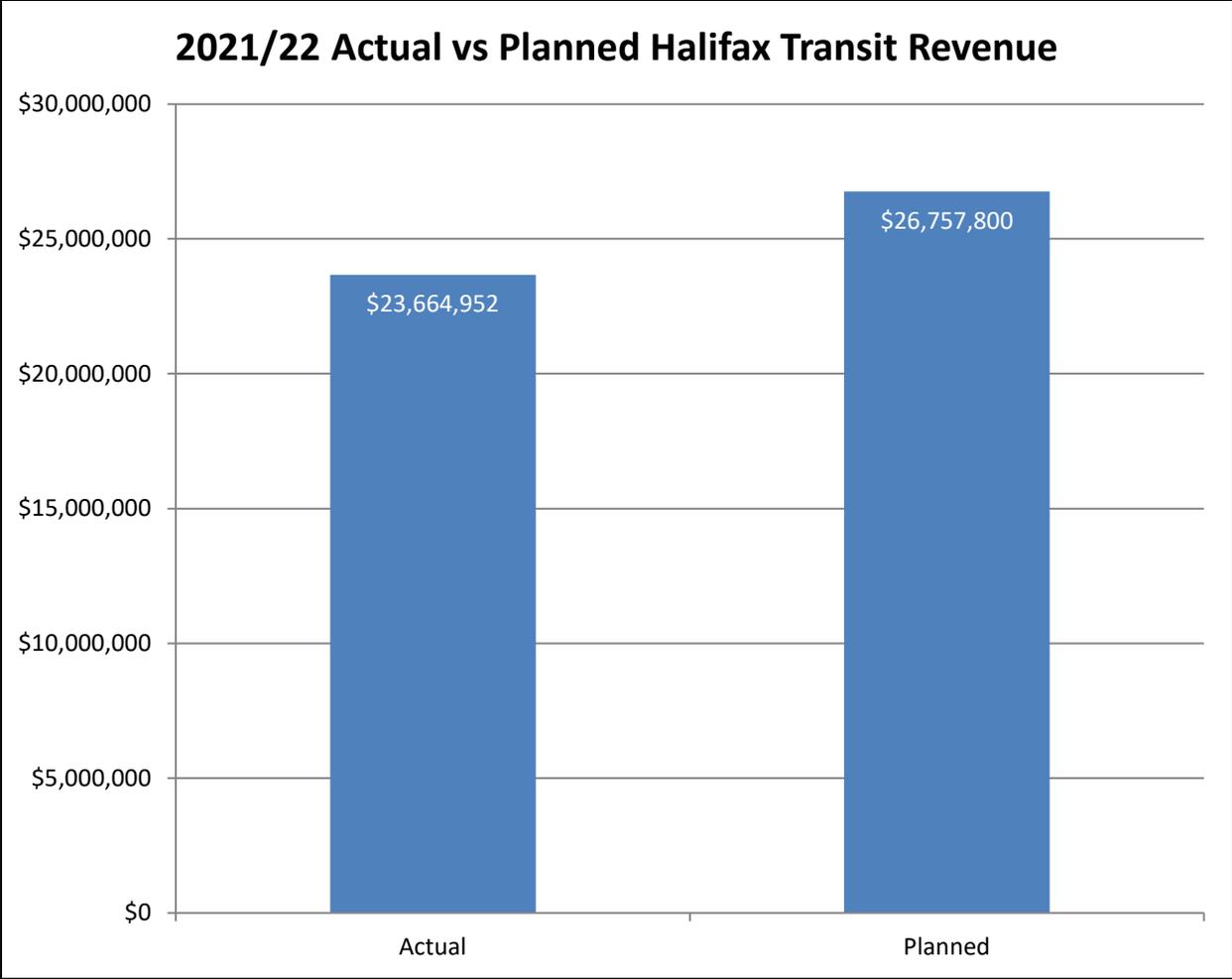
Halifax Transit Boardings & Revenue - Q4



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.

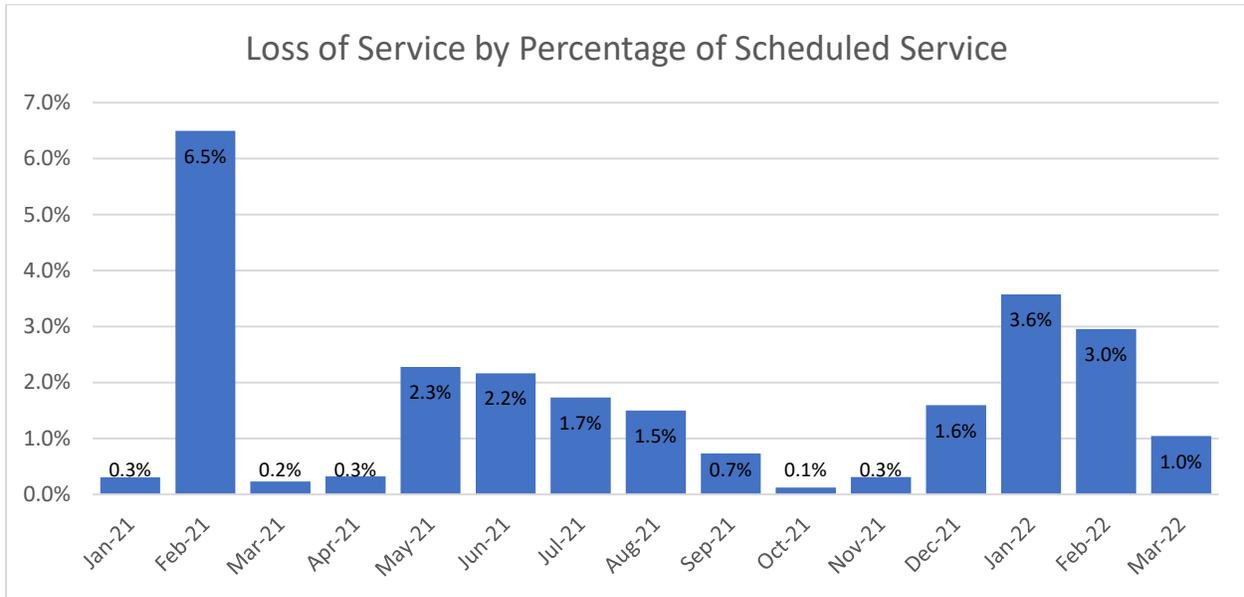




Loss of Service

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.

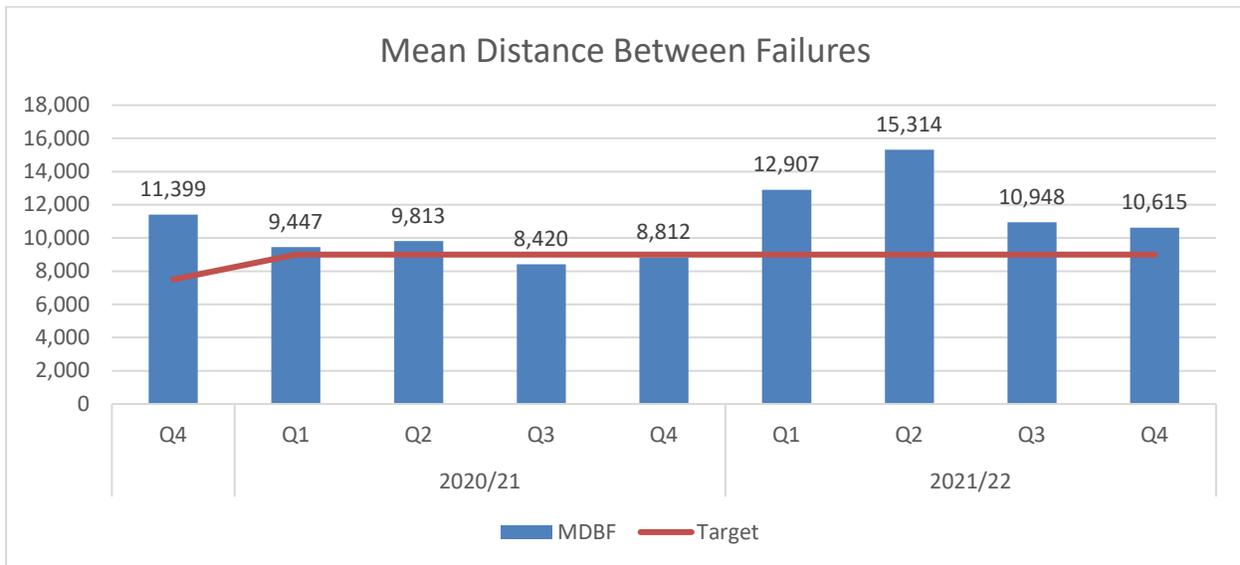
In the fourth quarter, the total loss of service was 5,064 hours, which is 2.5% of the quarterly revenue hours. The table below shows the total loss of service for each month. The increase in lost service through winter 2021/22 is attributable to the most recent wave of the pandemic, which resulted in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

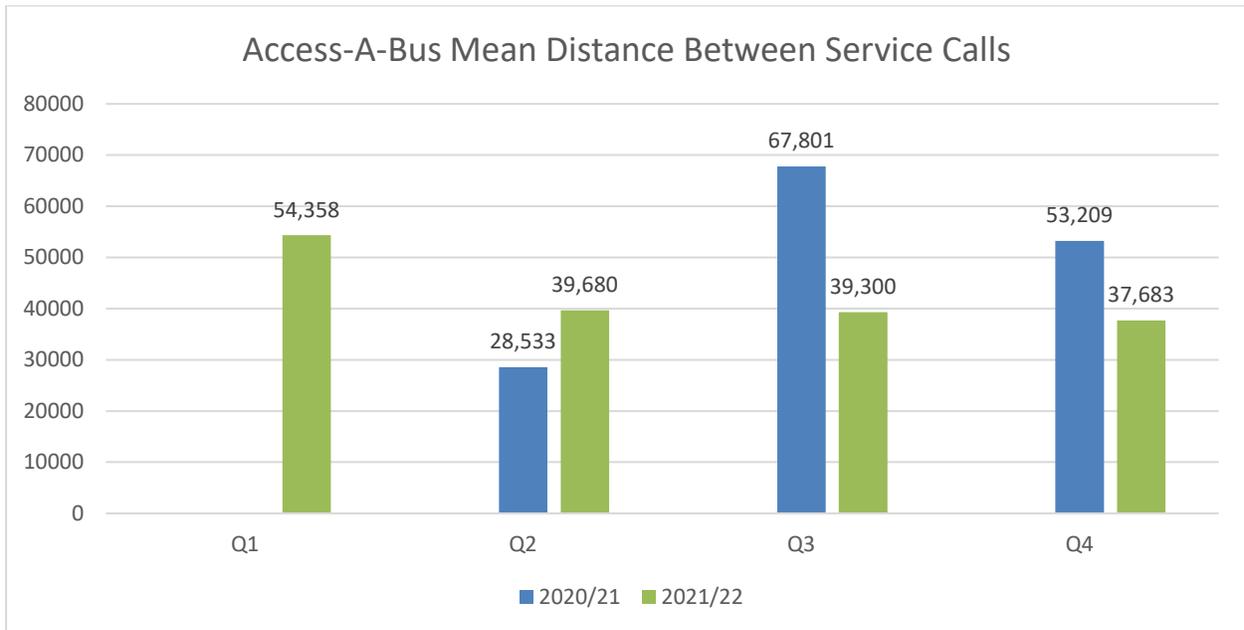
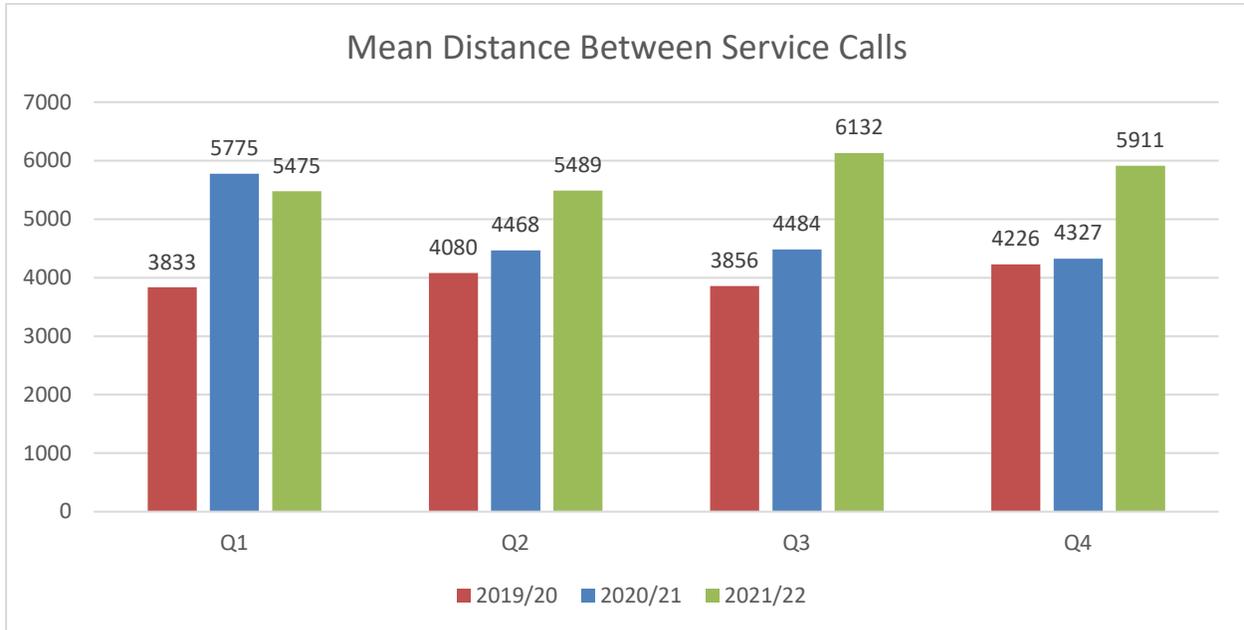
For the fourth quarter of 2021/22, the MDBF for conventional transit was 10,615 kms. This is a 20% increase from the fourth quarter of the previous year.



Mean Distance Between Service Calls

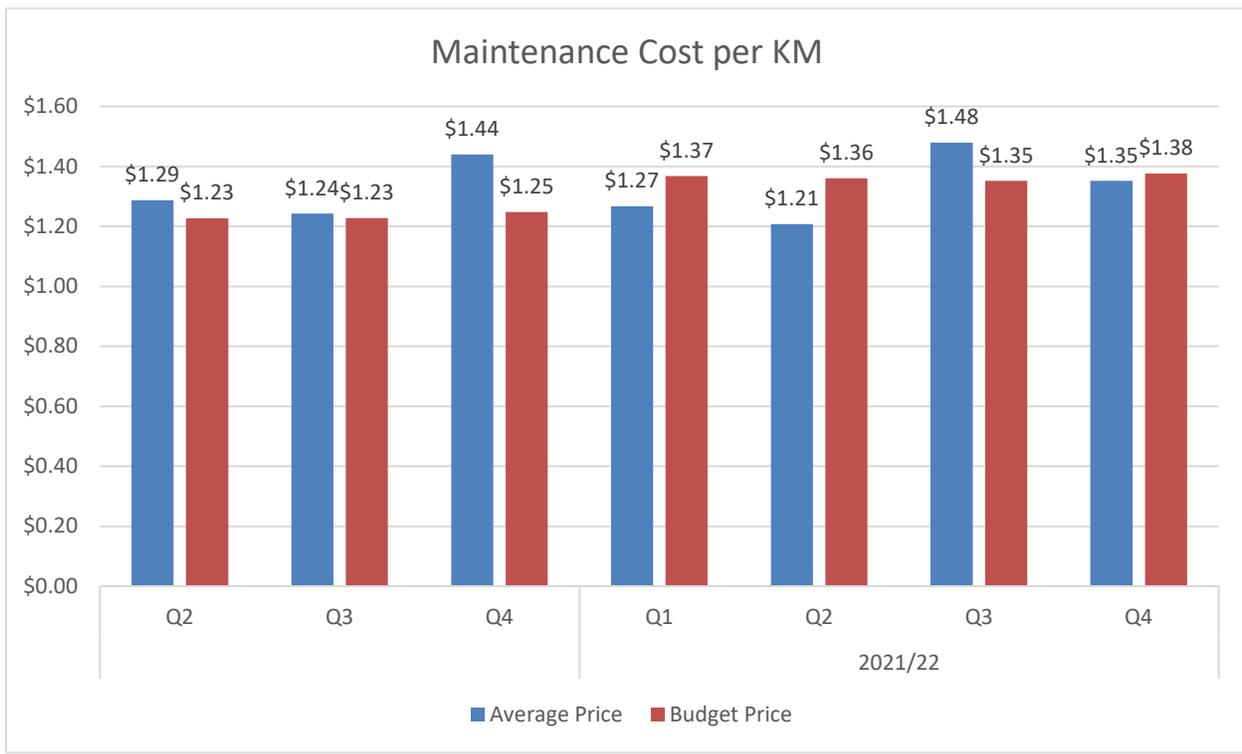
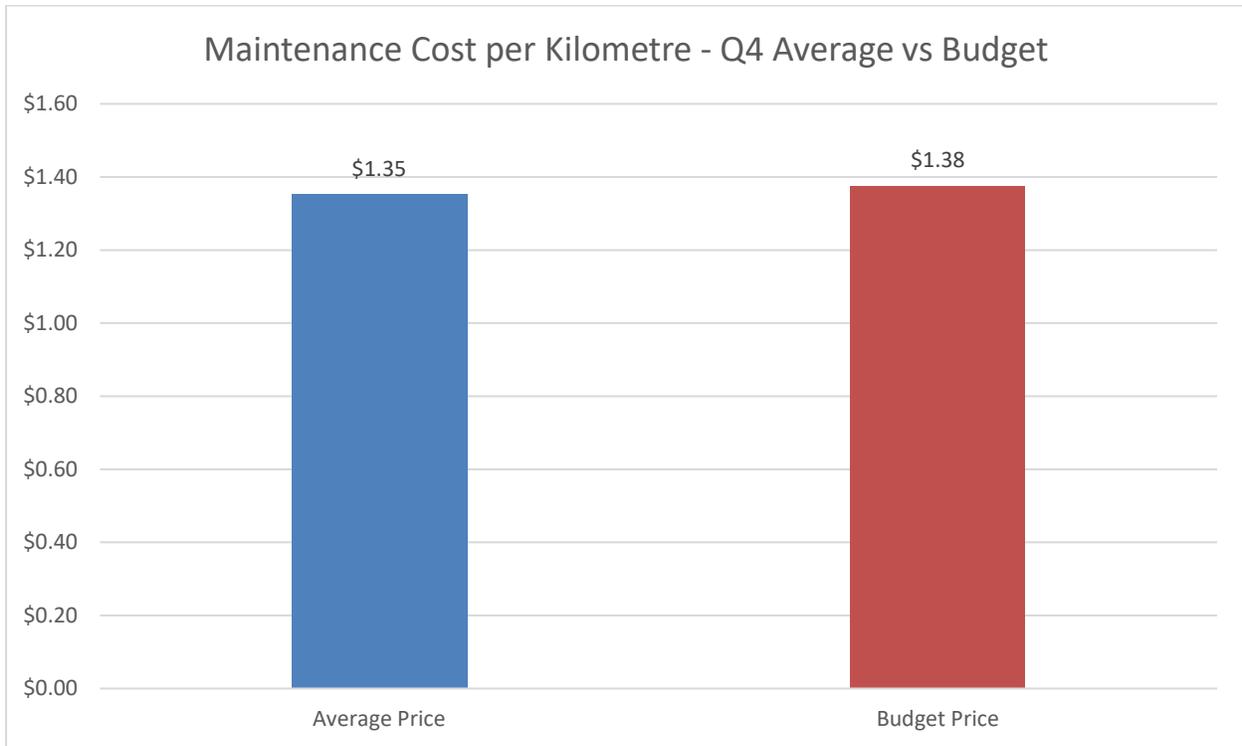
Mean Distance Between Service Calls (MDBS) reflects the average distance in kilometres covered between maintenance service calls. This metric includes all instances of service calls, including issues with secondary equipment, passenger-related events and damages to the bus resulting from minor accidents.

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.



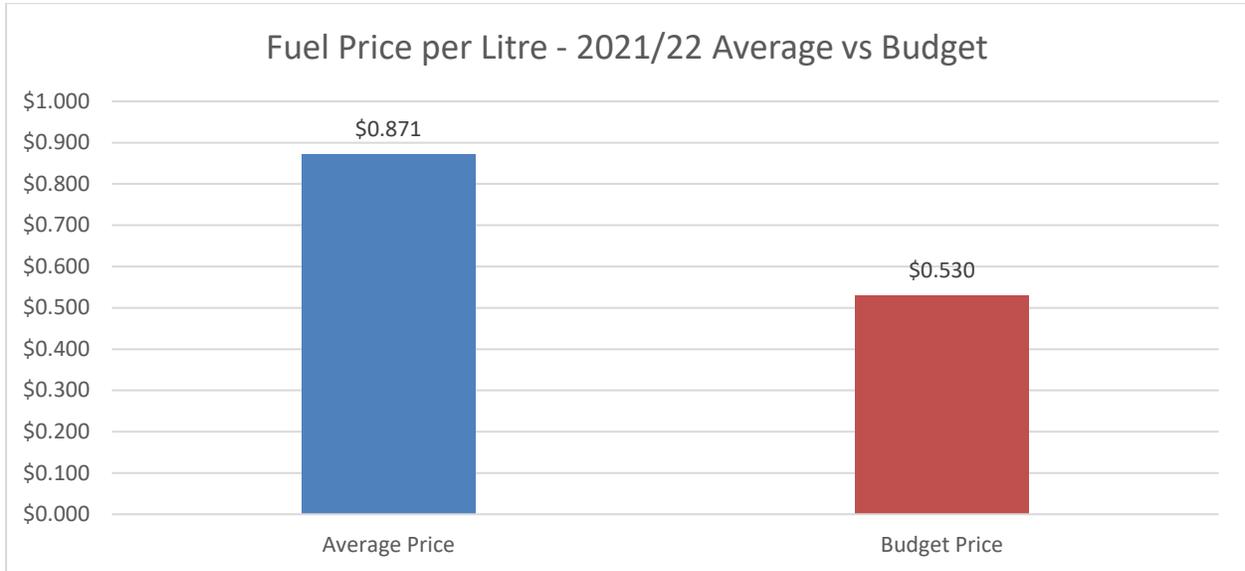
Bus Maintenance Cost – Quarter Average vs Budget

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



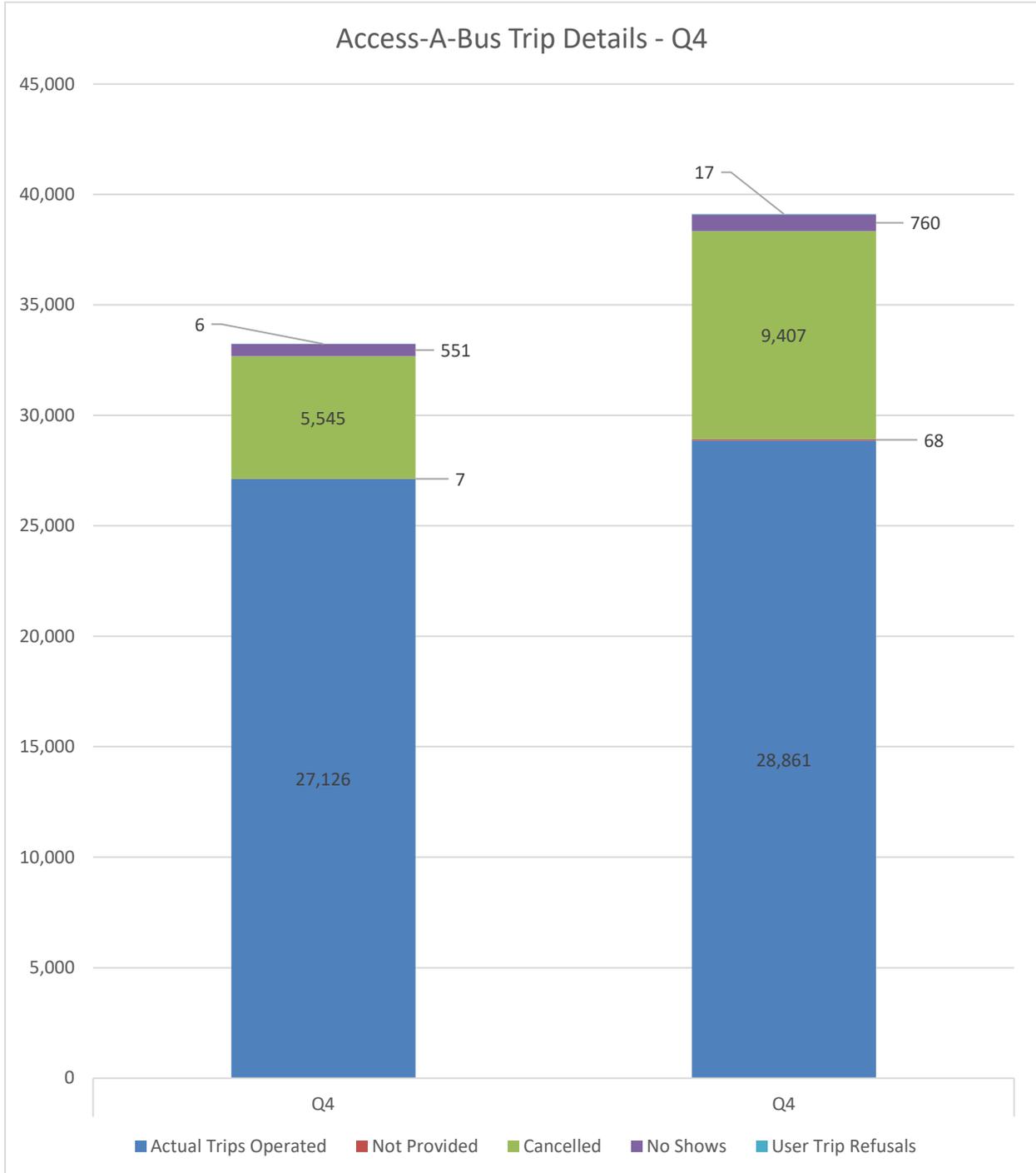
Fuel Price – Annual Average vs Budget

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.

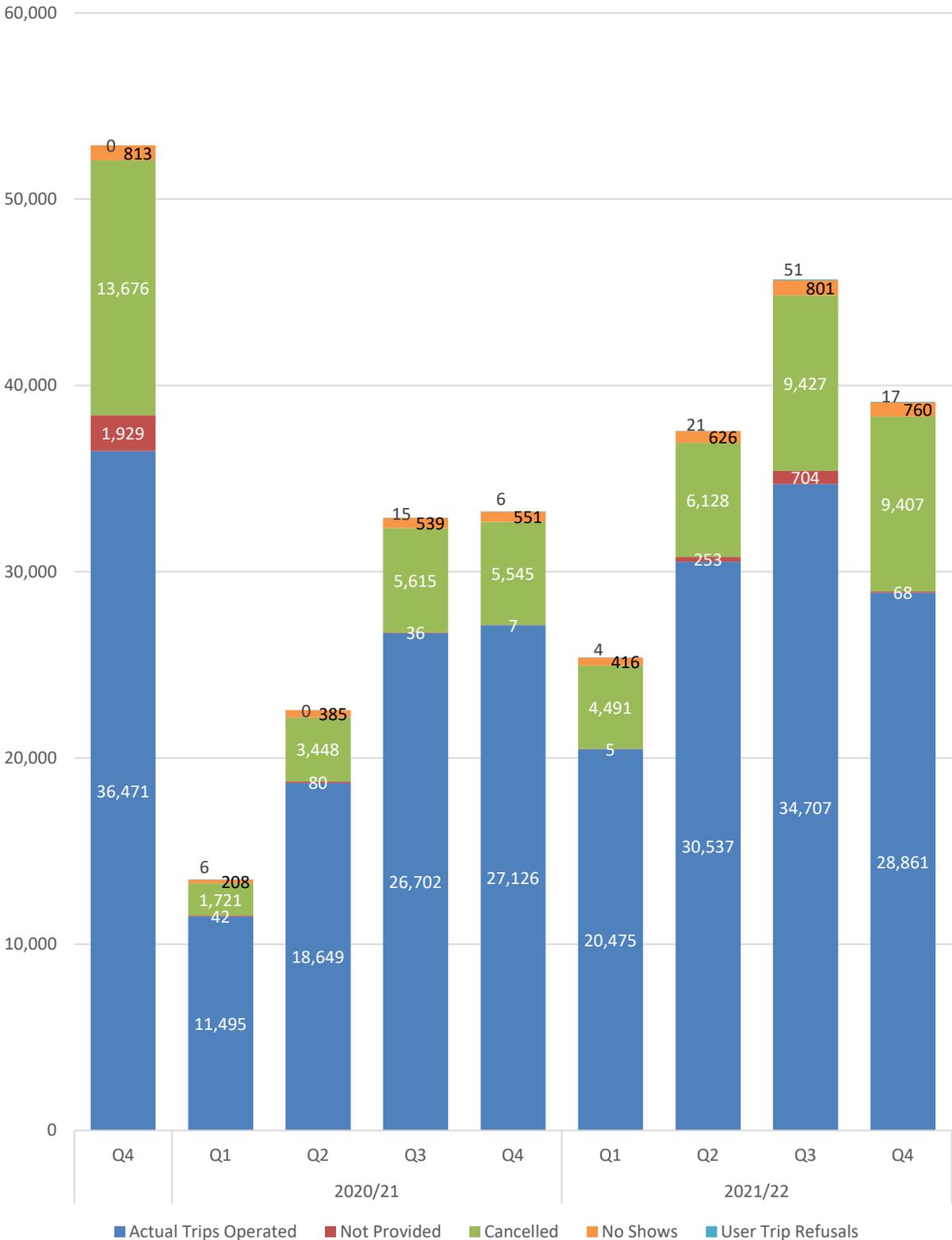


Access-A-Bus Trip Details

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

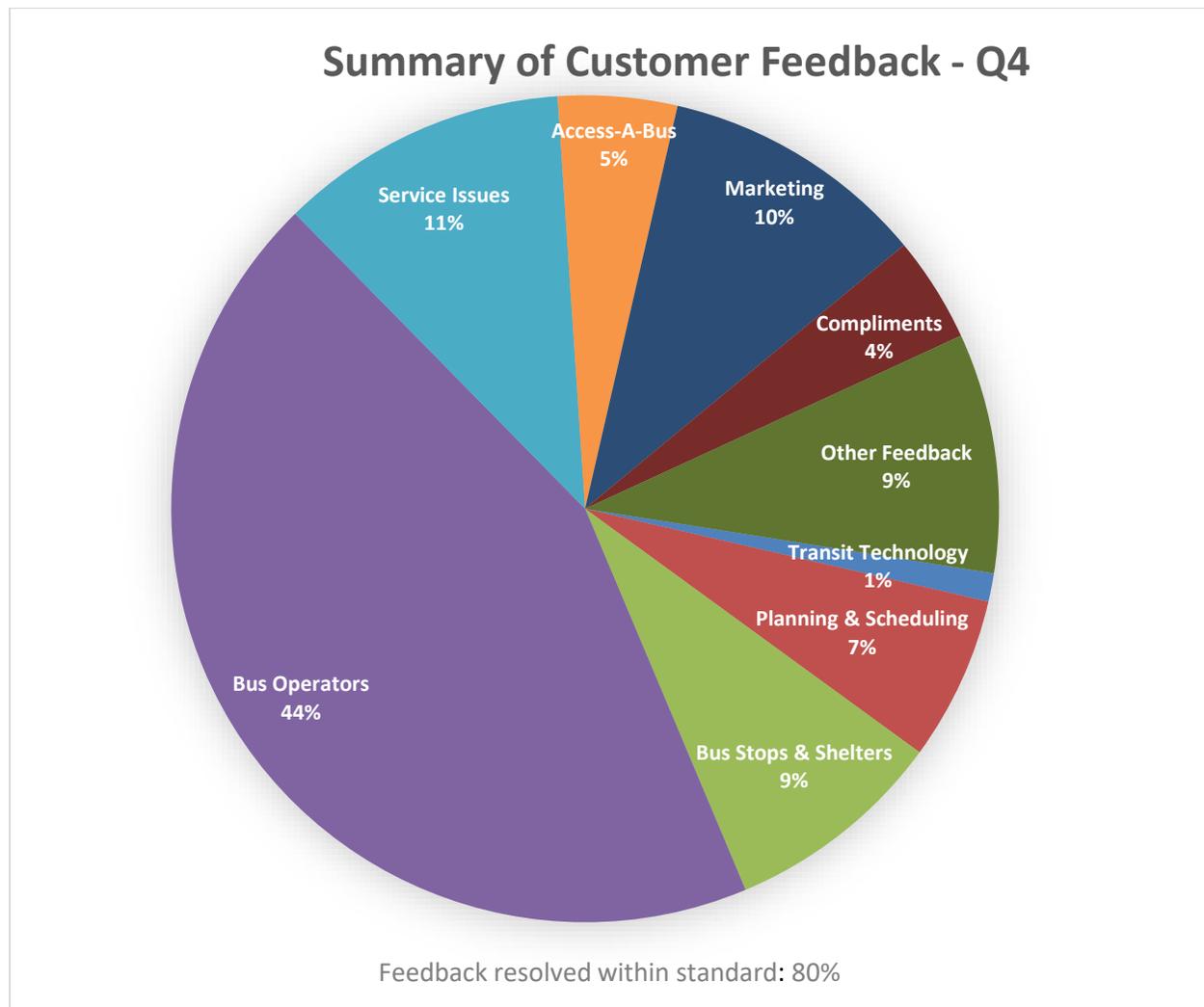


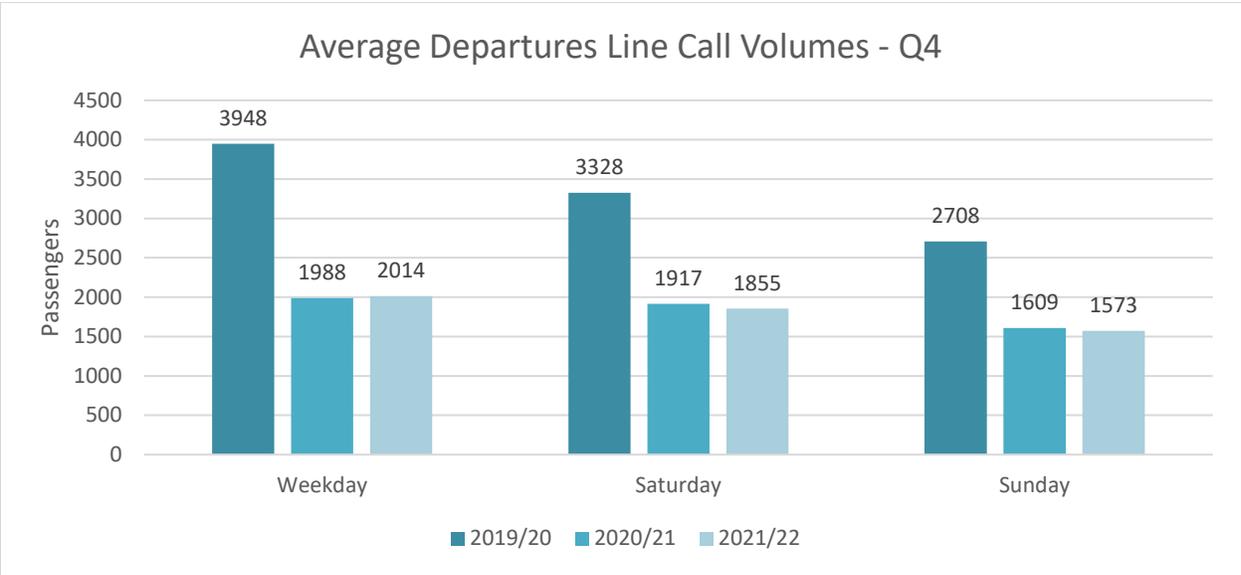
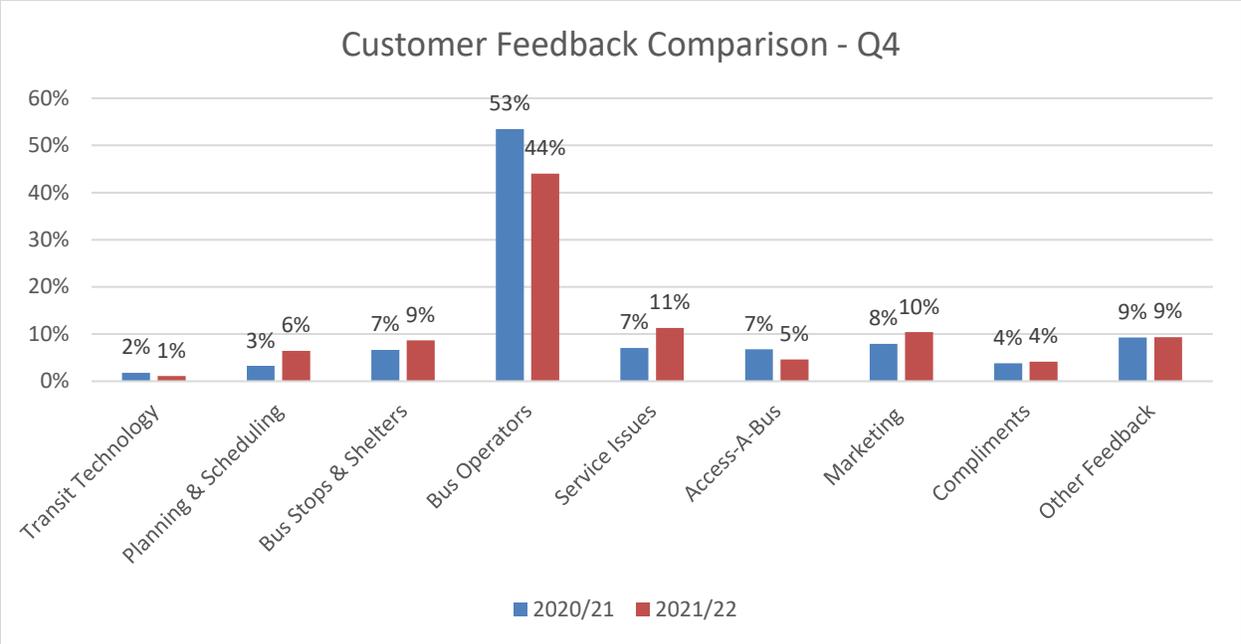
Customer Service – All Services

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.



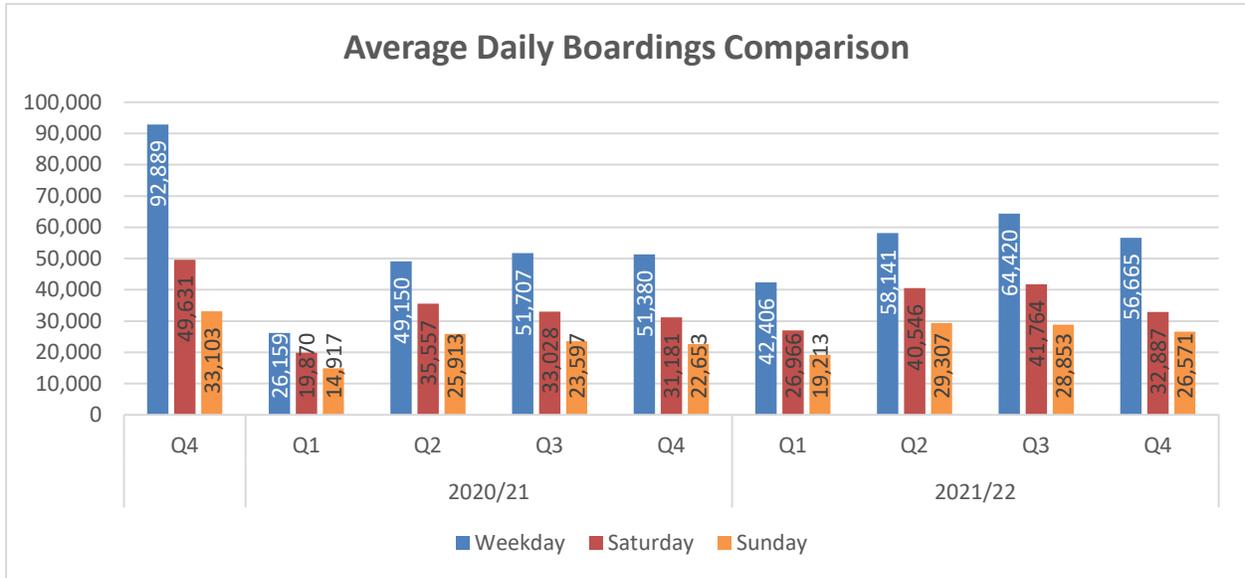


Service Utilization

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

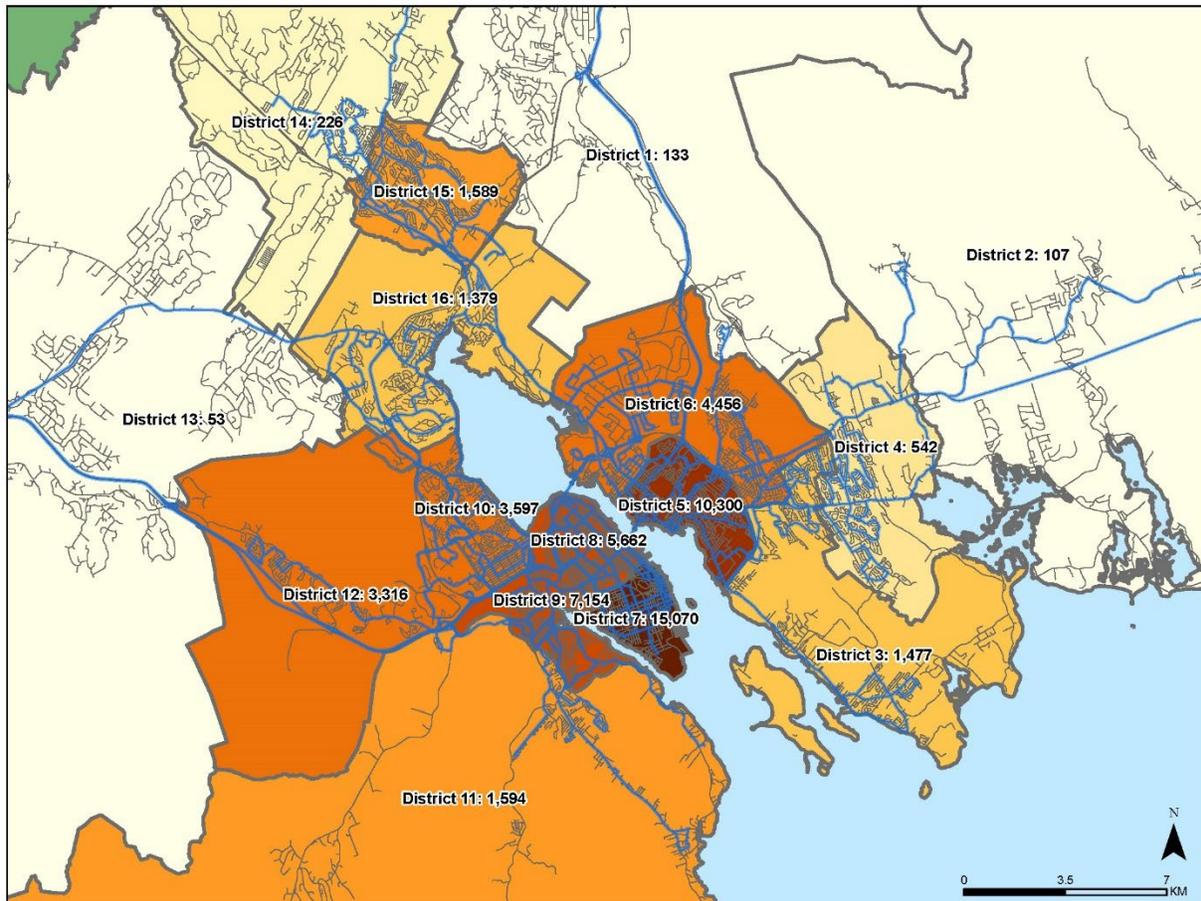


Boardings by District

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.

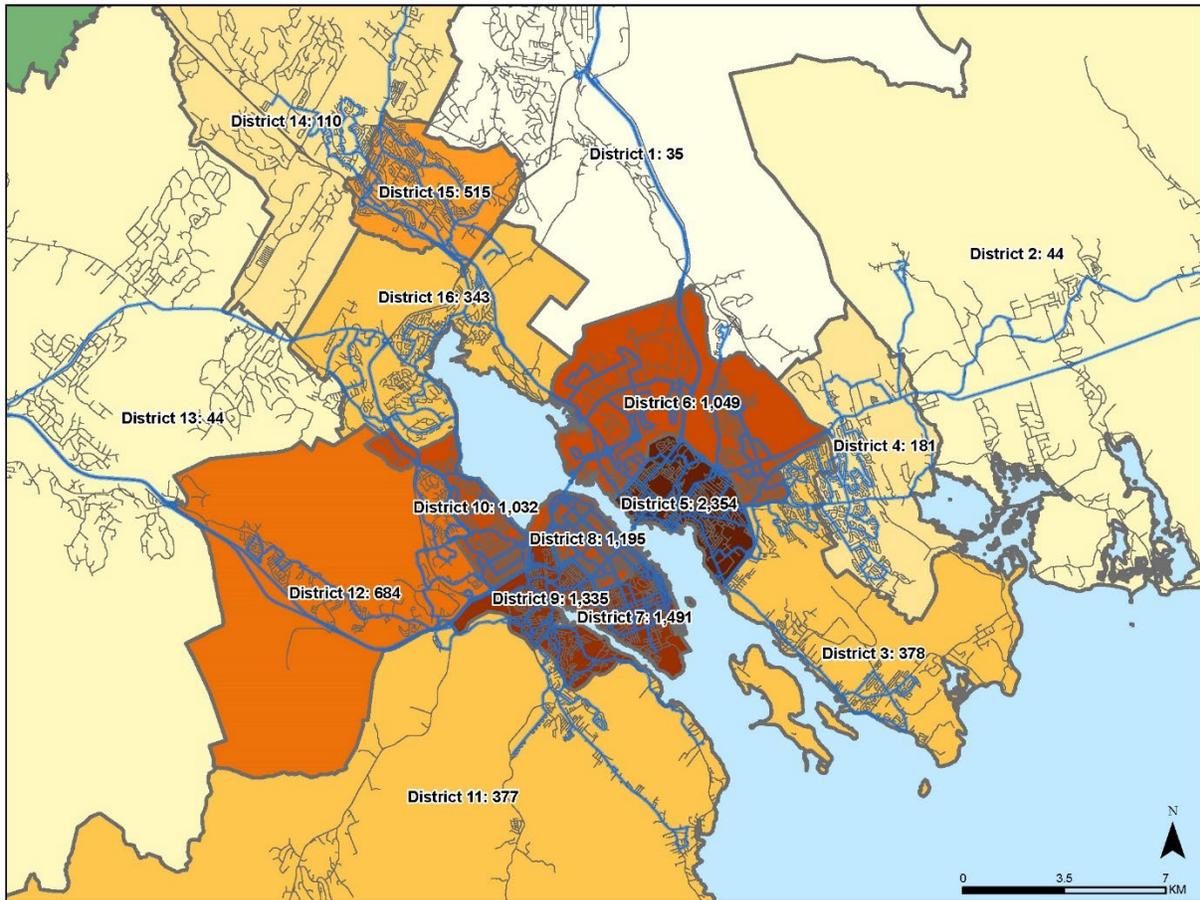
Weekday Boardings by District - All Day

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

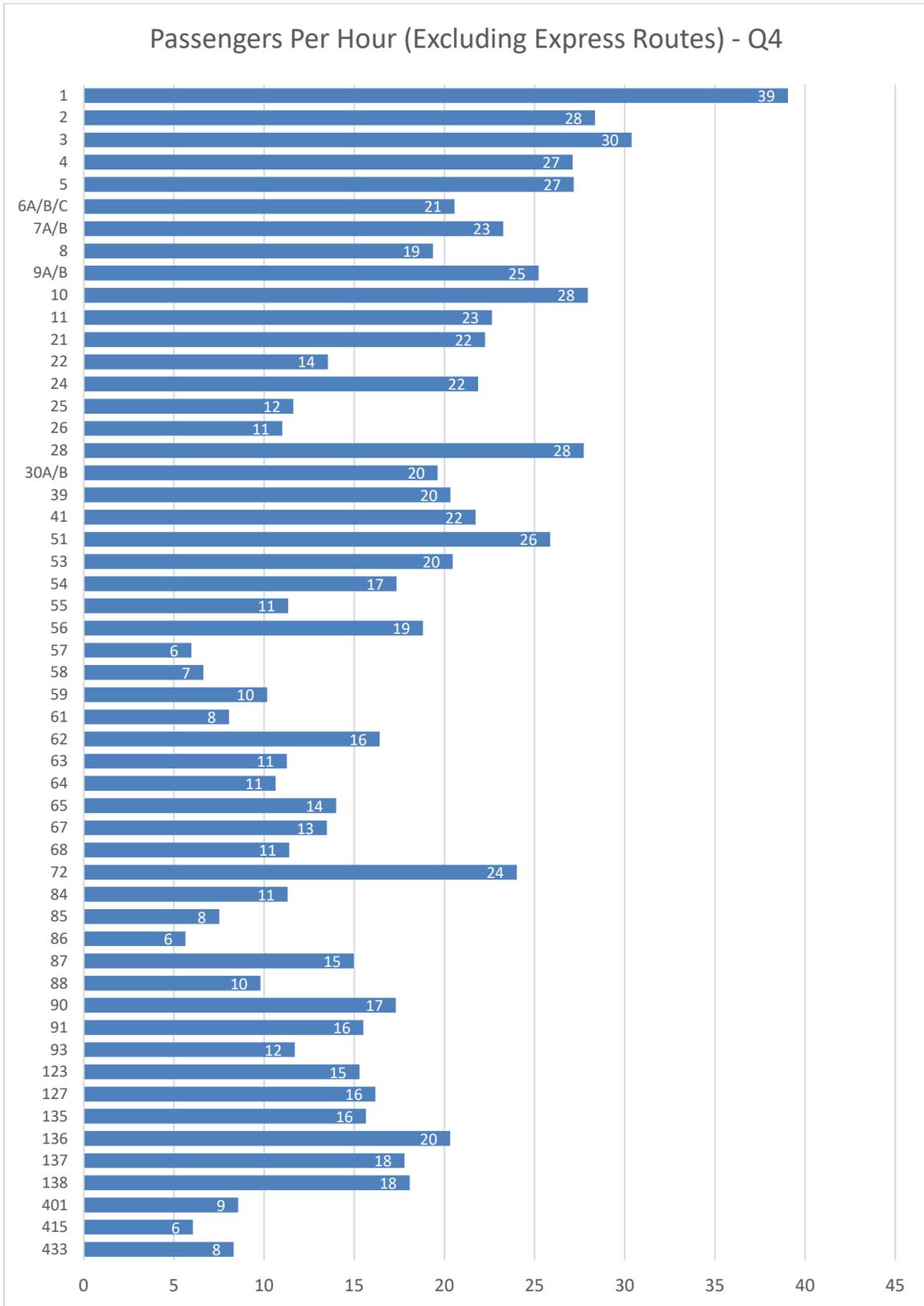
Passengers per hour measures the volume of passengers carried per service hour by route. Due to differences in service model/design, Express Routes are measured instead by passengers per trip. Ridership fluctuates significantly by season and therefore figures are compared to the same quarter in the previous 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								

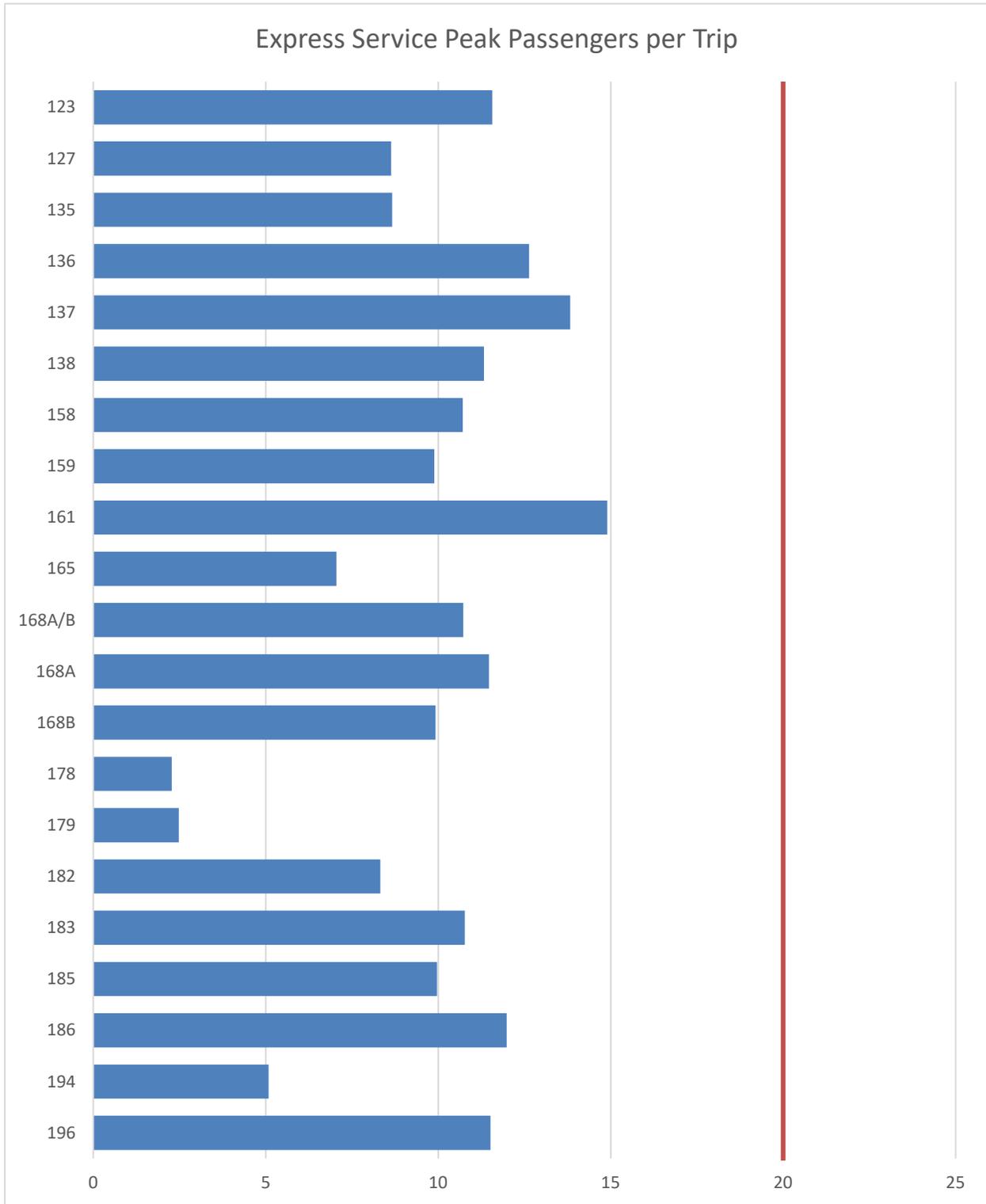
Passengers per Hour by Route



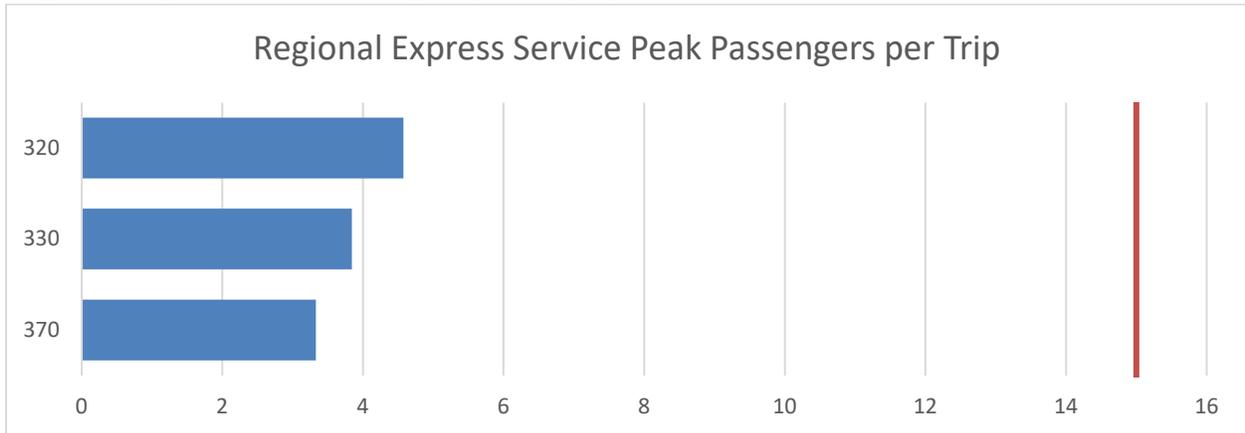
Express Service Peak Boardings and Passengers per Trip

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

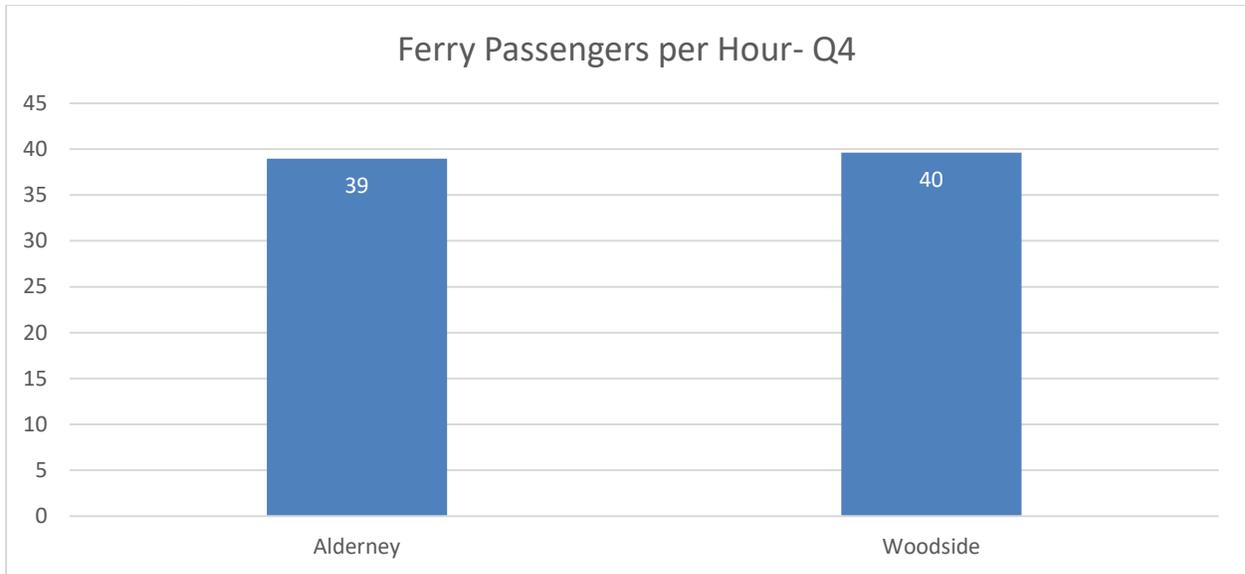
Express Service Peak Passengers per Trip by Route



Regional Express Peak Passengers per Trip by Route



Ferry Passengers per Hour

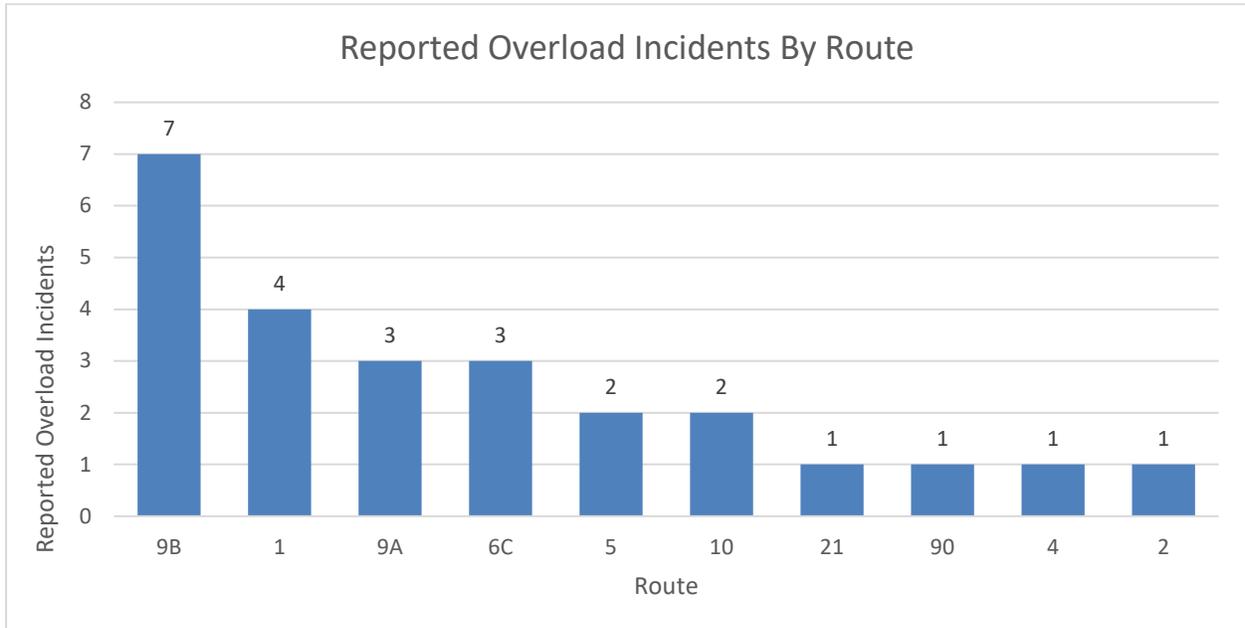


Passenger Overloads

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

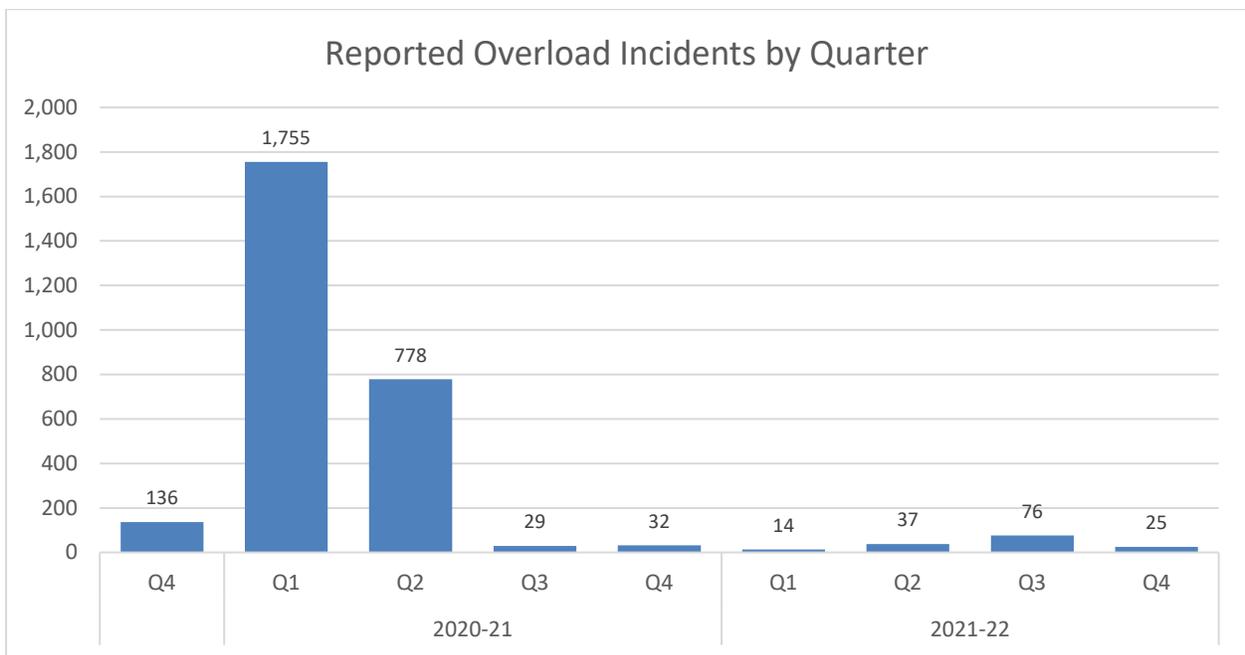
Passenger Overloads by Route

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.

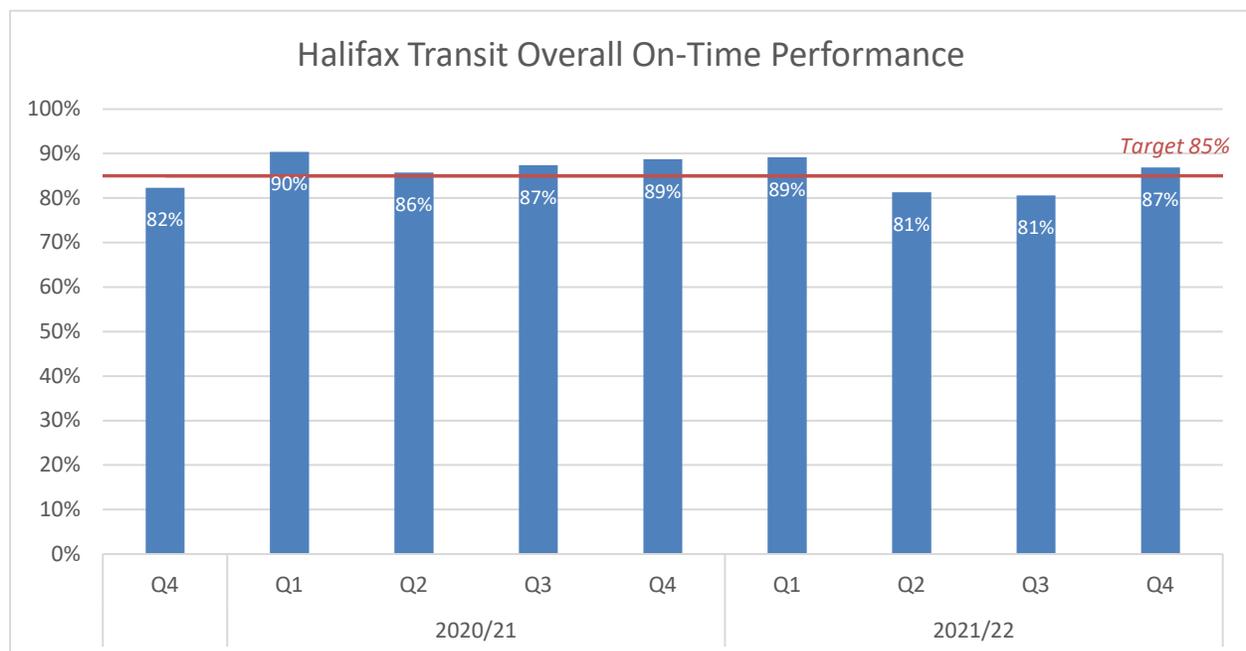
Overall most routes performed above or close to the target during the fourth quarter, in part due to the wave of COVID coinciding with this quarter resulting in reduced traffic conditions and transit demand.

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.

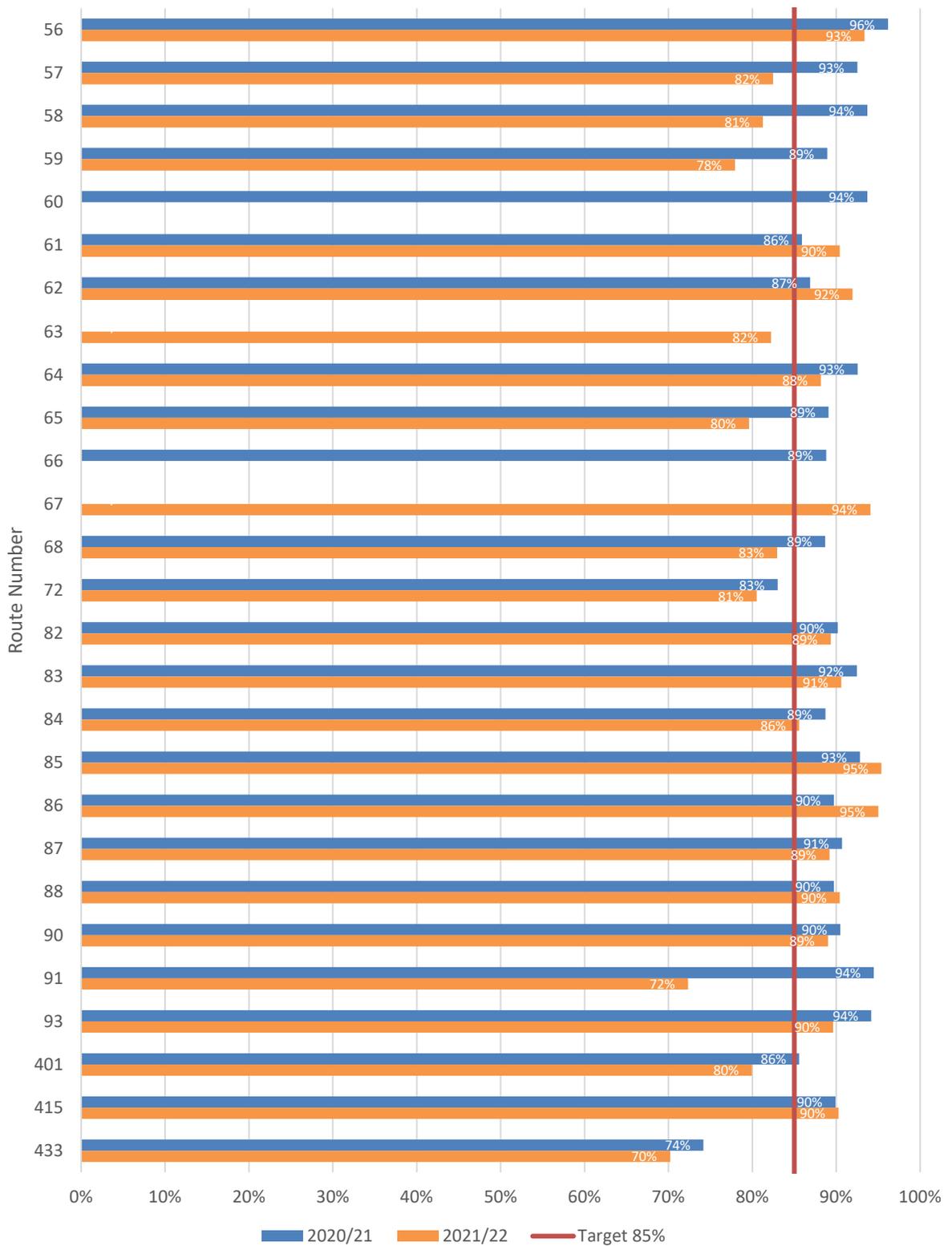
Overall Network On-Time Performance



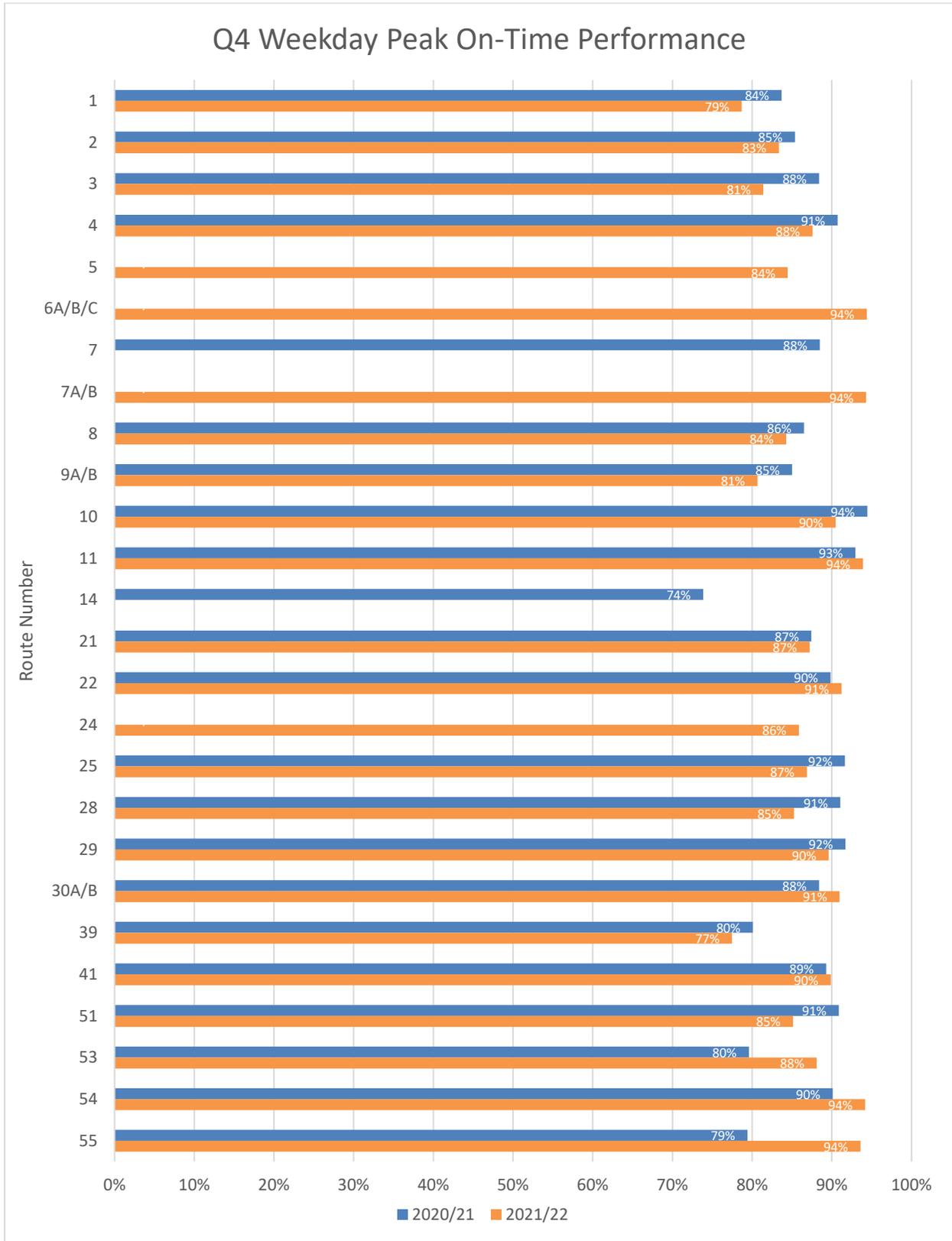
Weekday On-Time Performance



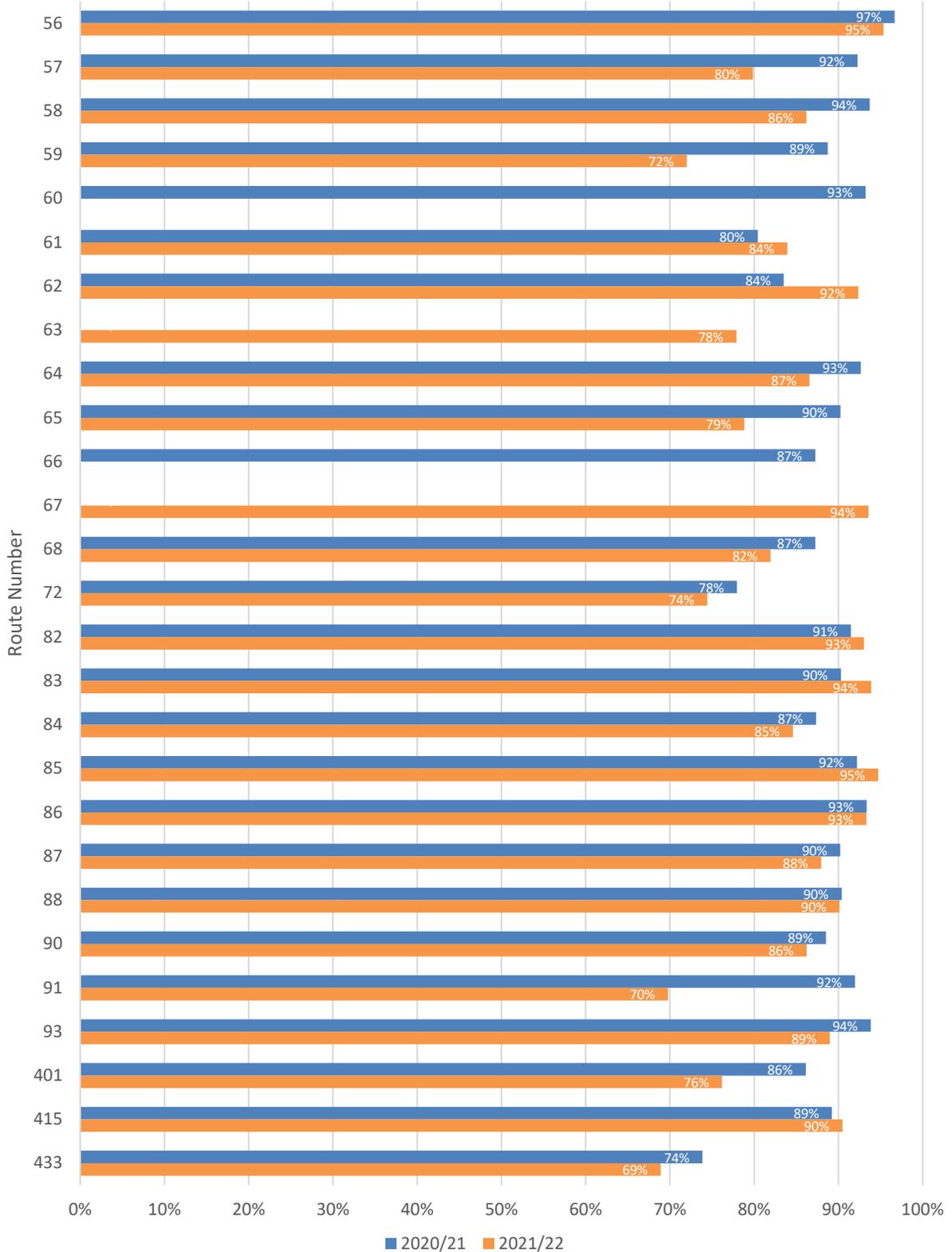
Q4 Weekday On-Time Performance



Weekday Peak Period On-Time Performance



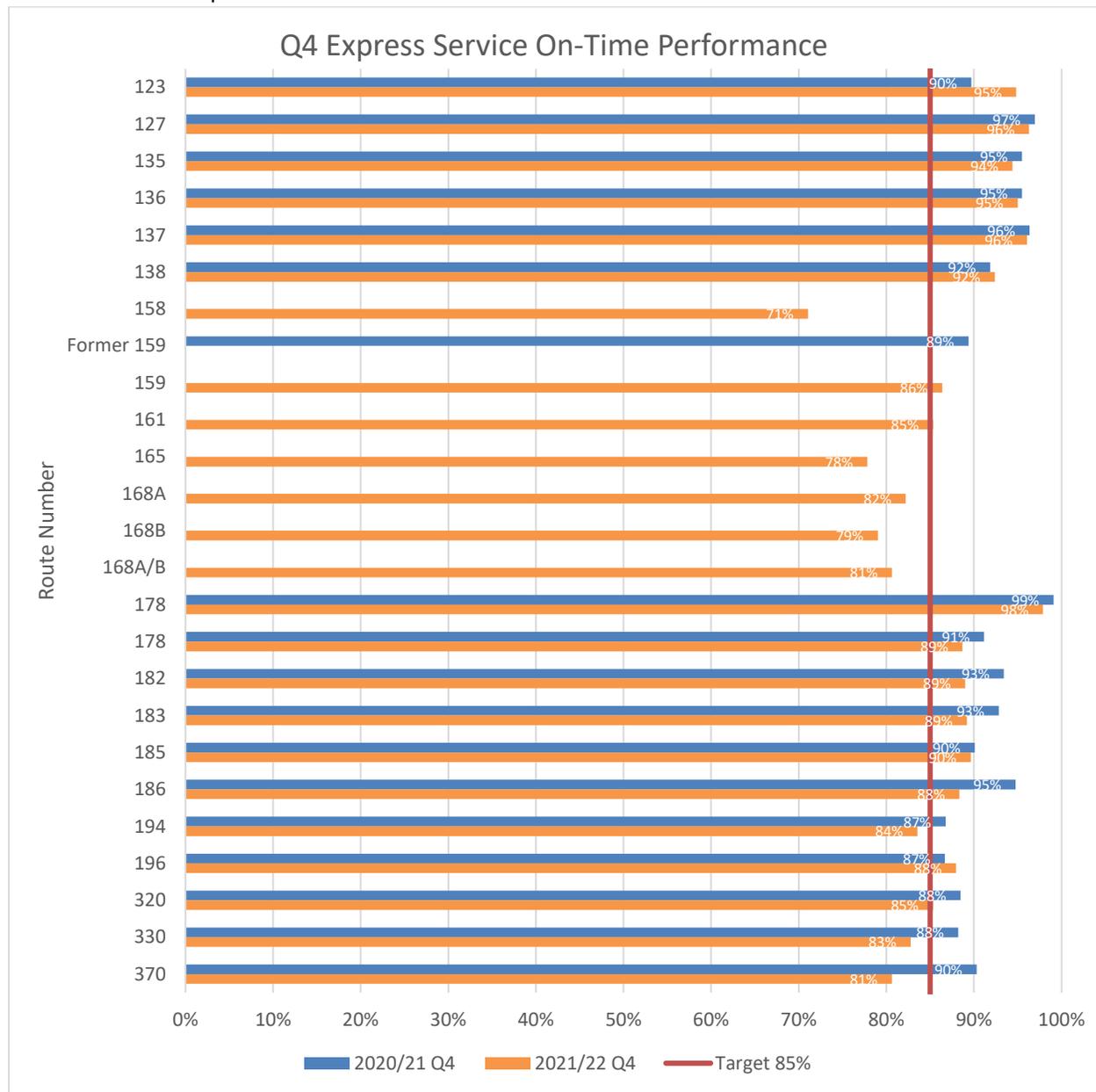
Q4 Weekday Peak On-Time Performance



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.



F

2021/22 – Year End Performance Measures Report

HALIFAX
TRANSIT

Contents

Annual Key Performance Indicators (KPIs) 1

Weekday Cost per Boarding 1

Boardings & Revenue..... 2

 Historical Boardings & Revenue..... 2

 Revenue – Actual vs. Planned 5

Mean Distance Between Failures 7

Bus Maintenance Cost – Annual Average vs Budget 8

Fuel Price – Annual Average vs Budget..... 8

Access-A-Bus Trip Details 9

Bus Stop Accessibility..... 10

Service Utilization 11

 Boardings 11

 Average Daily Bus Terminal Activity 11

 Monthly Boardings..... 12

 Annual Average Daily Boardings 13

 Passengers per Hour 13

 Annual Boardings & Passengers per Hour Comparison..... 14

 Express Service Peak Boardings and Passengers per Trip Comparison 16

Annual On-Time Performance 17

Annual Key Performance Indicators (KPIs)

The following KPIs are measured on an annual basis to track changes and growth. Bus & Ferry figures do not include Access-A-Bus. Most metrics improved significantly as service provision and usage rebounded from the worst of the COVID pandemic impacts.

KPI	Division	19/20	20/21	21/22	% Change (20/21 to 21/22)
Service Utilization (Passengers per Capita)	Bus & Ferry	59.51	23.95	38.84	+62.2%
Service Utilization (Passengers per Service Hour)	Bus & Ferry	24.27	10.37	15.47	+49.1%
Amount of Service (Service Hours per Capita)	Bus & Ferry	2.45	2.31	2.51	+8.7%
Cost Effectiveness (Operating Expense per Passenger)	Bus & Ferry	\$5.11	\$12.35	\$8.53	+31.0%
Average Fare (Passenger Revenue per Passenger)	Bus & Ferry	\$1.84	\$2.10	\$1.79	+15.1%
Financial (Cost Recovery)	Bus & Ferry	36%	17%	21%	+23.0%
Financial (Cost Recovery)	All	34%	16%	20%	+23.3%
Customer Service (Requests addressed within standard)	All	93%	88%	88%	-0.4%

Weekday Cost per Boarding

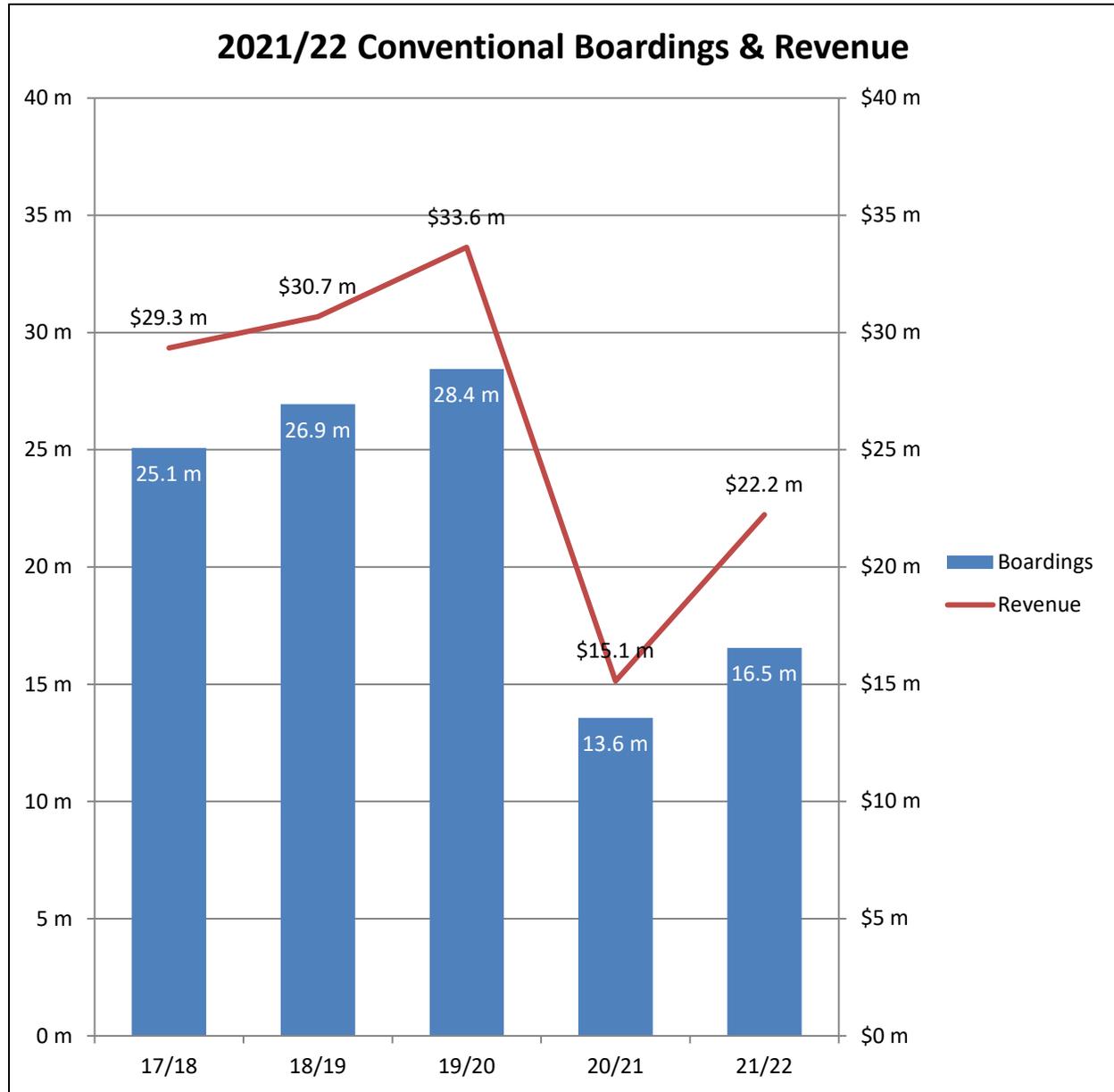


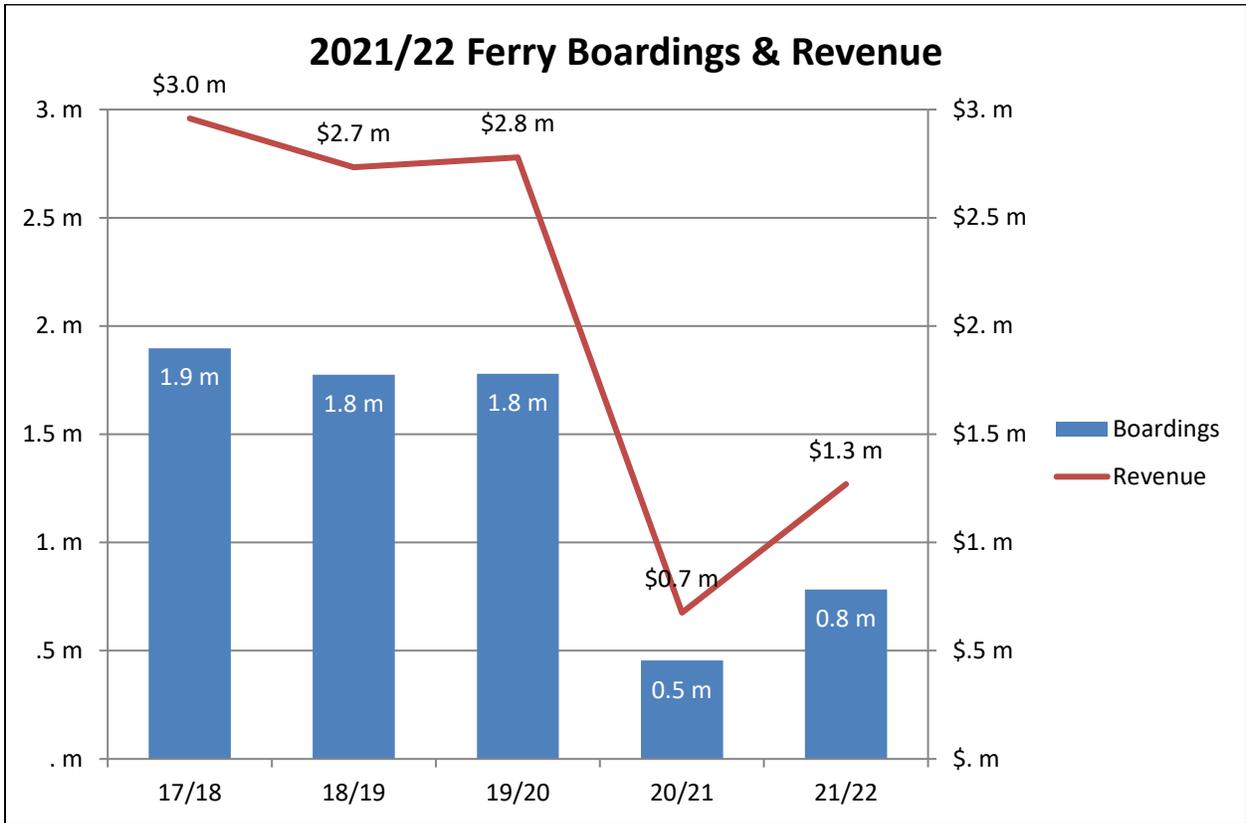
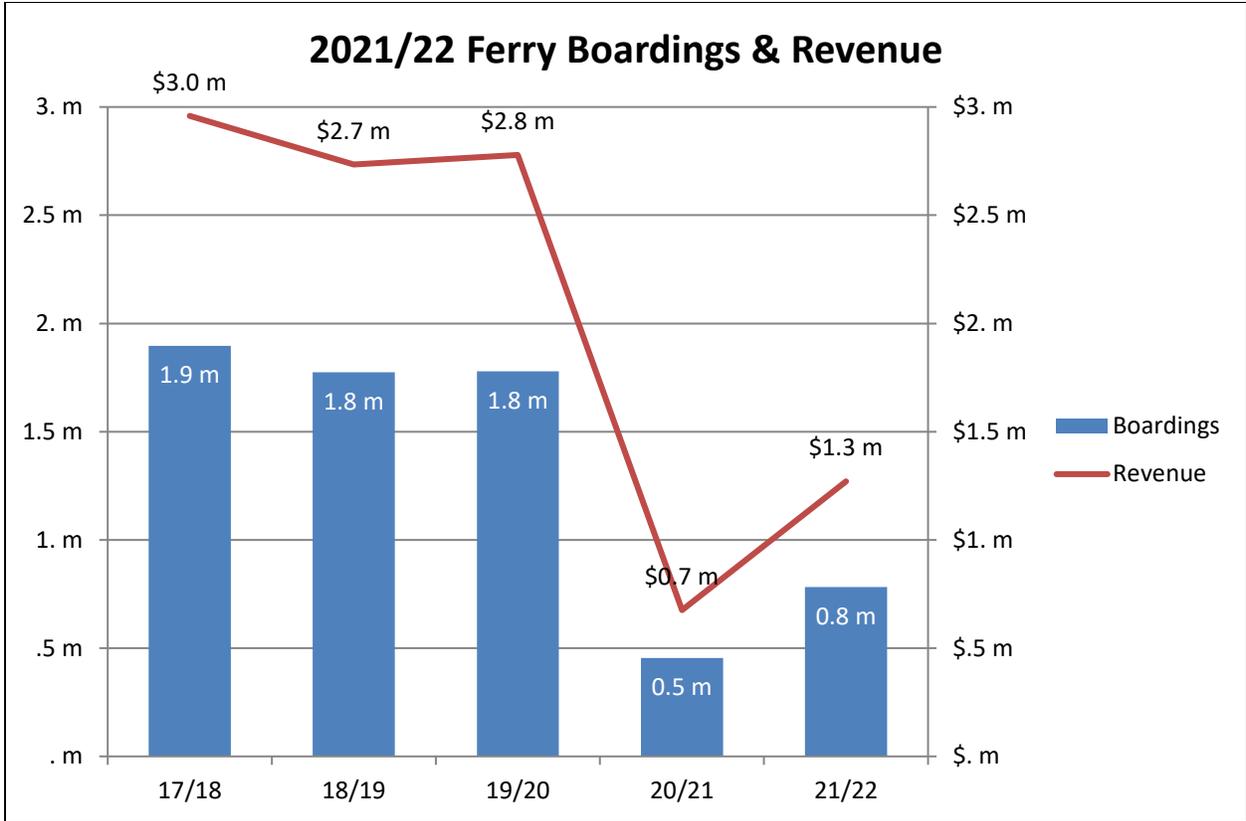
Boardings & Revenue

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

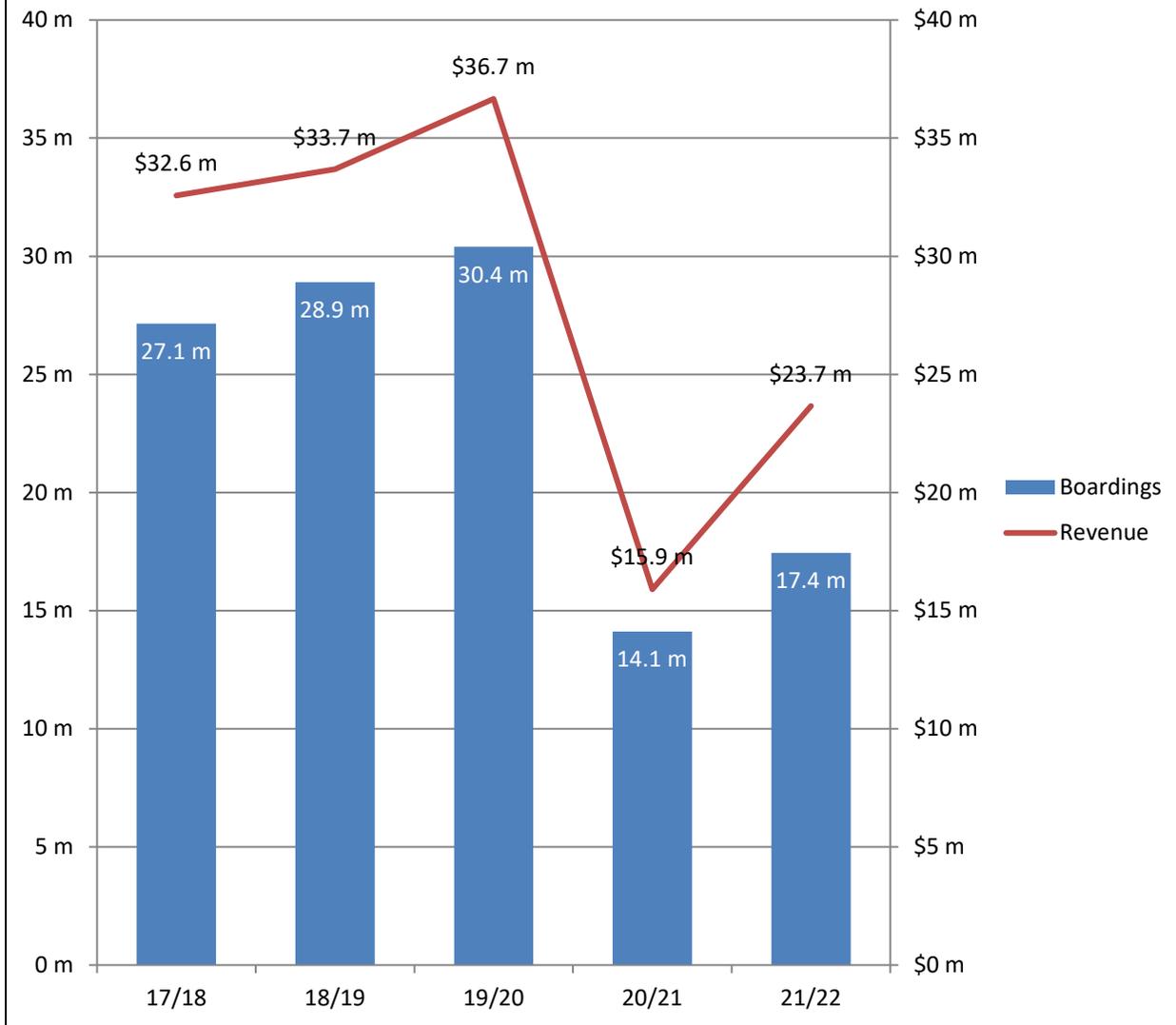
In 2021/22 conventional boardings increased 21.9% over 2020/21, ferry boardings increased 72.2% and Access-A-Bus boardings increased 38.3%. Overall, system wide boardings increased 23.7% compared to last year, but remains 42.6% below 2019/20 figures. Overall revenue in 2021/22 increased 48.8% from last year, but remains 35.5% below 2019/20 revenue.

Historical Boardings & Revenue



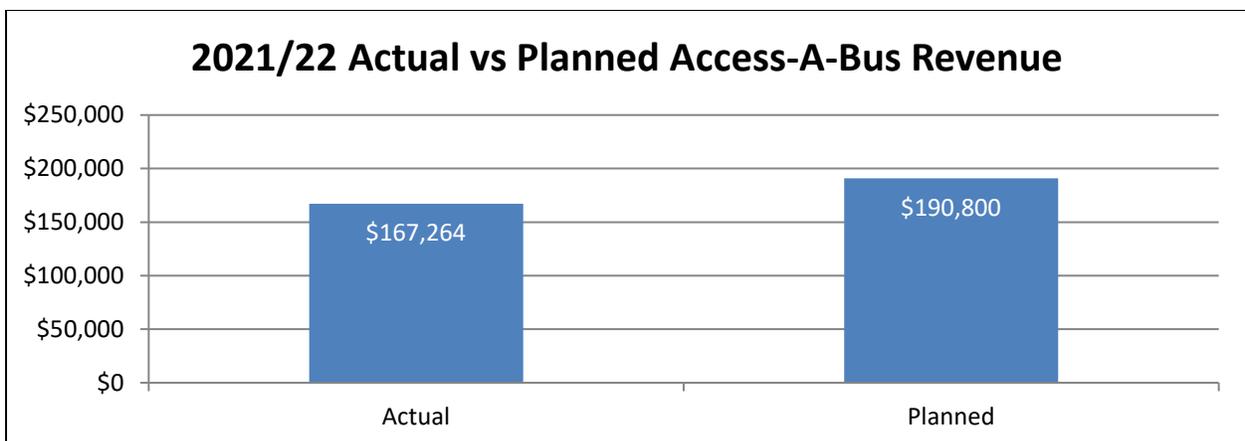
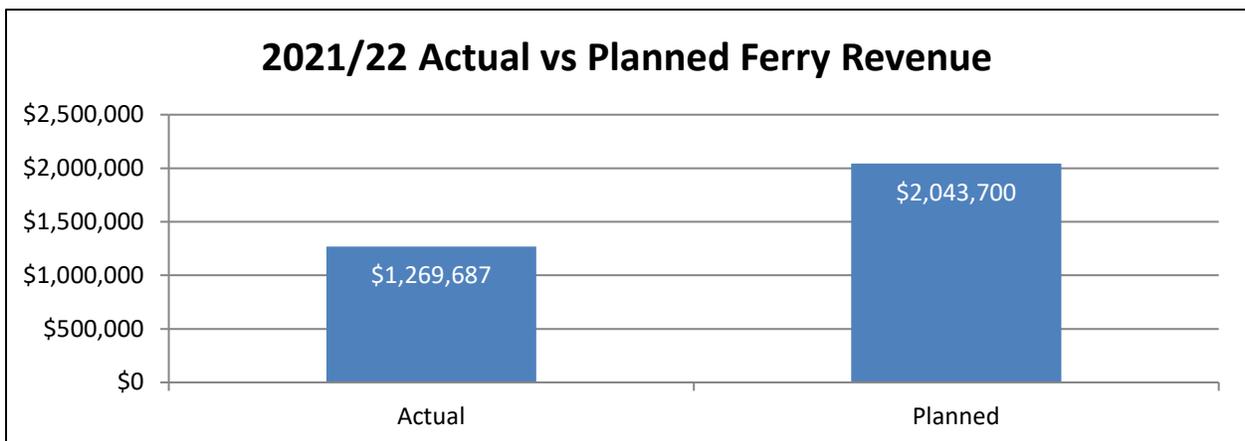
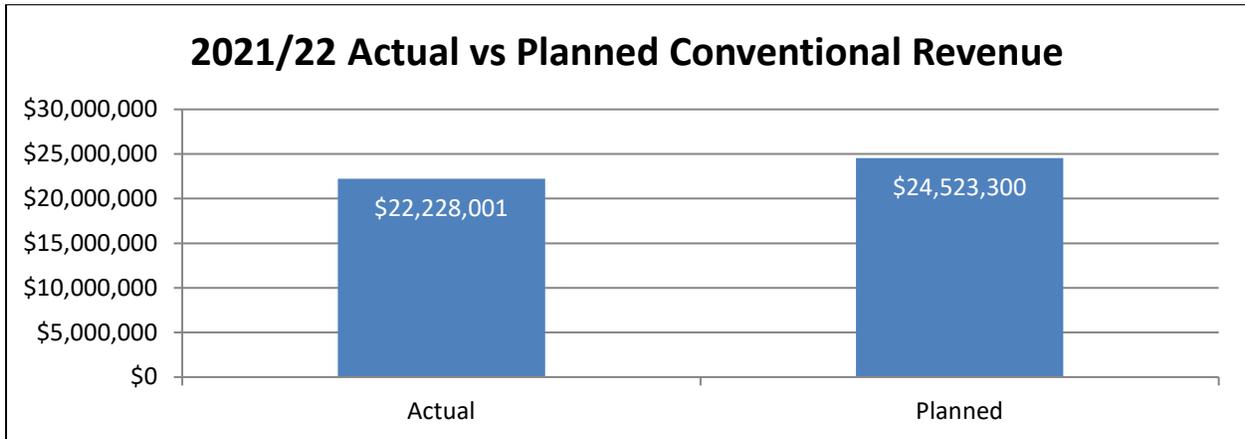


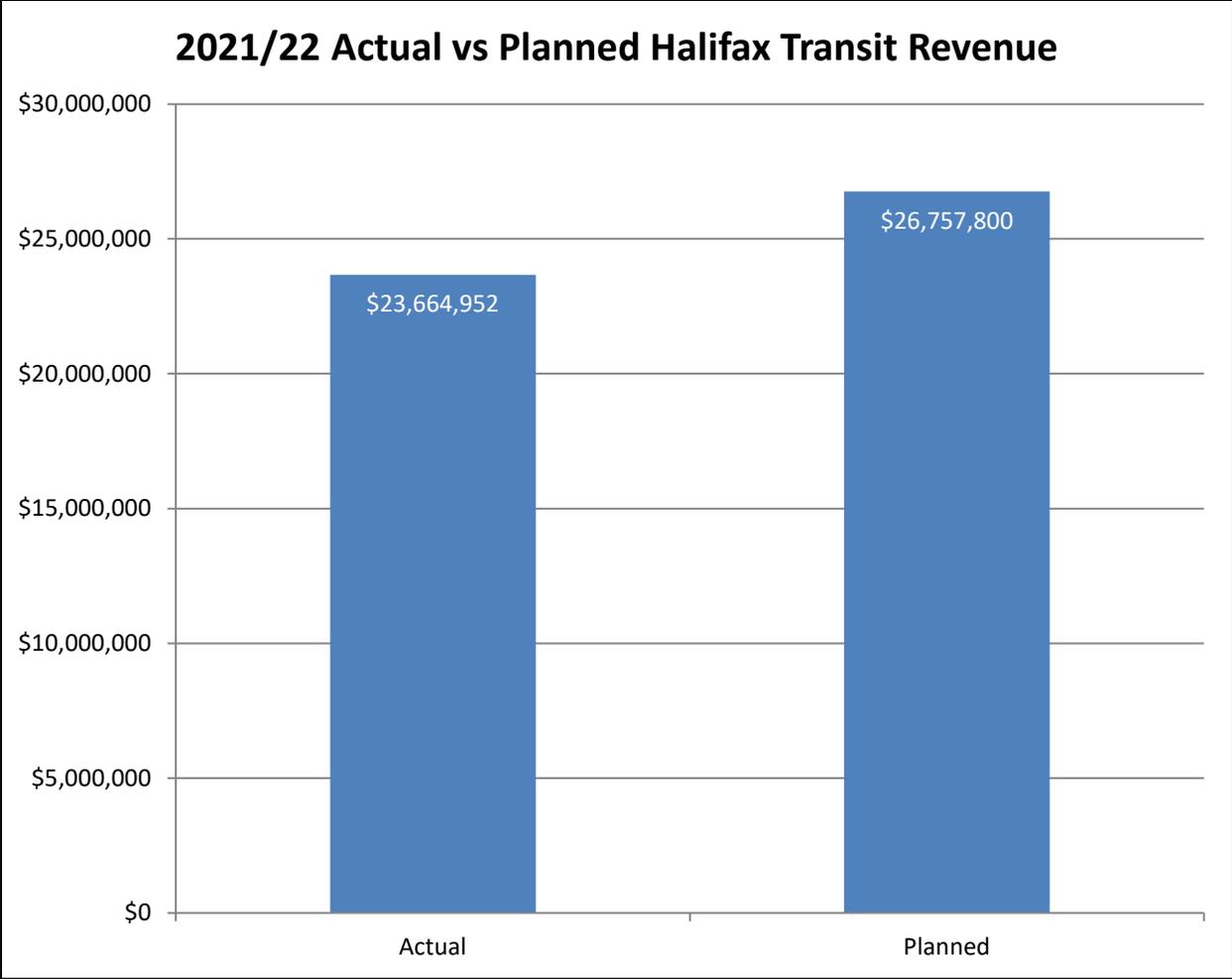
2021/22 Halifax Transit Boardings & Revenue



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. In 2021/22 conventional revenue increased 46.9% over last year and was 9.4% below the planned amount. Ferry revenue this year increased 87.9% and was 37.9% below the planned amount. Access-A-Bus revenue increased 79.7% over last year and was 12.3% below the planned amount. Overall revenue in 2021/22 increased 48.8% from the previous year, standing 11.6% below the planned amount.

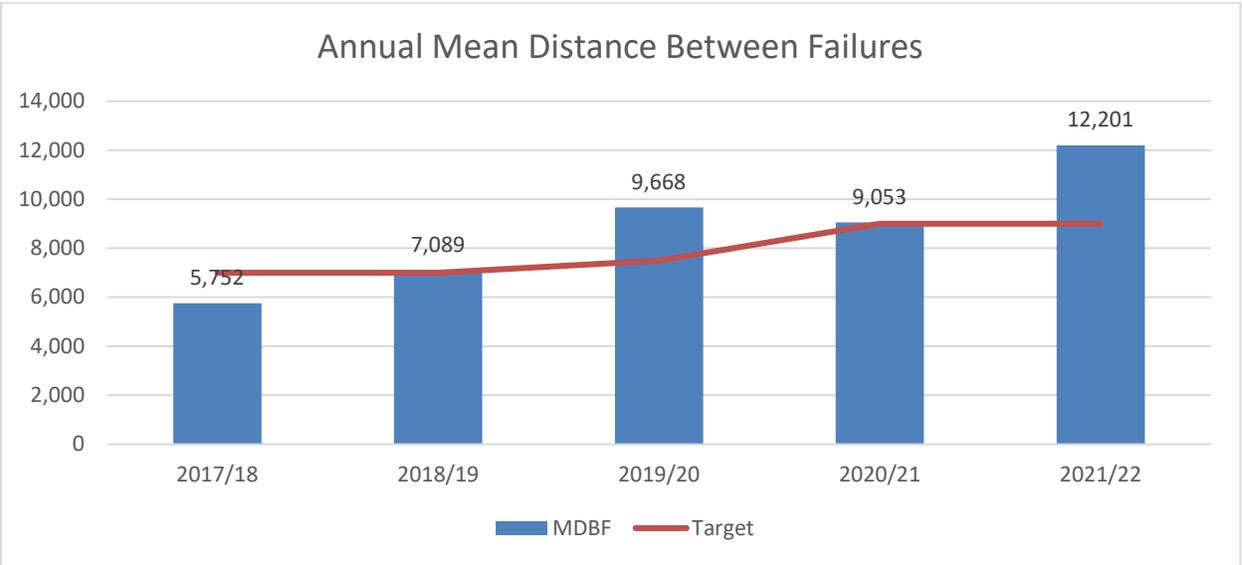




Mean Distance Between Failures

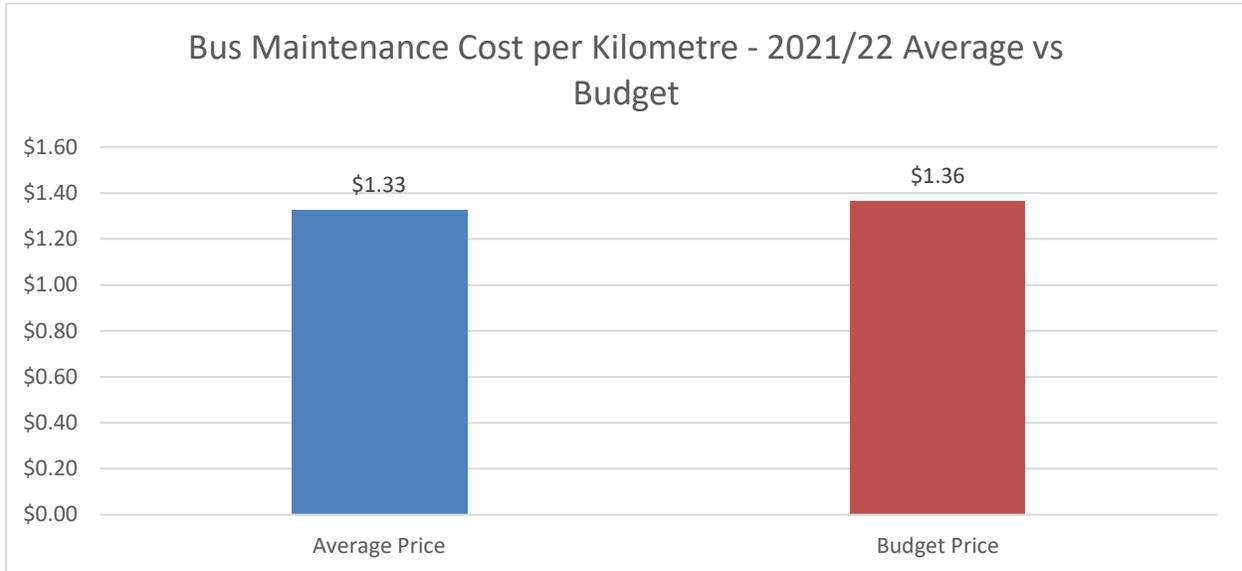
Halifax Transit’s Mean Distance Between Failures (MDBF) is the distance in kilometres covered between failures. CUTA references the Federal Transit Administration’s definition of failures which states that there are two classes of failures. The first being major mechanical system failures, which is the “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 2021/22 fiscal year, the conventional transit MDBF was 12,201 kms, achieving the target set of 9000 kms. This is equivalent to an increase of 35% from the previous year 2020/21 (9,053).



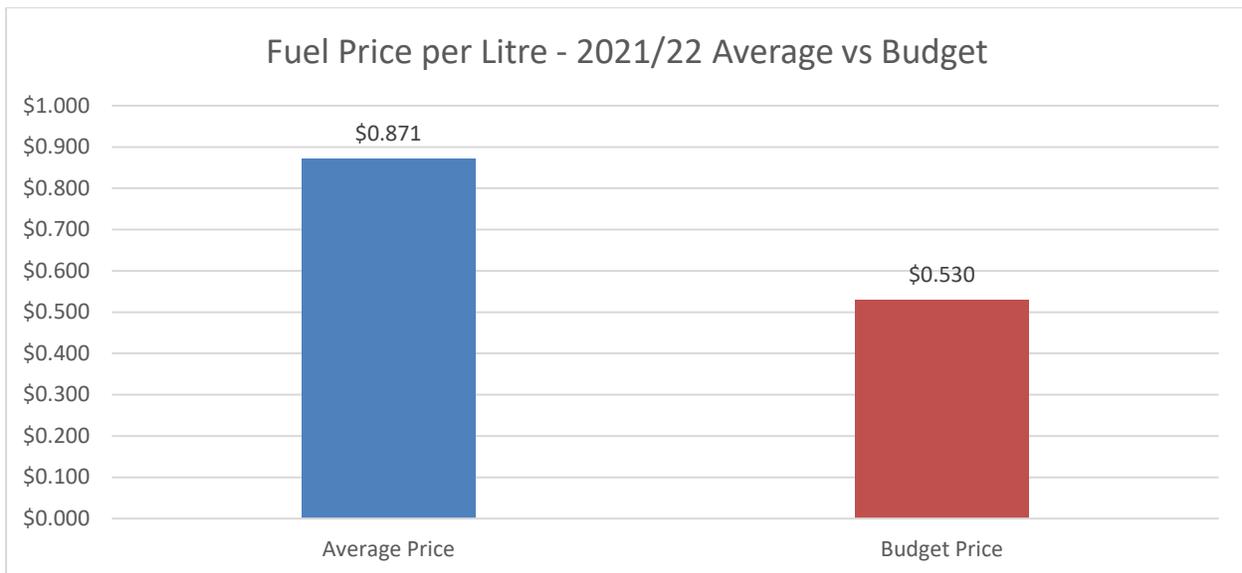
Bus Maintenance Cost – Annual Average vs Budget

For the 2021/22 fiscal year average bus maintenance costs were below budget, averaging \$1.33 per kilometre, compared with the budgeted amount of \$1.36 per kilometre.



Fuel Price – Annual Average vs Budget

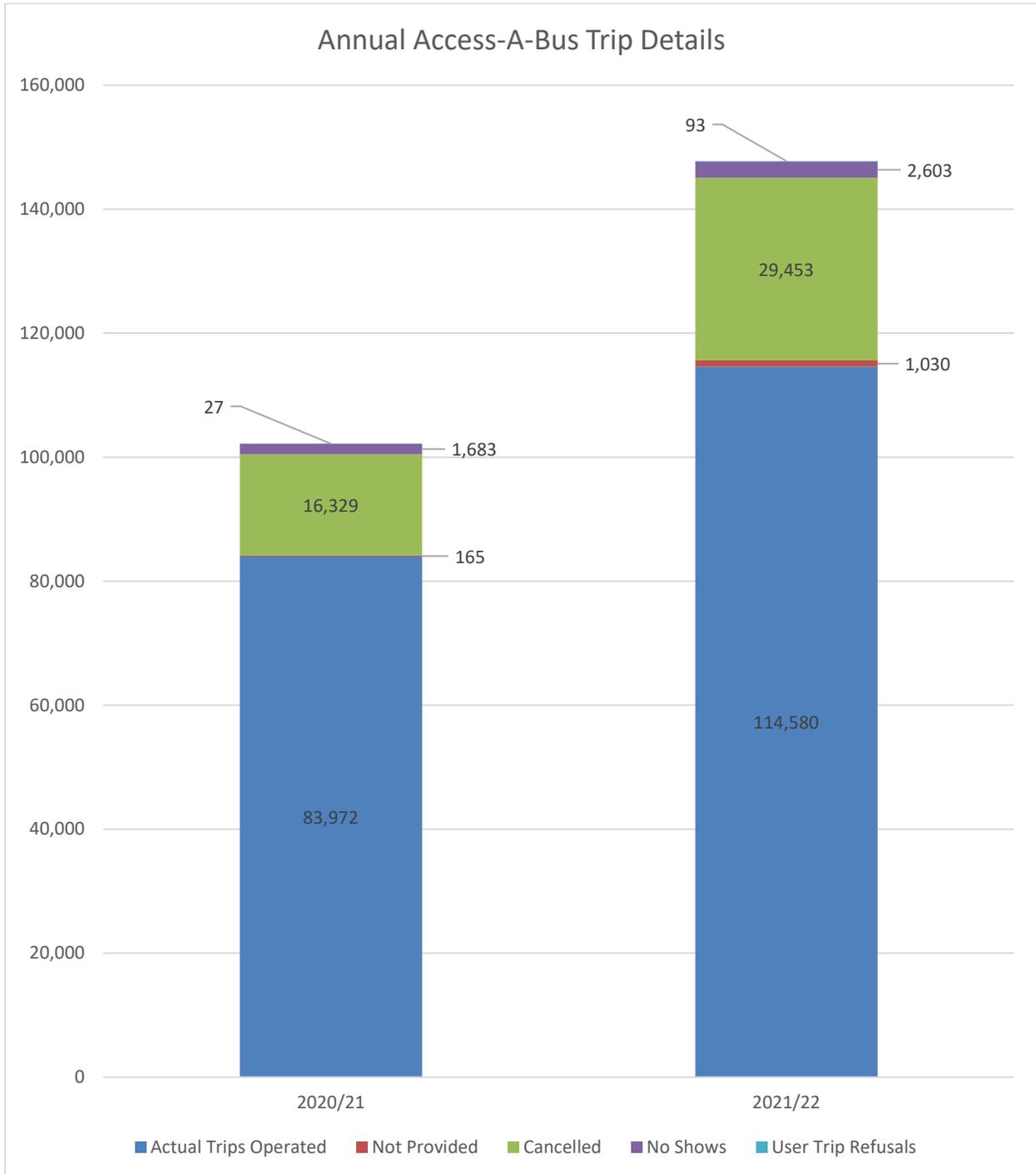
The average fuel price in 2021/22 was well above the budgeted price, averaging \$0.871 per litre compared to the budgeted price of \$0.53 per litre.



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 2021/22, 30,608 more trips were operated than in 2020/21, an increase of 36.5%.



Bus Stop Accessibility

During 2021/22, 109 bus stops underwent infrastructure changes or improvements. Six shelters were installed at new locations and three were removed.

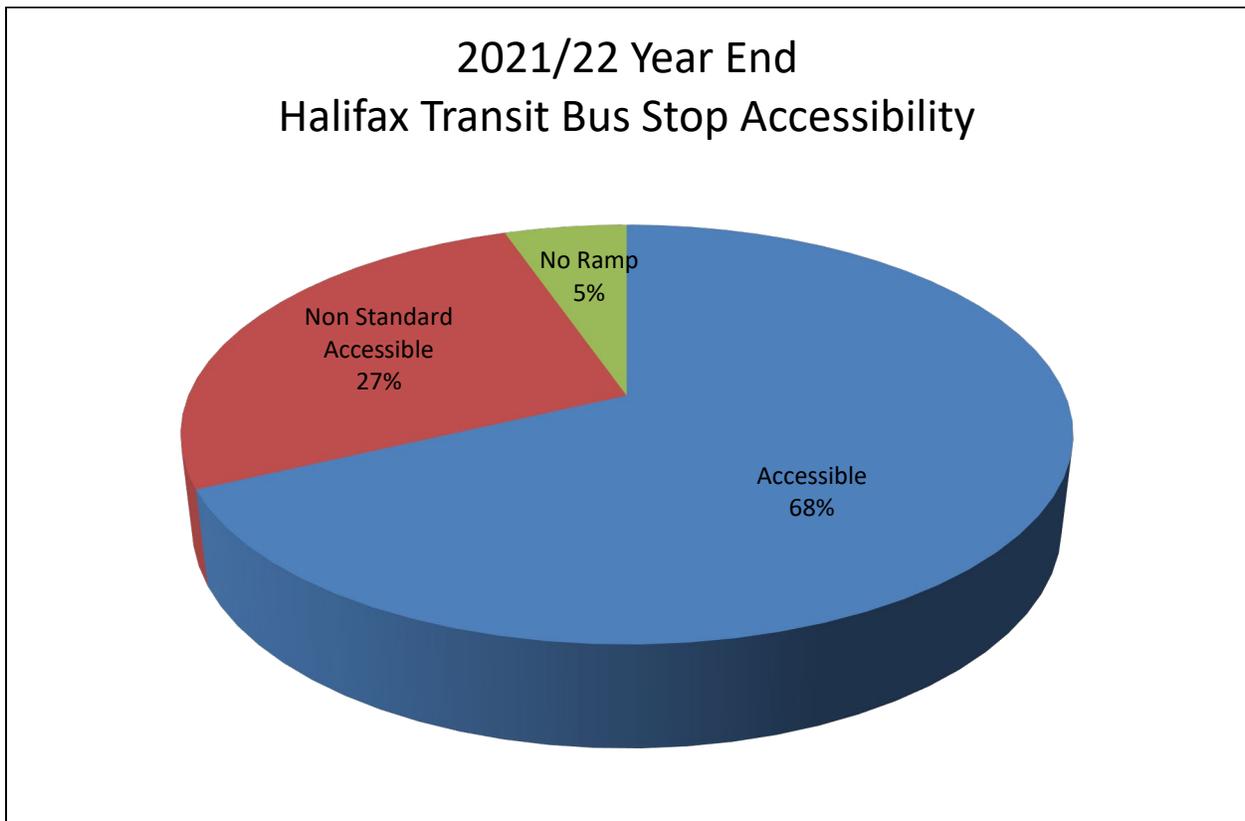
35 existing stops were upgraded or improved:

- 23 were upgraded from 'non-standard' to 'accessible'
- 3 were upgraded from 'no ramp' to 'accessible'
- 7 'non-standard' stops underwent improvements and remained 'non-standard' but enhanced with a ramped concrete pad
- 1 'accessible' stop underwent improvements and remained 'accessible'
- 2 'non-standard' stops underwent improvements and remained 'non-standard'

74 new stops were installed:

- 40 'accessible' stops were installed
- 15 'non-standard accessible' stops were installed with a ramped concrete pad
- 19 additional 'non-standard accessible' stops were installed

112 existing stops were removed as a result of service changes or capital projects requiring stop relocations. The graph below depicts the current state of accessibility for all stops in the network.



Note: Non-Standard Accessible stops do not meet Halifax Transit's accessibility standard; the ramp can be deployed and used at the customer's risk. The majority of the No Ramp stops are located in areas without sidewalks and with narrow shoulders.

Service Utilization

Automatic Passenger Counter (APC) data is now being used to report bus passenger boardings. The APCs provide data within a 90% degree of accuracy. Boardings by Route demonstrate passenger usage over the past year. 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.

Boardings

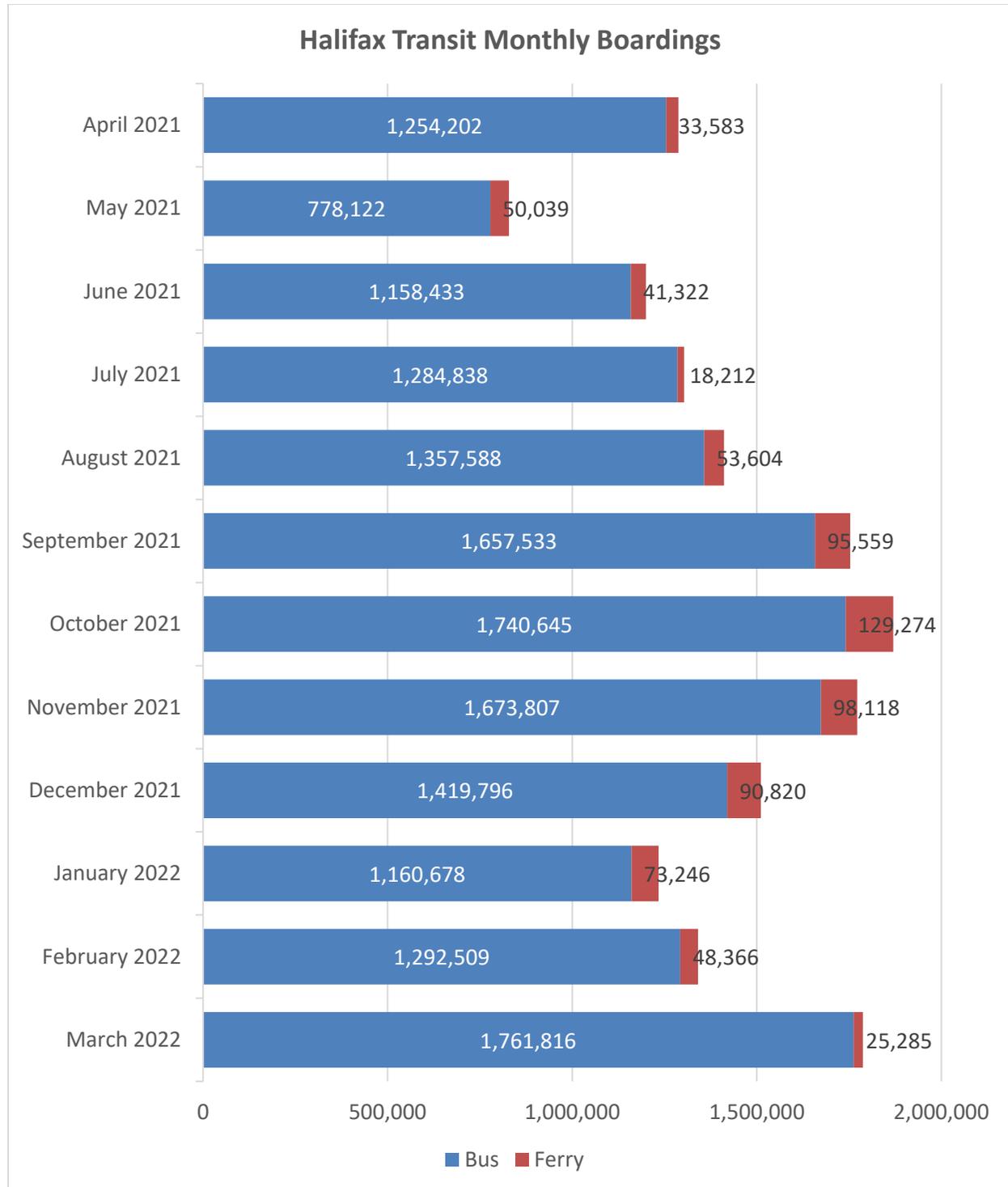
In 2020/21 average weekday boardings were 55,485 ± 13,857 (25% variance). Average Saturday boardings were 35,469 ± 9,168 (25.8% variance). Average Sunday boardings were 25,930 ± 5,551 (21,% variance).

Average Daily Bus Terminal Activity

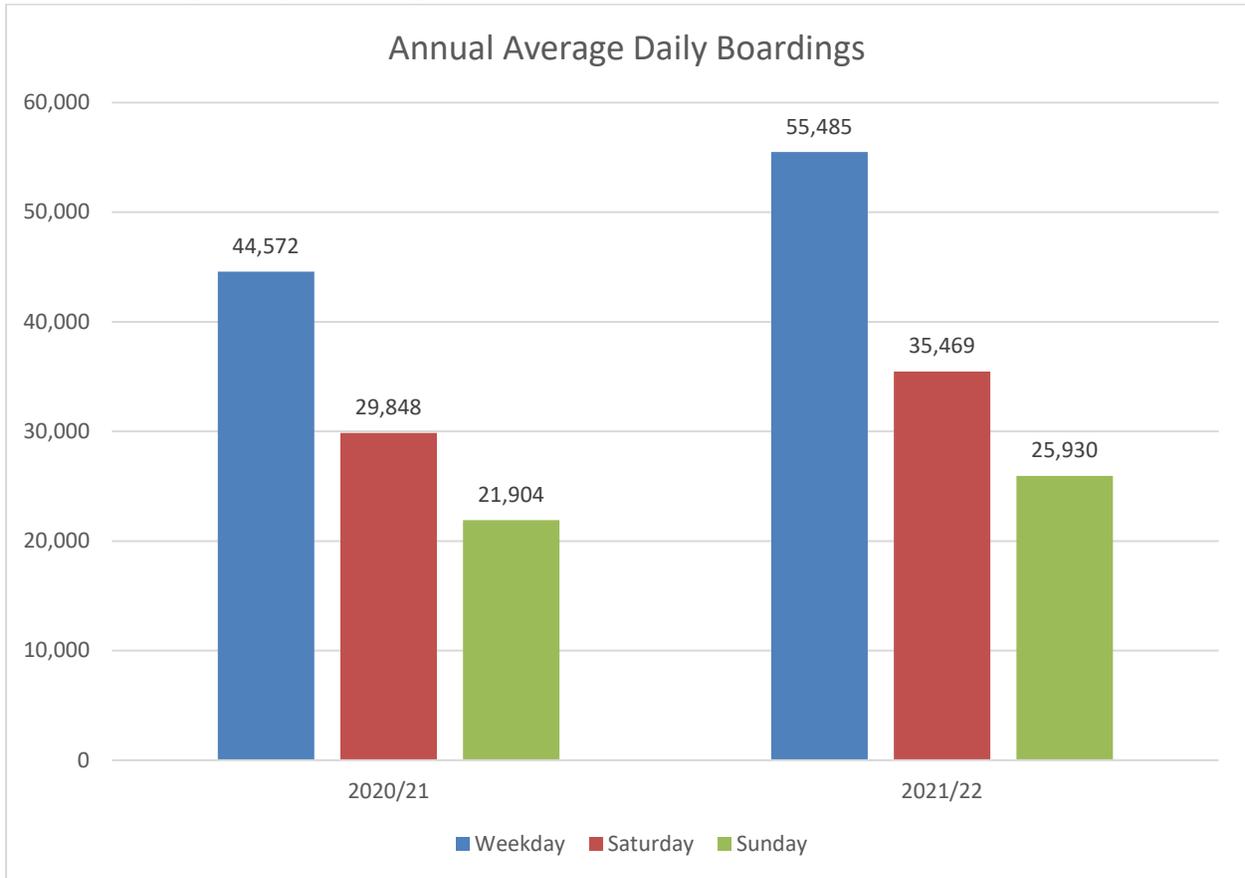
2021/22 Average Daily Bus Terminal Activity									
Terminal	Weekday			Saturday			Sunday		
	On	Off	Total	On	Off	Total	On	Off	Total
Bridge	5,548	5,399	10,947	3,635	3,538	7,174	2,694	2,606	5,300
Mumford	3,544	3,413	6,957	2,741	2,568	5,310	1,980	1,891	3,870
Scotia Square	2,799	2,638	5,436	1,496	1,344	2,840	1,138	1,002	2,140
Lacewood	1,846	1,742	3,588	1,274	1,240	2,514	896	883	1,778
Halifax Ferry	1,177	1,171	2,348	1,063	1,129	2,192	614	634	1,248
Highfield	934	759	1,693	481	371	852	316	224	540
Portland Hills	737	767	1,504	398	420	818	284	298	582
Alderney Ferry	718	723	1,441	1,129	1,063	2,192	634	614	1,248
Micmac	662	662	1,324	619	603	1,222	325	312	637
Alderney Bus	661	498	1,159	441	328	769	249	172	422
Sackville	487	486	973	248	253	501	200	203	403
Woodside Ferry	454	454	907	0	0	0	0	0	0
Penhorn	452	434	886	238	229	467	151	145	296
Cobequid	364	348	712	189	184	374	134	129	262
Water St	390	272	663	336	244	580	222	162	384
Woodside Bus	117	100	217	11	10	21	10	9	20

Monthly Boardings

Ridership generally rebounded throughout 2021/22, another wave of COVID impacted service provision and usage during the spring and again in the winter. Since restrictions have lifted in March 2022 continued increases have been observed.



Annual Average Daily Boardings



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. 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. As a result of COVID impacts the majority of services are not currently meeting these ridership targets.

Annual Boardings & Passengers per Hour Comparison

Route	Weekday				Saturday				Sunday			
	20/21		21/22		20/21		21/22		20/21		21/22	
	Boardings	Pass/Hr										
1	4,502	30	5,266	34	3,720	33	4,297	39	2,493	29	3,691	35
2	2,711	25	3,029	28	2,390	24	2,809	28	1,536	21	2,234	26
3	3,871	27	4,442	30	2,145	25	2,348	28	2,274	23	3,139	26
4	2,060	18	3,087	24	985	20	1,400	29	894	19	1,487	26
Former 5	40	18	55	16								
5			2,448	27			1,691	26			1,447	27
6A/B/C			1,904	20			940	22			1,000	18
7	2,387	22	2,756	24	1,769	19	2,045	22	1,030	19	1,486	23
7A/B			3,105	23			2,078	21			1,752	19
8	2,221	16	2,578	19	1,675	15	1,977	18	1,351	12	1,997	15
9A/B	3,790	24	4,201	25	2,110	29	2,358	33	1,739	23	2,445	27
10	1,984	21	2,683	25	1,566	21	1,869	26	1,095	22	1,623	26
11	40	26	57	28								
14	1,116	19	1,366	22	652	20	765	23	545	18	779	22
21	591	19	679	23	507	14	579	17	352	19	480	20
22	419	13	433	14	305	9	318	10	254	7	334	8
24			1,158	21			1,106	20			1,166	17
25	199	10	252	12	129	8	154	10	110	10	161	11
26			28	12								
28	988	25	1,083	29	824	19	931	22	432	21	631	25
29	1,451	17	1,691	19	950	15	1,111	18	739	12	1,067	14
30A/B	504	14	602	17	348	10	418	12	220	12	340	15
32			175	15								
39	741	16	827	19	641	13	711	14	273	13	392	15
41	312	14	682	20								
51	571	25	631	26	318	20	349	22	180	17	240	16
Former 53	690	28	689	28	451	30	474	31	214	25	255	25
53			727	21			557	18			383	14
Former 54	436	23	483	23	307	20	309	20	160	16	208	17
54			539	18			311	15			289	14
Former 55	180	9	202	9	120	8	149	10	98	6	127	7
55			240	12			191	13			169	9
56	699	21	692	21	731	21	746	22	493	15	651	16
Former 57	321	9	364	9	198	7	206	7	121	7	137	6
57			29	6								
Former 58	392	15	422	15	231	12	281	15	205	12	274	13
58			102	7			77	5			75	4
Former 59	844	15	1,076	14	457	19	506	21	340	14	440	15
59			108	10			85	12			85	10
Former 60	1,383	20	1,476	19	984	24	1,105	27	723	25	1,026	30
Former 61	1,254	17	1,375	18	665	17	736	19	548	14	766	16
61			132	8			126	8			123	6
Former 62	392	14	414	13	289	13	299	14	147	9	192	10
62			387	16			213	13			264	13
Former 63	424	23	443	26								
63			252	11			134	9			130	7
64	337	8	404	10								
Former 65	138	9	174	10	58	4	59	4	33	5	47	6
65			93	13			52	5			67	5
Former 66	650	23	659	22	345	22	352	22	214	13	297	15
67			383	14			162	10			155	7
Former 68	707	16	746	16	433	14	484	16	322	10	408	11
68			182	11			147	9			116	6

Route	Weekday				Saturday				Sunday			
	20/21		21/22		20/21		21/22		20/21		21/22	
	Boardings	Pass/Hr										
72	806	18	956	21	648	14	758	17	336	12	480	14
82	127	7	132	7	93	6	99	6	74	5	96	5
83	62	5	62	5	48	5	55	6	39	3	51	4
84	533	10	625	11	208	6	244	7	166	6	256	7
85	88	7	98	7	56	6	64	8	45	6	61	7
86	96	6	94	7	73	5	80	5	64	4	76	4
87	749	14	813	15	483	9	557	11	294	10	392	11
88	128	9	139	10	98	6	105	7	68	5	81	5
90	777	12	1,060	16	553	9	747	12	298	8	504	12
91	366	11	461	13	203	9	248	11	192	7	294	9
93	65	10	110	11								
Former 401	81	6	97	7								
401			90	9			27	7			33	5
415	39	6	37	6								
433	35	7	46	8								
Alderney	896	42	1,437	51	1,056	85	2,207	131	726	61	1,272	78
Woodside	556	38	907	44								

Express Service Peak Boardings and Passengers per Trip Comparison

Average Weekday Daily Express Route Peak Boardings				
Route	2020/21		2021/22	
	Boardings	Peak Pass/Trip	Boardings	Peak Pass/Trip
Former 32	149	11	184	9.6
Former 78	24	2.4	40	3.0
Former 79	30	3.3	27	2.4
123	96	8.7	141	11.4
127			160	8.8
135	142	12.0	178	12.8
136	225	14.1	259	16.3
137	94	10.4	149	13.3
138	130	11.8	173	13.0
158			88	10.9
Former 159	131	5.5	197	9.4
159			177	10.0
161			169	14.8
165			90	7.4
168A/B			302	11.2
178			25	2.7
179			19	2.4
182	171	7.9	240	9.3
183	94	9.2	132	10.7
185	261	10.1	269	10.9
186	98	10.4	138	12.1
194	43	6.9	65	6.6
196	25	7.8	38	10.8
320	56	4.9	75	6.0
330	73	4.1	89	4.3
370	55	4.4	54	4.6

Annual 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 of 85% for on-time performance, service fell slightly under this target for 2021/22 achieving 84% on-time performance. The target was generally exceeded during times of increased COVID impacts, and not met during less impacted periods. Schedule improvements will continue to be made in effort to consistently meet this target.

