

Seattle Department of Transportation

2021 ANNUAL STREETCAR OPERATING REPORT



October 2022



Seattle
Department of
Transportation

CONTENTS

- 1. EXECUTIVE SUMMARY**4
- 2. INTRODUCTION**6
 - 2.1. South Lake Union Streetcar8
 - 2.2. First Hill Streetcar8
 - 2.3. Center City Connector8
- 3. OPERATIONS HIGHLIGHTS** 10
 - 3.1. Governance Structure and Budget Overview 10
 - 3.2. Safety & Security Update 11
- 4. PERFORMANCE METRICS**..... 13
 - 4.1. Ridership 13
 - 4.2. Reliability..... 15
 - 4.3. Productivity 17
 - 4.4. Performance and Safety Improvements..... 17
- 5. FINANCIAL METRICS**20
 - 5.1. Operations and Maintenance Costs.....20
 - 5.2. Revenue.....20
 - 5.3. Investment in Streetcar Operations22
- 6. CONCLUSION**30
 - 6.1. 2021 in Review.....30
 - 6.2. Looking Ahead30

FIGURES

Figure 1: Seattle Streetcar System Map	7
Figure 2: Seattle Streetcar Security Incidents January 2019-December 2021	12
Figure 3: Seattle Streetcar Ridership (National Transit Data Base Reported) 2016-2021	13
Figure 4: Total Quarterly Ridership 2019-2022	14
Figure 5: Seattle Streetcar On-Time Performance 2009-2021	16
Figure 6: Seattle Streetcar Productivity 2016-2021	17
Figure 7: Fare Revenue Collected 2017-2021	21

TABLES

Table 1: Ridership Projections 2022-2027	15
Table 2: 2021 Streetcar Spot Improvements	18
Table 3: Projected Streetcar Balances and Investment Per Rider	24
Table 4a: South Lake Union Streetcar Historic and Current Operating Costs	25
Table 4b: South Lake Union Streetcar Projected Operating Costs	26
Table 5a: First Hill Streetcar Historic and Current Operating Costs	27
Table 5b: First Hill Streetcar Projected Operating Costs.....	28
Table 6: First Hill Streetcar Performance Historic and Estimated	29
Table 7: South Lake Union Performance Historical and Estimated.....	29

1. EXECUTIVE SUMMARY

The Seattle Streetcar system, owned by the Seattle Department of Transportation (SDOT), consists of two separate, modern streetcar lines: the South Lake Union Streetcar (SLU), which opened in 2007, and the First Hill Streetcar (FHS), which opened in 2016. The City of Seattle partners with King County Metro (Metro) to serve as the operator of the system on the City's behalf. This document satisfies the reporting requirements outlined in [Ordinance 124946](#) and summarizes 2021 performance and financial metrics.

Highlights from 2021 include:

SDOT and Metro streetcar staff continued to respond to the COVID-19 global pandemic, which required ongoing adjustments to dynamic and evolving federal, state, and local directives. Streetcar operations responded through a variety of measures, including:

- Continued implementation of physical safety measures to support social distancing on streetcar vehicles for the first part of 2021. This included removing seats and hanging a chain barrier to keep riders 6 feet from the operator's cab. Metro also installed signage and mask dispensers to support federal, state, and local mask directives. In mid-2021, seats were reinstalled, and the chain barrier removed.
- Service on First Hill and South Lake Union continued to have reduced service hours from 2019 levels based on staffing availability and SDOT budget reductions.

Overall, ridership increased by approximately 8% in 2021 between both lines, compared to 2020, to 806,120 riders, and rebounded at a similar rate to Metro services (as seen in Figure 3).

- Starting in February of 2021, ridership for both lines incrementally increased throughout 2021, as riders slowly began to return to transit.
- For comparison, pre-pandemic ridership in 2019 was 1,863,409 for FHS and SLU lines combined.
- 2021 ridership trends are comparable to Metro Bus Operations ridership trends during the same period.¹

Overall, fare revenue continued to stabilize by staying flat in 2021 compared to 2020.

- Streetcar ticket vending machines, which sell streetcar-only fares and are directly received by SDOT, saw growth in sales in 2021 which reflects a stabilization from pandemic trends.
- When comparing to 2019 as a pre-pandemic baseline, fare revenue in 2021 decreased by 76% (approximately \$1.4 million).
- These trends were comparable to Metro Bus Operations, which saw a decline in fare revenue between 2019 and 2021 of approximately 67% (or approximately \$110 million).²

¹As reported in the 2019 and 2021 APTA Public Transportation Ridership Reports, Metro ridership was 59% less in 2019, compared to 2021 (streetcar ridership was 57% less). 2021 National Transit Database (NTD) Ridership reports for King County Metro Bus Operations have not been uploaded, and data may slightly differ from that included in NTD reports due to differences in data calculation procedures and in periods of time covered.

²As reported in [King County Metro's Transit Fare Revenue 2019 and 2021 Reports](#). Methodology does not specify if streetcar fare revenue is included in their reporting.

In 2021, the federal government continued to provide financial assistance to transit agencies to address ongoing revenue reductions brought on by the pandemic with the passage of the American Rescue Plan Act (ARPA). This followed two previous acts, the Coronavirus Aid Relief and Economic Security Act (CARES) and Coronavirus Response and Relief Supplemental Appropriations Act (CRRSAA), passed in 2020.

- In 2020, the City of Seattle was directly awarded \$688,000 from the CARES Act for streetcar operations and an invoice credit of \$1.2 million³ from King County Metro.
- In 2021, the City was directly awarded CRRSAA funds for streetcar operations of \$785,000, as well as an invoice credit from King County Metro of \$1.3 million.
- In 2021, the City was also directly awarded \$1.2 million from ARPA for streetcar operations, and an invoice credit of \$2 million from King County Metro which will be realized as 2022 monthly invoice offsets.

SDOT streetcar program added a Streetcar Program Manager.

- In the beginning of 2021, SDOT Streetcar program included the Streetcar & Transit Corridors Manager and the Streetcar Chief Safety Officer, who are part of the Transit & Mobility Division.
- In July 2021, SDOT hired a Streetcar Program Manager to oversee program management and operations. Replacing the Streetcar Operations Manager role, the Program Manager is responsible for many of the duties and responsibilities of the Streetcar Operations Manager, such as oversight of day-to-day operational policy, while providing more emphasis on program strategy and financial oversight.

SDOT met new, more stringent federal safety requirements.

- In 2019, there were several new changes to federal requirements governing rail safety oversight, requiring SDOT to assume new responsibilities in managing and planning streetcar safety. In 2020, SDOT submitted its first Public Transportation Agency Safety Plan (PTASP).
- In 2021, SDOT adopted its annual revision for the PTASP based on a Safety Management System (SMS) philosophy in accordance with the new federal requirements.
- SDOT also implemented a new internal safety audit program and began the process of updating the 2019 Interlocal Agreement with King County Metro to clarify both parties' safety roles and responsibilities.

SDOT completed spot improvement projects to enhance safety, performance, and reliability.

- In 2021, the SDOT Transit Spot Improvement Program completed work on several small-scale capital investments to increase safety for people on bicycles around streetcar tracks and improve streetcar travel time and reliability.
- Notable projects included installing a bicycle signal and connection to a protected bike lane on Broadway and Denny, installing tuff posts to prevent cars from passing the streetcar on Broadway and Yesler, and adding bicycle channelization and marking improvements at various locations in South Lake Union to improve bicycle flow and minimize conflict over streetcar tracks. See section 4.4 for photos of these projects.

³King County Metro submits all NTD reporting for Seattle Streetcar and received funding distributions based off these reporting metrics. Proportional credits for Seattle Streetcar's NTD submissions for CARES, CRRSAA, and ARPA funding were all distributed to SDOT.

2. INTRODUCTION

Seattle City [Ordinance 124946](#) requires the Seattle Department of Transportation (SDOT) to submit a report to the Chair of the City Council's Sustainability and Transportation Committee (now the Transportation and Seattle Public Utilities Committee) on the operations of all operating streetcar lines. This requirement has been in place since December 2015.

Ordinance 124946 states:

"The report shall include both performance metrics and financial metrics; and will include data for the past 5 years, estimates for the current year, and projections for the next 5 years. Performance metrics shall include ridership, farebox recovery ratio, productivity (riders per revenue hour), fare evasion, and reliability. Financial metrics shall include costs, including operating payments to King County, SDOT direct costs and contingency, and major maintenance expenditures; revenues, including farebox recovery, sponsorships and donations, grants, and intergovernmental revenues; and actual use of funds from the Consolidated (Residual) Cash Pool⁴ for interim financing. Financial reporting shall identify variances from financial projections included in the Adopted Budget. The report shall include a narrative to describe any significant or operational policy changes and explain any significant variation from budgeted projections. SDOT may adjust the performance and financial metrics with the written concurrence of the Chair of the Transportation Committee, to reflect changes to reporting methods from King County or other sources of data. The report shall be submitted in writing to the Chair of the Transportation Committee."

In 2019, SDOT entered an Interlocal Agreement with King County Metro, whereby operating costs for the First Hill Streetcar and South Lake Union Streetcar are reconciled by June 30 of each year. Through the reconciliation process, Metro compiles all actual costs incurred to operate the streetcars and compares the amount to invoices paid by SDOT monthly throughout the year, with a financial settlement as needed. It takes Metro three months to produce the final actual costs incurred, as financial systems close-out the previous year during the first quarter. Once reconciliation is complete, SDOT can prepare the analysis included in the annual report. This reconciliation process only happens once a year. Since 2019, SDOT has prepared an annual report for a Q3 delivery which aligns with this annual reconciliation process, rather than the bi-annual report requested in Ordinance 124946.

Figure 1 shows the South Lake Union and First Hill Streetcar segment alignments along with the proposed Center City Connector route.

⁴An interfund loan for streetcar operations is currently supported by the City's Transportation Fund.

2.1. SOUTH LAKE UNION STREETCAR

The South Lake Union Streetcar was approved by the City Council in 2005 in response to efforts to develop the South Lake Union neighborhood into a biotechnology and biomedical research hub. The \$56.4 million line was funded nearly 50% by property owners along the alignment and the remainder by federal, state, and local funds.

The SLU line is 1.3 miles long and operates through mixed traffic. The line is served by a fleet of four Inekon vehicles operating in mixed right-of-way and powered exclusively by an overhead contact system. SLU operates an average 10- to 15-minute service frequency from 6:00am – 9:00pm weekdays, 7:00am-9:00pm Saturdays and 10:00am-7:00pm Sundays.

The SLU line started operations on December 12, 2007. It conveniently connects thousands of jobs in the South Lake Union neighborhood to the downtown core and additional regional transit connections at Westlake. There are nine stops along the alignment leading to restaurants, retail, businesses, and Lake Union's 12-acre waterfront park. The southern terminus at Westlake/McGraw Square is a block away from Monorail and the Link Light Rail station at Westlake Center. SLU is served by an Operations and Maintenance Facility (OMF) located at 318 Fairview Ave N.

2.2. FIRST HILL STREETCAR

The First Hill Streetcar connects major medical facilities, Seattle Central College, Seattle University, and a variety of neighborhoods to the King Street mobility hub, which provides connections to Sounder trains, Link light rail, and regional bus transit. Construction of the First Hill Streetcar line was funded by Sound Transit. Due to high construction and engineering risks, Sound Transit removed the proposed First Hill station from the North Link preferred route in July 2005 and funded a streetcar connection instead. It was approved by the Seattle City Council in December 2008. Construction began in late April 2012, and operation began in January 2016.

The First Hill Streetcar line is 2.5 miles long. It operates with six streetcar vehicles, provides an average 15- to 20-minute service frequency from 5:00am-10:30pm weekdays, 6:00am-10:30pm Saturdays and 10:00am-8:00pm Sundays. FHS is served by an OMF located at 848 7th Ave S.

2.3. CENTER CITY CONNECTOR

The Center City Connector (C3) project will join the existing SLU and the FHS lines, creating new north-south connections from Stewart St. in Westlake to Jackson St. in Pioneer Square. The project is anticipated to be funded through a combination of local and federal funds, including a Federal Transit Administration (FTA) Small Starts grant. The C3 project is currently paused. A brief history is provided below.

- In March 2018, SDOT paused all work on the C3 project pending an independent review of operating and capital costs led by the City Budget Office. In January 2019, the Durkan Administration announced that the results of the third-party analyses showed that the overall capital cost of the project was significantly higher than the budget passed in 2017.
- In August 2019, City Council authorized \$9 million in funding for critical design and planning work needed to advance the C3 project. Then-Mayor Durkan also announced plans to work with community members, the City Council, transit partners, businesses, and stakeholders to move forward on the project. In September 2019, the Durkan Administration proposed a new tax on Transportation Network Company (TNC) trips, the proceeds of which can be used as local funding to close the capital budget gap for C3 Streetcar. City Council approved the new TNC tax in December 2019.

- In June 2020, SDOT paused the project again due to significant decline of revenues for the City and funding partners related to the COVID-19 pandemic. In November 2021, the City Council approved \$2.4 million in TNC revenues the 2022 budget to update a limited body of work in 2022 to assess key known technical issues, to inform a decision about how to proceed with the project. On-going citywide revenue shortfalls have limited funding for this work effort.

For the purposes of this report, future year projections include only SLU and FHS operations due the continued pause of the C3 project.



3. OPERATIONS HIGHLIGHTS

3.1 GOVERNANCE STRUCTURE AND BUDGET OVERVIEW

The South Lake Union and First Hill Streetcar lines are owned by the City of Seattle and operated by King County Metro (Metro). This partnership, including respective roles, responsibilities, and funding commitments, is detailed in the 2019 Interlocal Agreement (ILA) between the City of Seattle and King County regarding the Seattle Streetcar. This agreement was executed in December 2019 and replaced the 2014 Amended & Restated ILA between the City of Seattle and King County.

Metro, as operator of the system, employs approximately 55 operators, supervisors, and maintenance staff dedicated to streetcar operations. While nearly all day-to-day operations and maintenance responsibilities reside with

Metro under the ILA, SDOT is responsible for decisions regarding safety, overall budget and financial planning, level of service, fare policy and enforcement, and long-term asset management.

In addition to revenues and expenses from Metro, the overall streetcar operations and maintenance budget includes revenue generated from the streetcar sponsorship program, Sound Transit contributions⁵, federal grants, a contribution from the commercial parking tax, and cash fares collected directly by SDOT from streetcar ticket vending machines. It also includes costs directly incurred by SDOT for such items as labor for program management and safety oversight, asset repairs, right-of-way maintenance, and other operations and maintenance activities not performed by Metro.

In July 2021, SDOT hired a Streetcar Program Manager to oversee program management and operations. The Program Manager is responsible for many of the duties previously performed by the Streetcar Operations Manager, such as oversight of day-to-day operational policy, and provides more emphasis on program strategy and financial oversight. Streetcar program staff also include the Streetcar & Transit Corridors Manager and the Streetcar Chief Safety Officer, who are part of the Transit & Mobility Division. The Streetcar Chief Safety Officer was previously the Streetcar Operations Manager and was trained into the new position as part of compliance with the new federal safety regulations. This separation of safety and operational responsibilities is a requirement of the Federal Transit Administration (FTA).

⁵Under the Funding and Cooperative Agreement between Sound Transit and the City of Seattle for the First Hill Streetcar project, Sound Transit provides an annual contribution of \$5.0M to First Hill Streetcar operations and maintenance through 2023.



3.2 SAFETY & SECURITY UPDATE

The Seattle Streetcar is a Rail Transit Agency (RTA) subject to oversight by the Washington State Department of Transportation (WSDOT), which serves on behalf of the federal government as the State Safety Oversight Agency (SSOA) for the State of Washington. In July 2019, the FTA's Public Transportation Agency Safety Plan (PTASP) final rule [49 CFR Part 673], as authorized by the Moving Ahead for Progress in the 21st Century Act (MAP-21), became effective. The final rule made major changes to the safety requirements and responsibilities of rail transit agencies, the largest of which required SDOT to develop a PTASP based on Safety Management System (SMS) principles and methods.

Under the new safety plan, SDOT's role in safety oversight has significantly expanded. SDOT now has a Chief Safety Officer (CSO) who reports directly to the Accountable Executive (the SDOT Director) on streetcar safety. The CSO has direct responsibility for implementing the new safety plan as well as the associated Safety Management System (SMS) which is designed to broaden the culture of safety within a transit agency.

Many of the day-to-day responsibilities governing safety and security continue to be administered by Metro as the operator, including accident notification, reporting, and investigation. SDOT is responsible for safety certification, safety oversight, and internal safety auditing. SDOT is also the owner of the Transit Asset Management Plan (TAMP), which is referenced by the PTASP and reinforces State of Good Repair decision making.

In 2020, SDOT submitted the first ever adopted PTASP to WSDOT, meeting the federal timeline for submittal. The PTASP replaced the prior System Safety Program Plan (SSPP), which King County Metro has historically authored and maintained. In 2021, SDOT submitted the adopted annual revision of the PTASP to WSDOT, further developing the goals and processes in the PTASP and meeting the federal timeline for submittal.

In 2021, WSDOT conducted a Triennial Safety Audit of the Seattle Streetcar PTASP and returned several findings and recommendations with the goal of improving the effectiveness of the plan. The following are a list of key findings and recommendations which staff began addressing in 2021 and which continue into 2022:

- SDOT must better monitor that Metro is performing to SDOT safety standards;
- SDOT must clarify the Chief Safety Officer's line of authority over streetcar safety matters;
- SDOT should consider improving its SMS implementation plan tracking; and
- SDOT should consider improvements to the streetcar internal safety audit process.

As a result of these findings and observations, the Streetcar PTASP was updated ahead of an early 2022 approval. SDOT is also undertaking a parallel effort to review the ILA to update roles and responsibilities related to safety. The City and County continue to develop the amendment to the ILA in 2022.

Streetcar staff also worked with SDOT's People, Culture and Logistics (PCL) Division to develop a new streetcar internal safety audit process. This new process addressed the recommendations from WSDOT and satisfies an annual requirement to conduct an independent review of PTASP implementation and monitor growth of SDOT's streetcar safety culture.

In response to rising numbers of security-related incidents on streetcars and platforms in 2021, SDOT worked with Metro to begin deployment of security personnel on streetcar service. SDOT and Metro observed behaviors onboard and on platforms that included verbal abuse, intimidation and physical assault on passengers and employees. Security staff are trained to be customer service representatives first and security de-escalation second with the ability to call on law enforcement in cases where they are required. Fare enforcement is not a component of this deployment.

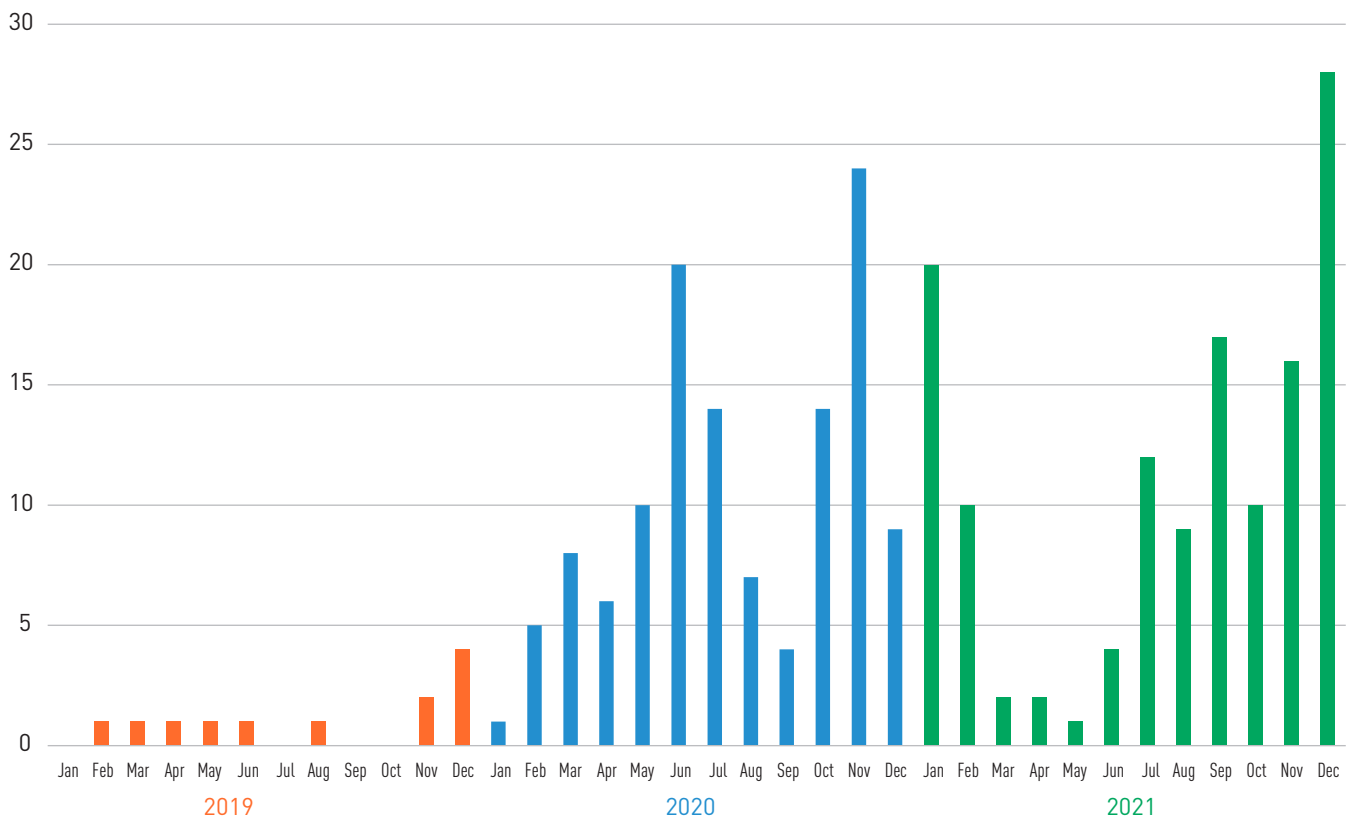
The implementation of security enforcement is consistent with the Metro Safety, Security, and Fare Enforcement (SaFE) Reform initiative (<https://kingcounty.gov/depts/transportation/metro/about/safety-security/safe-reform-initiative.aspx>) which guides Metro’s deployment of security staff on Metro Bus Operations. This provides consistency between security service on streetcar and bus transit.

Deployment of officers was originally planned to begin in October 2021, with four hours of presence per day. However due to labor shortages, the security presence on the streetcar did not start until January 2022 and in a limited

capacity, at approximately two hours per day. SDOT and Metro continue to work to bring the full complement of security staff to streetcar in 2022.

Figure 2 shows the monthly number of reported security incidents from 2019 to 2021. Security incidents are defined as “an incident that poses a security risk to passengers or employees such as vandalism or assault. Security incidents can occur on the streetcar, on the platform, or occur as a result of an outside incident that overlaps with streetcar service.” SDOT staff continues to work with Metro reporting to refine understanding of reported security incidents and to develop responsive countermeasures.

FIGURE 2: SEATTLE STREETCAR SECURITY INCIDENTS JANUARY 2019-DECEMBER 2021



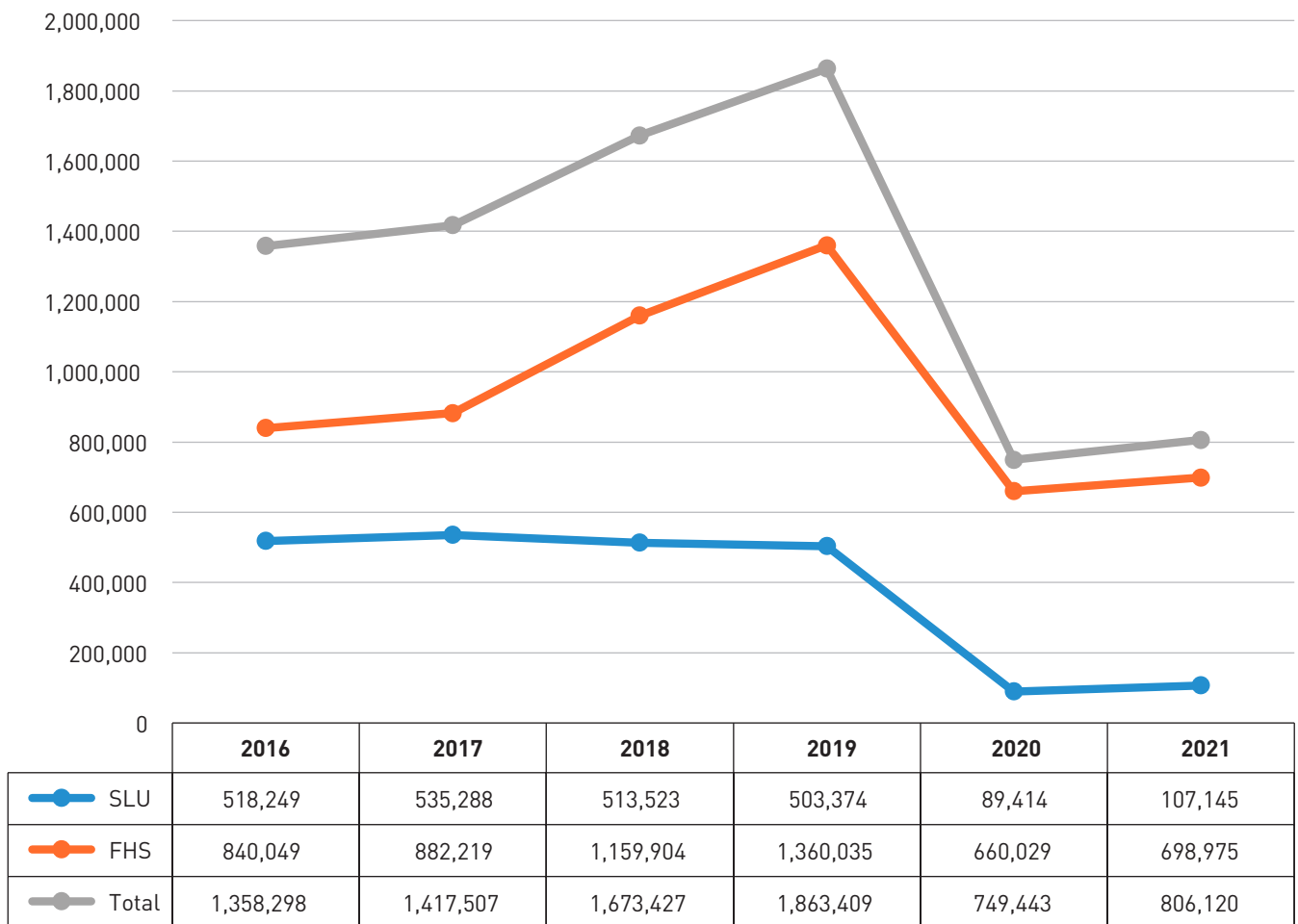
4. PERFORMANCE METRICS

4.1 RIDERSHIP

Ridership on the Seattle Streetcar system has continued to be impacted by the COVID-19 pandemic but grew beyond 2020 ridership levels. Overall, ridership increased by approximately 8% over 2021 between both lines (approximately 56,677 riders) compared to 2020. SDOT collects Streetcar ridership numbers via automatic

passenger counters installed onboard vehicles. These numbers get validated by King County Metro before being sent to the National Transit Database. Ridership trends from 2016 to 2021 are shown in Figure 3. Quarterly ridership from 2019 to 2022 is shown in Figure 4 and highlights the consistent increase in ridership since 2021.

FIGURE 3: SEATTLE STREETCAR RIDERSHIP (NATIONAL TRANSIT DATA BASE REPORTED) 2016-2021

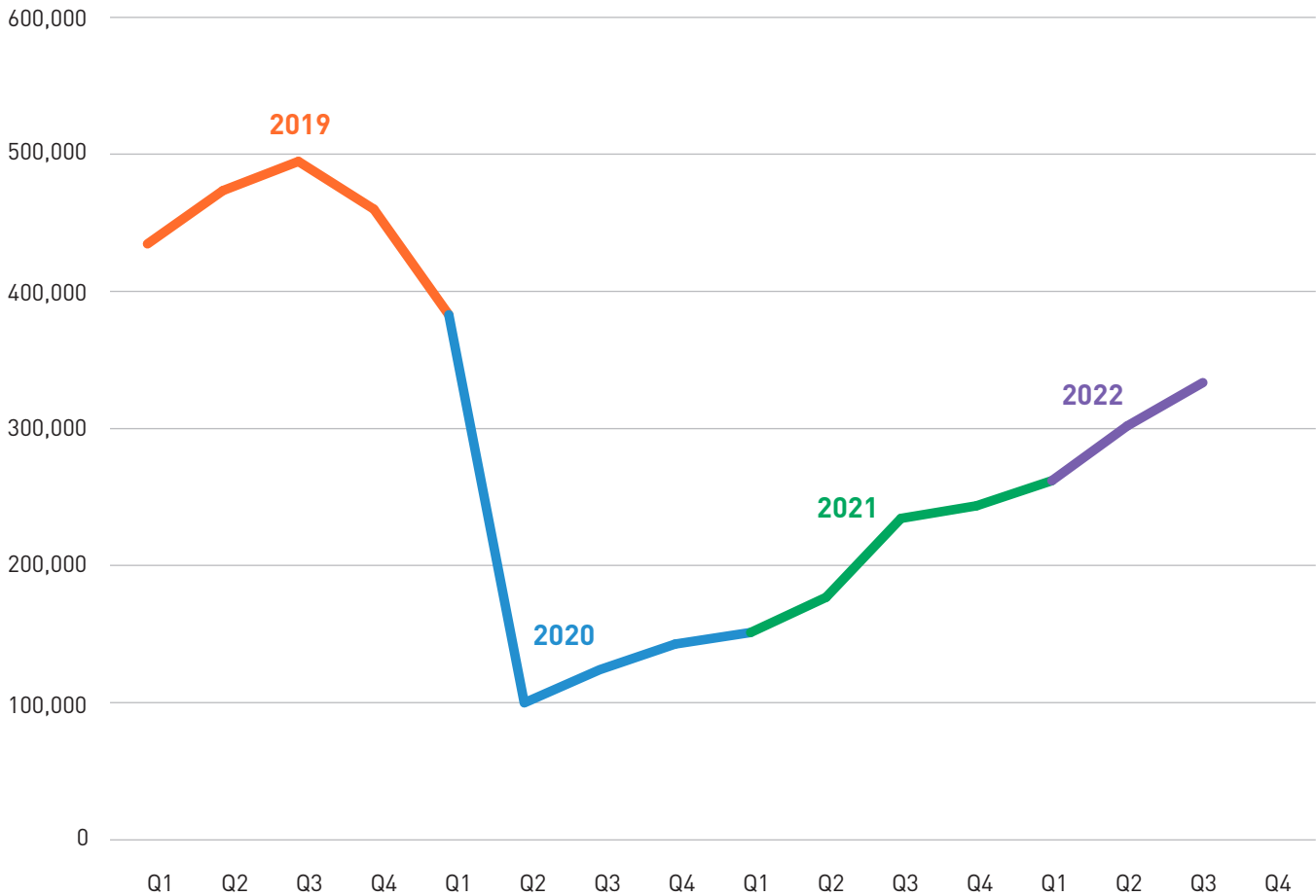


- 2021 ridership on the First Hill Line⁶ increased by approximately 6% over 2020.
- 2021 ridership on the South Lake Union Line⁷ increased by approximately 20% over 2020.

⁶As reported by King County Metro to the National Transit Database.

⁷As reported by King County Metro to the National Transit Database.

FIGURE 4: TOTAL QUARTERLY RIDERSHIP 2019-2022



Overall, the streetcar system had a combined systemwide ridership of 806,120 riders, a decrease of 57%, or approximately 1.1 million fewer riders, compared to pre-pandemic ridership in 2019. These numbers are in line with the decreases that King County Metro Bus Operations are seeing as well⁸, with a decrease of 59%, or approximately 74 million fewer riders, compared to pre-pandemic ridership. Following gains from 2020 in 2021, ridership continues to incrementally increase for both streetcar lines in 2022.

In years prior, staff have assumed 3% year-over-year growth in ridership for projection purposes. The COVID-19 pandemic disrupted ridership starting in 2020, making trend analysis from 2020 and 2021 challenging. For this reason, SDOT has continued to use 2019 as the data comparison baseline for current and future year projections. SDOT revised assumptions through 2024 based on observed growth in 2021 and 2022. Projections used 2% per month growth in 2022, 3% per month growth in 2023, and 3% annual growth over previous year in 2024-2026. FHS is projected to reach the 2019 annual baseline in mid-2023. SLU is not projected to reach the 2019 annual baseline until after the current projection period, based on current trends. As of the first half of 2022, ridership trends seem on track to align with current projections.

⁸As reported in the 2019 and 2021 APTA Public Transportation Ridership Reports, as 2021 NTD Ridership reports for King County Metro Bus Operations have not been uploaded. Data may slightly differ from that included in Federal Transit Administration reports due to differences in data calculation procedures and in periods of time covered.

TABLE 1: RIDERSHIP ACTUAL AND PROJECTED 2019-2027

Year	Actuals			Projected					
	2019	2020	2021	2022	2023	2024	2025	2026	2027
FHS	1,360,035	660,029	698,975	1,066,266	1,423,666	1,466,376	1,510,368	1,555,679	1,602,349
SLU	503,374	89,414	107,145	214,648	383,310	385,967	397,546	409,473	421,757
Totals	1,863,409	749,443	806,120	1,280,914	1,806,976	1,852,343	1,907,914	1,965,152	2,024,106

Additional details on these assumptions as well as updated projections are located within the South Lake Union and First Hill financial tables (Tables 4a/b and 5a/b) in the Financial Metrics section.

4.2 RELIABILITY

Reliability is measured based on the arrival time of a given streetcar at designated points along the route between 7:00am and 7:00pm, relative to the scheduled arrival time. A streetcar is “on-time” if it arrives within a window five minutes prior to or

later than the scheduled time at the designated time point. This is consistent with Metro Bus Operations’ measure of reliability.

Overall reliability in 2021 improved for both lines. Reliability for the FHS line improved in 2021 from 63% to 83%, which is in line with Metro Bus Operations. Reliability on the SLU line improved from 46% to 48%. However, due to technical issues caused by the nationwide migration from 3G cell networks, 2022 data is incomplete. SDOT



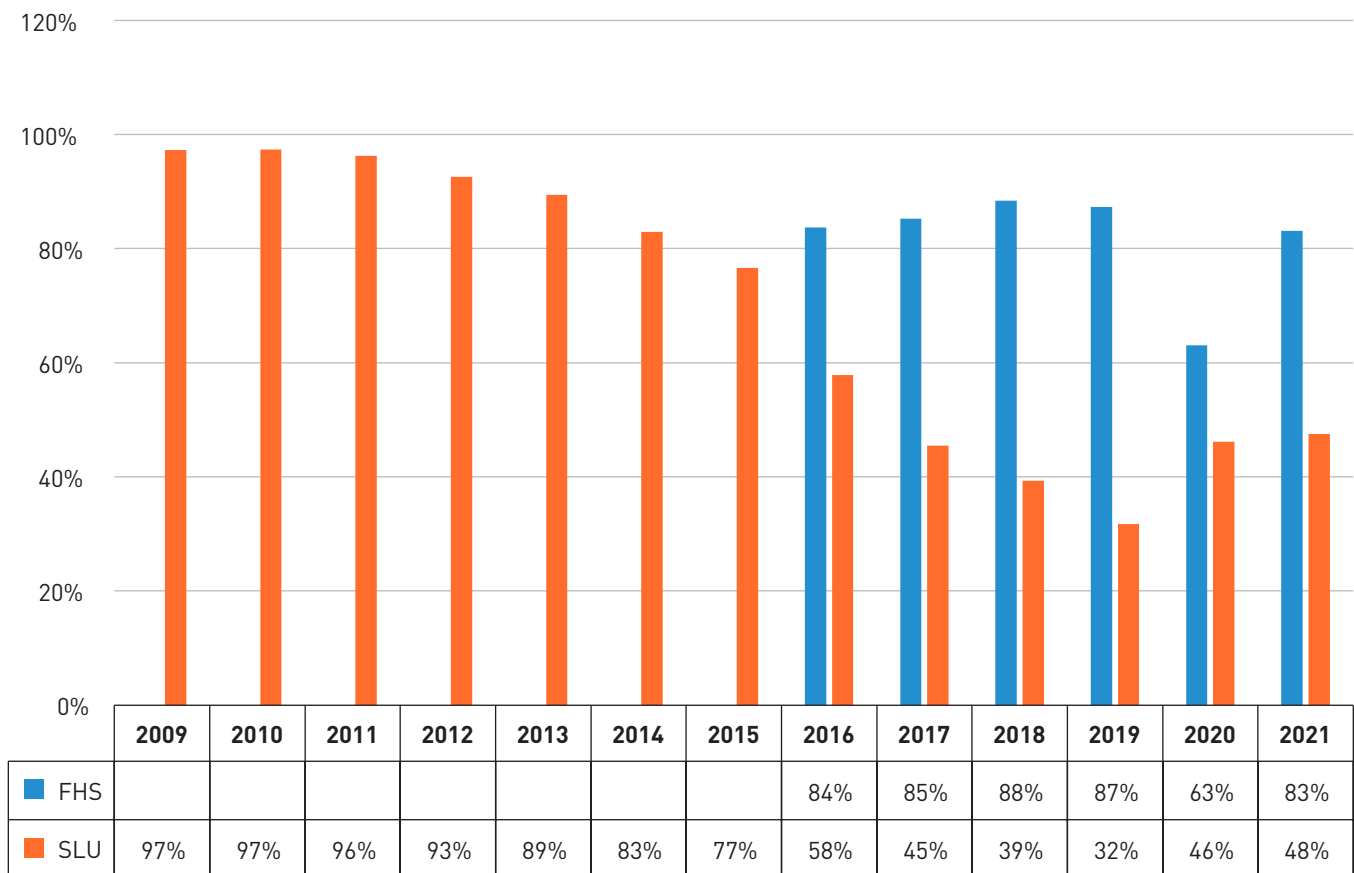
is implementing system upgrades to address the outage. Regardless, reliability on the SLU streetcar has declined since 2012 as the SLU neighborhood has continued to grow and traffic volumes have increased.

In 2021, SDOT undertook efforts to improve streetcar reliability. The Transit Spot Improvement team re-channelized the roadway at Westlake Avenue and Valley Street to prevent cars from

blocking streetcar tracks to improve service reliability and began design of additional improvements to be constructed in 2022. SDOT also initiated a performance analysis study in 2022 for both SLU and FHS, which will generate other capital projects to improve service reliability.

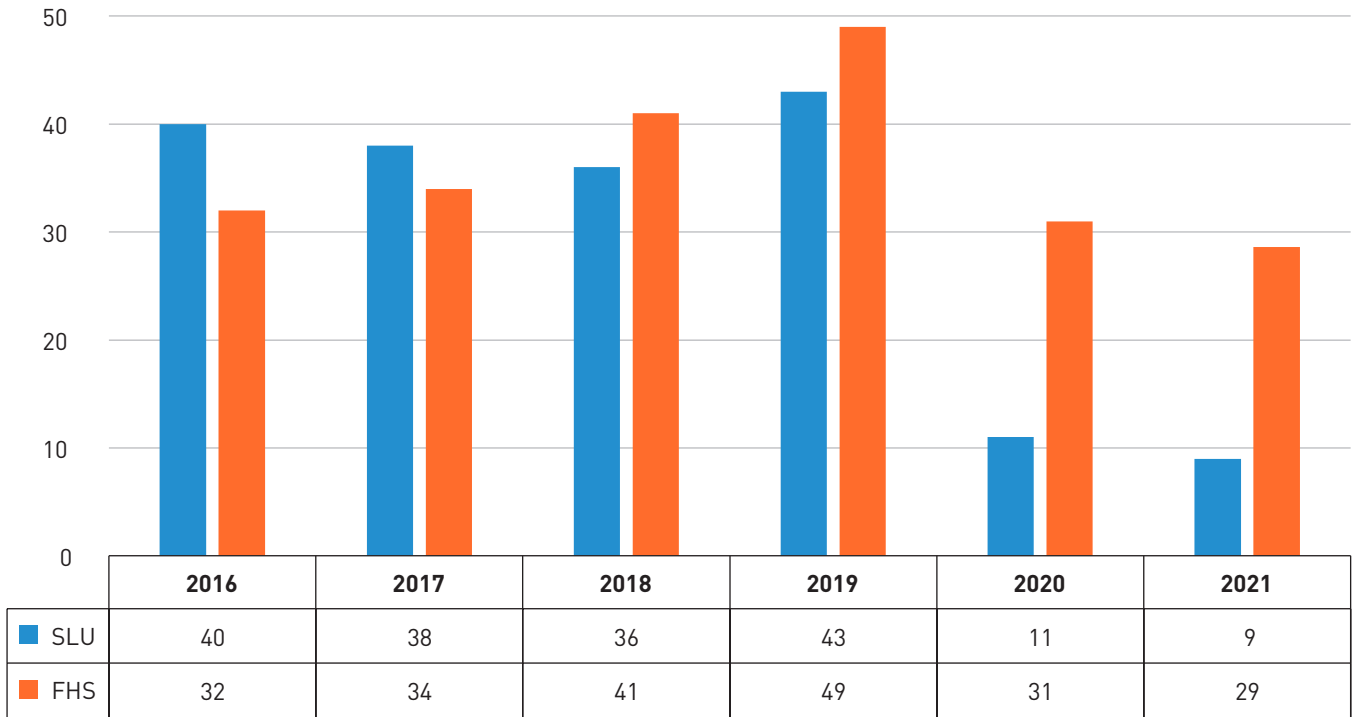
Figure 5 shows the average annual percentage of time each line was operating “on-time.”

FIGURE 5: SEATTLE STREETCAR ON-TIME PERFORMANCE 2009-2021⁹



⁹Data begins at 2016 for FHS as that is when revenue service began for the line.

FIGURE 6: SEATTLE STREETCAR PRODUCTIVITY 2016-2021



4.3 PRODUCTIVITY

Productivity on the SLU and FHS lines, as measured by riders per revenue hour, appears to have slightly decreased due to increased revenue hours in 2021. Productivity is measured by calculating the number of riders, compared to the number of hours streetcar is operating scheduled service, or revenue hours¹⁰ (number of riders per revenue hour.) Transit agencies use this indicator to manage service. SLU operated approximately 11,927 revenue hours, serving nine riders per revenue hour. FHS operated approximately 24,431 revenue hours, serving 29 riders per revenue hour. 2021 productivity trends for both FHS and SLU are in line with Metro’s Bus Operations’ productivity. Figure 5 shows the productivity of each line.

¹⁰Revenue Hours are defined as the number of hours streetcars are operating scheduled service. This time does not include layover or deadhead time.

In 2020, streetcar operated 7,500 fewer revenue hours, due to the pause in SLU service for several months at the start of the pandemic. Had regular revenue hours run in 2020, the productivity would have been lower than 2021. 2021 saw relatively productive service for FHS as ridership continued to grow, while SLU’s productivity reflected lower ridership as many employers have delayed returning to offices in South Lake Union.

4.4 PERFORMANCE AND SAFETY IMPROVEMENTS

In 2021, SDOT continued work on spot improvement projects to improve safety, performance, and reliability. The SDOT Transit Spot Improvements Program completed work on several spot improvements to increase safety for people on bicycles around streetcar tracks, reduce disruptive conditions identified through operations, and improve streetcar travel time and reliability.

Table 2 outlines the safety improvements locations and dates completed.

TABLE 2: 2021 STREETCAR SPOT IMPROVEMENTS

Location	Project	Date Completed
East Yesler Way and 10th Avenue East	Installed tuff posts to prevent cars from passing the streetcar (Safety)	February 2021
Broadway and Alder Street	Installed tuff posts to prevent cars from passing the streetcar (Safety)	April 2021
Broadway and Harvard	Installed tuff posts to prevent left turns onto Harvard from Broadway (Service reliability)	May 2021
Fairview Avenue and Valley Street	Streetcar and bike lane markings to better define space for cyclists (Safety)	May 2021
Westlake Avenue and Valley Street	Re-channelized roadway to prevent cars from blocking Streetcar tracks (Service reliability)	June 2021
Broadway and Denny Way	Installed bicycle signal and protected lane markings to improve safety for cyclists transferring into and out of the Broadway protected bike lane (Safety)	August 2021



East Yesler and 10th Ave. E tuff posts



Broadway and Denny bicycle lane and signal



Broadway and Alder tuff posts



Westlake Avenue and Valley Street Re-channelized roadway

5. FINANCIAL METRICS

5.1 OPERATIONS AND MAINTENANCE COSTS

In 2021, the COVID-19 pandemic continued to impact streetcar operations through reduced service hours due to staffing and budget constraints, lower fare revenue, and ongoing asset maintenance challenges such as shelter damage. In 2021, there was continuation of the 10% reduction of service (compared to 2019 service levels) due to the COVID-19 pandemic impact on Commercial Parking Tax (CPT) funds, a primary source of funding for the streetcar.

- For First Hill, this included a reduced span of service (ending at 10:30 PM instead of 1:00 AM) and service levels of every 15 minutes instead of every 10–12 minutes.
- For South Lake Union, this included a reduced span of service (ending at 9:00 PM most days, instead of 11:00 PM) and service levels of every 15 minutes most of the day plus added peak trips, instead of every 10–12 minutes.

Though asset maintenance challenges such as streetcar shelter and vehicle damage continued to be an issue in 2021, they were not as significant as in 2020. While both SLU and FHS experienced incidents of vandalism, the FHS line continued to experience higher levels. The most common form of vandalism was spray paint graffiti and broken glass on streetcar shelters. In 2021, streetcar staff trialed using polycarbonate at shelters, instead of glass, and are continuing to expand use throughout 2022. While polycarbonate is a more expensive material than glass, it is far more resilient to damage and wear and tear. From preliminary calculations, polycarbonate appears to be a lower cost option long-term, with reduced costs from ordering glass and installing graphics less often.

Systemwide, operations and maintenance costs for the Seattle Streetcar decreased in 2021 by 26% because of the continued reduced service levels for both lines and holding a Metro supervisor position vacant.

Actual expenses paid by SDOT in 2021 decreased by 9%. 2021 actuals reflect costs incurred in SDOT's accounting system, not the full costs to operate streetcar, offset by federal relief dollars, ORCA fare revenue, and Metro operating contributions.

Later this year, SDOT will begin billing the \$1.2 million from ARPA for 2021 streetcar operations expenses, which will continue to provide relief from lost fare revenue. ARPA will have a significant impact in offsetting large expenses from 2021, such as the reconciliation payment.

Detailed financial metrics, including historic and projected operations and maintenance costs, can be found in Table 4a/b and Table 5a/b. Note that these tables reflect SDOT's paid actuals, including reflecting when invoices and reconciliation costs were paid by accounts payable, not when they were incurred. 2021 actuals in these tables do not show costs credited to King County Metro invoices such as ORCA fare revenue or King County Metro operating contributions.

5.2 REVENUE

In 2021, the Seattle Streetcar's revenue sources included fare revenue (through ORCA and ticket vending machine sales), sponsorships, contributions from King County Metro and Sound Transit, and grants.

Overall, fare revenue stayed flat in 2021 compared to 2020 with a decrease of less than 1% between years. Streetcar ticket vending machines, which sell streetcar-only fares, saw significant growth in

sales in 2021, compared to 2020. This is likely due to the return of tourism downtown and employees in South Lake Union.

ORCA revenue, the single largest source of fare revenue for the streetcar system, slightly decreased systemwide in 2021, by 7% (approximately \$31,000). This is likely due to continued remote work patterns.

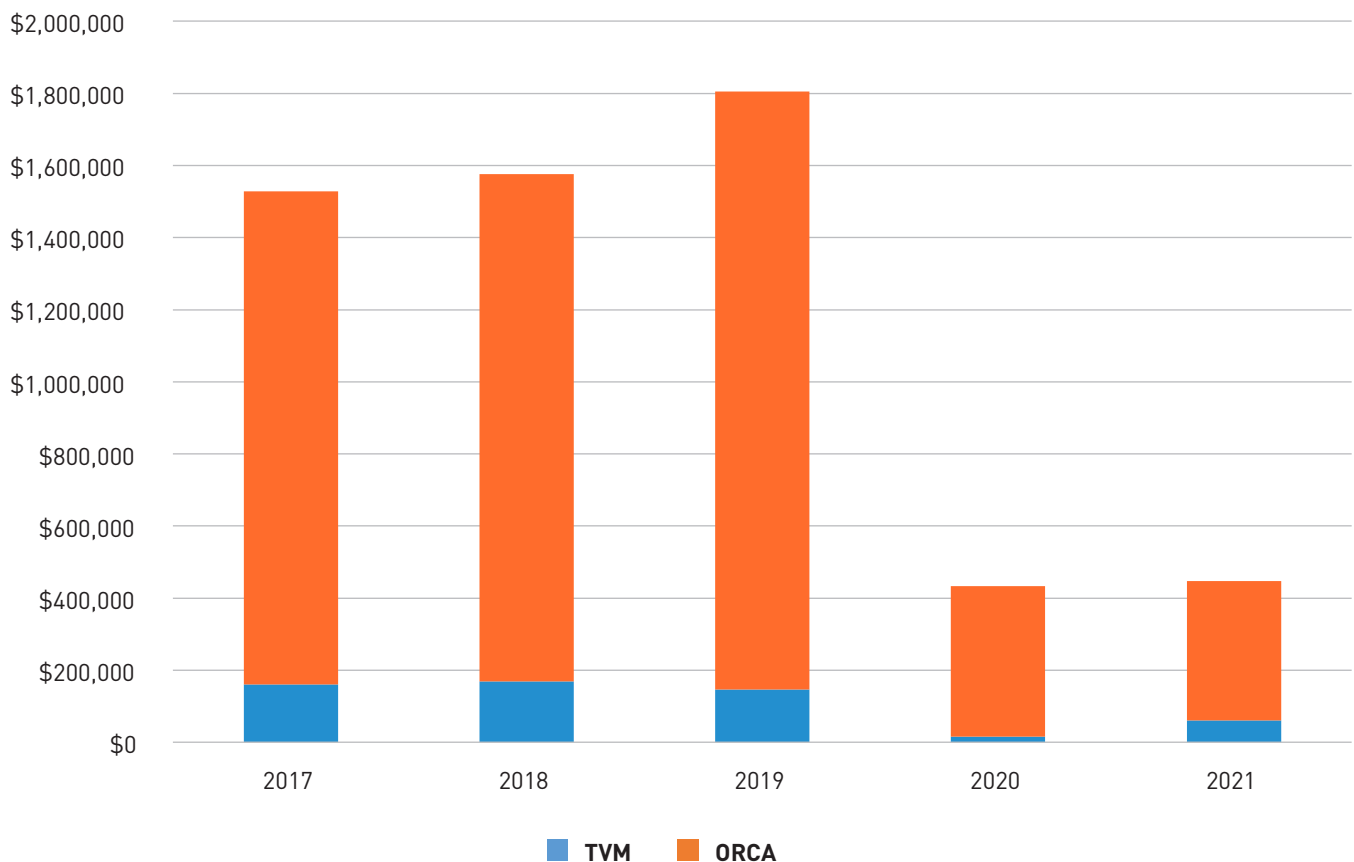
A detailed outline of both ticket vending machine and ORCA fare sales can be found in Figure 7.

Sponsorship on both lines also continued to lag in 2021 because of the COVID-19 pandemic. Sponsorship revenue in 2021 was \$117,000, from two sponsorships. One vehicle was sponsored by Kaiser Permanente on the SLU line, and one vehicle was sponsored by Swedish Providence on the FHS Line.

To optimize sponsorship opportunities and attract relevant expertise, SDOT is releasing an RFP for sponsorship program management in 2022, to create a more predictable revenue source for the streetcar program and streamline program administration.

Metro and Sound Transit contributions to the SLU and FHS lines, respectively, continued to be the largest sources of streetcar revenue in 2021. The Sound Transit contribution to FHS of \$5 million annually concludes in 2023, while the Metro contribution to SLU of \$1.55 million annually, with slight increases each year, will continue under the Interlocal Agreement (ILA) through 2024. In 2024, SDOT anticipates renegotiating the operating ILA; if a new ILA is not approved, Metro's contribution drops to \$872,000 and provides a commitment of a Metro contribution through 2027.

FIGURE 7: FARE REVENUE COLLECTED 2017-2021





In 2021, federal relief grant funding continued to provide significant support for streetcar in offsetting lost fare revenues due to the COVID-19 pandemic. In 2020, the Coronavirus Aid Relief and Economic Security Act (CARES) and Coronavirus Response and Relief Supplemental Appropriations Act (CRRSAA), both provided funding to transit agencies. In 2021 a third act, the American Rescue Plan Act (ARPA) provided additional relief during the pandemic.

- In 2020, the City of Seattle was directly awarded \$688,000 from the CARES Act for streetcar operations and an invoice credit of \$1.2 million¹¹ from King County Metro.
- In 2021, the City was directly awarded CRRSAA funds for streetcar operations of \$785,000, as well as an invoice credit from King County Metro of \$1.3 million.
- In 2021, the City was also directly awarded \$1.2 million from ARPA for streetcar operations, and an invoice credit of \$2 million from King County Metro which will be realized as 2022 monthly invoice offsets.

¹¹King County Metro submits all NTD reporting for Seattle Streetcar and receives subsequent funding packages based off these reporting metrics. Proportional credits for Seattle Streetcar's NTD submissions for CARES, CRRSAA, and ARPA funding were all distributed to SDOT.

Detailed financial metrics, including historic and projected revenues, can be found in Table 4a/b and Table 5a/b. 2021 actuals in these tables do not show costs credited to King County Metro invoices such as ORCA fare revenue or King County Metro operating contributions.

5.3 INVESTMENT IN STREETCAR OPERATIONS

Almost all public transit systems require a subsidy (in addition to fares and other operating revenue sources) to meet operating expenses. Seattle streetcar revenues do not fully cover operating and maintenance costs. As such, the City invests other transportation revenues, such as Commercial Parking Tax, to maintain service levels. Table 3 shows actual and projected funding investments required by each streetcar line based on each line's operations, actual and projected ridership, and the subsequent operating investment needed per passenger, depending on the year. Tables 4a/b and 5a/b provide a more detailed financial summary for each line,

including costs by agency, funding sources, and surplus/deficit. 2021 actuals in these tables do not show costs credited to King County Metro invoices such as ORCA fare revenue or King County Metro operating contributions.

Though ridership continued to increase in 2021 compared to 2020, in the first quarter of 2020 there were 82% more ORCA fares collected than 2021. Total fare revenue per boarding on streetcar declined in 2021, averaging \$0.54, compared to \$0.58 in 2020. This reduction in fare revenue per boarding is a result of the ongoing impacts from the 2020 pause in collection of fare revenue and low rates of fare collection associated with the COVID-19 pandemic.

Fare evasion is the percentage of riders who do not purchase or possess the fare media required to travel. There is no active fare enforcement on the Seattle Streetcar system, and Streetcar Operation Supervisors have paused conducting fare inspection surveys on both streetcar lines since March 2020.

For this annual report, SDOT used a new method to calculate the evasion rate more directly than in past years. Prior to the COVID-19 pandemic, supervisors conducted fare inspections for one hour per day, resulting in calculations based on a sample size that may have underestimated the amount of non-payment by riders. In this report, fare evasion data is calculated using ORCA and ticket vending machine fare transactions compared to National Transit Database (NTD) validated passenger unlinked trip data¹². This comparison shows the percent of fare-paying passengers, compared to all passengers.

Based on this data, the rate of non-payment for FHS has increased significantly in 2021 to 69%, compared to 23% in 2020. The rate of non-payment for SLU also increased to 11% in 2021, compared to 3% in 2020. Also, it should be noted, 2020 data

¹²Unlinked Passenger Trips is the number of times passengers board public transportation vehicles.

was limited to the first three months of 2020 before fare inspections ceased. While data has shown that passengers are tapping their ORCA cards at a lower rate since the COVID-19 pandemic, this increase in non-payment can also be attributed to calculating the evasion rate more directly in this year's report, compared to previous year's reports using only fare inspection survey data. As discussed in Section 3.2, security staff were added in 2022. While not conducting fare enforcement, it is possible increased security presence may result in reduced fare evasion in 2022.

Tables 6 and 7 shows historic and actual ridership and estimated non-payment of rates data, a.k.a. "fare evasion."

Farebox recovery ratios are the percentage of an agency's overall operating costs funded by the fares it collects. Farebox recovery ratios evaluate farebox revenue compared to operating costs, where fare evasion rates compare total riders to fare paying riders.

In 2021, farebox recovery ratios for FHS and SLU were approximately 3% and 8%, respectively. In 2020, despite suspending fares from April until October, and having a ridership decline of almost 70% during those months, the FHS farebox recovery rate was also 3%. The SLU rate increased from 5% in 2020, to 8% in 2021. This is due to 2021 actuals using invoice cost data, which has King County Metro's contributions already deducted from them.

By comparison, in 2020 Sound Transit Link Light Rail fare recovery rate was reported at 8%, and King County Metro bus, trolley bus, and DART services' recovery rate was reported at 7%. 2021 NTD-reported farebox recovery ratios for Sound Transit and King County were not yet available. These figures compare to 20% (ST) and 12% (King County) respectively for 2019 and demonstrate the dramatic loss of farebox revenue for transit agencies in the region. Farebox recovery per line is outlined in Tables 4a/b, 5a/b, 6, and 7.

TABLE 3: PROJECTED STREETCAR BALANCES AND INVESTMENT PER RIDER

	Actual				Projected			
	2019	2020	2021	2022	2023	2024	2025	2026
Streetcar Balances								
SLU Investment Needed	(\$789,082)	(\$399,889)	(\$1,758,715)	(\$754,101)	(\$1,586,693)	(\$1,663,519)	(\$3,004,841)	(\$3,201,706)
FHS Investment Needed	(\$2,765,547)	(\$2,341,906)	(\$2,587,566)	(\$3,596,110)	(\$3,560,151)	(\$8,388,375)	(\$8,664,470)	(\$9,102,652)
Total Additional Investment Needed	(\$3,554,629)	(\$2,741,795)	(\$4,346,281)	(\$4,350,211)	(\$5,146,844)	(\$10,051,894)	(\$11,669,311)	(\$12,304,358)
Ridership¹³								
SLU Ridership	503,374	89,414	107,145	214,648	383,310	385,967	397,546	409,473
FHS Ridership	1,360,035	660,029	698,975	1,066,266	1,423,666	1,466,376	1,510,368	1,555,679
Total Ridership	1,863,409	749,443	806,120	1,280,914	1,806,976	1,852,343	1,907,914	1,965,152
Operating Investment per rider								
SLU	\$1.57	\$4.47	\$16.41	\$3.51	\$4.14	\$4.31	\$7.56	\$7.82
FHS	\$2.03	\$3.55	\$3.70	\$3.37	\$2.50	\$5.72	\$5.74	\$5.85
Combined Operating Investment per rider	\$1.91	\$3.66	\$5.39	\$3.40	\$2.85	\$5.43	\$6.12	\$6.26

¹³Investment/Rider projections for 2023 are based on observed growth in 2021 and 2022, 2024-2026 assume 3% annual ridership growth.

TABLE 4A: SOUTH LAKE UNION STREETCAR HISTORIC AND CURRENT OPERATING COSTS

	Historical				Adopted 2021	Actual 2021	Adopted 2022	Revised 2022
	2017	2018	2019	2020				
Costs	\$3,369,119	\$3,612,215	\$3,788,077	\$3,070,223	\$4,224,358	\$2,068,873	\$4,324,358	\$4,585,455
O&M	\$3,369,119	\$3,612,215	\$3,788,077	\$3,528,348	\$4,224,358	\$2,068,873	\$4,324,358	\$4,585,455
Metro/KCM	\$3,022,833	\$3,154,660	\$3,410,686	\$3,034,379	\$3,771,134	\$1,580,443	\$3,787,604	\$3,787,604
City	\$346,286	\$457,555	\$377,391	\$493,969	\$453,224	\$488,430	\$536,754	\$1,017,764
Reconciliation				(\$458,125)				(\$219,913)
Revenues	\$3,051,237	\$2,831,136	\$2,998,995	\$2,670,334	\$2,767,600	\$310,158	\$2,710,832	\$3,831,354
Metro/KCM ¹⁴	\$1,450,000	\$1,500,000	\$1,550,000	\$1,550,000	\$1,550,000		\$1,644,395	\$1,644,395
Fares	\$759,148	\$730,067	\$775,379	\$168,758	\$543,600	\$46,651	\$343,437	\$343,437
ORCA ¹⁵	\$658,355	\$625,702	\$688,146	\$152,442	\$483,600		\$309,093	\$309,093
Pay Stations & Passes	\$100,793	\$104,365	\$87,233	\$16,316	\$60,000	\$46,651	\$34,344	\$34,344
FTA Funding	\$194,057	\$52,249	\$97,573	\$504,237	\$300,000		\$300,000	\$1,429,522
Grants – 5307/5309	\$194,057	\$52,249	\$97,573		\$300,000		\$300,000	\$412,662 ¹⁶
CARES/CRRSAA/ ARPA Grants								\$386,817 ¹⁷
CARES/CRRSAA/ ARPA Credits ¹⁸				\$504,237				\$630,043
Other	\$648,032	\$548,820	\$576,043	\$447,339	\$266,000	\$263,507	\$423,000	\$414,000
Sponsorship	\$337,692	\$192,500	\$211,723	\$85,219	\$120,000	\$86,207	\$160,000	\$160,000
318 Fairview Lease	\$89,340	\$127,320	\$127,320	\$89,340		(\$89,340)		
Amazon Contribution	\$221,000	\$229,000	\$237,000	\$245,000	\$254,000	\$266,640	\$263,000	\$254,000
Tech Adjustment				\$27,780				
Surplus/(Deficit)	(\$317,882)	(\$781,078)	(\$789,082)	(\$399,889)	(\$1,456,758)	(\$1,758,715)	(\$1,613,526)	(\$754,101)

Farebox Recovery	23%	20%	20%	5%	13%	10% ¹⁹	8%	7%
²⁰ Subsidy/rider	\$0.59	\$1.52	\$1.57	\$4.47	\$13.20	\$16.41	\$7.52	\$3.51

¹⁴These revenues are credited towards Metro Operating Invoices and are not received directly by SDOT.

¹⁵See note 15. ORCA revenue of \$123,869 is realized as credits in 2021 Metro operating invoices.

¹⁶This grant is the provisional 2022 5307 formula funding ARPA funding.

¹⁷This grant is the provisional 2022 ARPA funding.

¹⁸See note 3. Metro Operating expenses in 2021 for SLU before Metro's contribution, fare revenue, and CRRSAA credits were \$3.3 million.

¹⁹ORCA farebox revenue is credited towards Metro Operating Invoices and is not directly received by SDOT. Farebox recovery is calculated based on credited fare revenue from ORCA and ticket vending machine sales.

²⁰Subsidy/Rider projections for 2023 are based on observed growth in 2021 and 2022, 2024-2026 assume 3% annual ridership growth. CRRSAA grant billing 2021 expenditures is shown as hitting 2022 revised expenditures.

TABLE 4B: SOUTH LAKE UNION STREETCAR PROJECTED OPERATING COSTS

	Projected				
	2023	2024	2025	2026	2027
Costs	\$4,474,986	\$4,629,820	\$4,848,515	\$5,077,761	\$5,318,073
Operating & Maintenance	\$4,474,986	\$4,629,820	\$4,848,515	\$5,077,761	\$5,318,073
Metro/KCM	\$3,990,012	\$3,990,013	\$4,189,514	\$4,398,989	\$4,618,939
City	\$484,974	\$639,807	\$659,001	\$678,771	\$699,134
Revenues	\$2,888,293	\$2,966,301	\$1,843,674	\$1,876,055	\$1,909,192
Metro/KCM ²¹ Contribution	\$1,693,727	\$1,744,539	\$872,269	\$872,269	\$872,269
Fares	\$613,296	\$617,547	\$636,073	\$655,157	\$674,812
ORCA ²²	\$551,966	\$555,792	\$572,466	\$589,641	\$607,330
Pay Stations & Passes	\$61,330	\$61,755	\$63,607	\$65,516	\$67,481
FTA Funding	\$141,270	\$146,215	\$151,332	\$156,629	\$162,111
Grants – 5307/5309	\$141,270	\$146,215	\$151,332	\$156,629	\$162,111
Other	\$440,000	\$458,000	\$184,000	\$192,000	\$200,000
Sponsorship	\$168,000	\$176,000	\$184,000	\$192,000	\$200,000
Amazon Contribution	\$272,000	\$282,000	-	-	-
Surplus/(Deficit)	(\$1,586,693)	(\$1,663,519)	(\$3,004,841)	(\$3,201,706)	(\$3,408,881)

Farebox Recovery	14%	13%	13%	13%	13%
²³ Subsidy/rider	\$4.14	\$4.31	\$7.56	\$7.82	\$8.08

²¹These revenues are credited towards Metro Operating Invoices and are not received directly by SDOT.

²²See note 21.

²³Subsidy/Rider projections for 2023 are based on observed growth in 2021 and 2022, 2024-2026 assume 3% annual ridership growth. CRRSAA grant billing 2021 expenditures is shown as hitting 2022 revised expenditures.

TABLE 5A: FIRST HILL STREETCAR HISTORIC AND CURRENT OPERATING COSTS

	Historical						Actual	Adopted	Revised
	2017	2018	2019	2020	2021	2022			
	Costs	\$7,714,003	\$8,096,831	\$8,795,010	\$8,256,948	\$9,466,145			
O&M	\$7,714,003	\$8,096,831	\$8,795,010	\$8,256,948	\$9,466,145	\$8,521,318	\$9,666,145	\$9,675,529	
Metro/KCM	\$6,567,926	\$7,337,722	\$7,794,924	\$6,879,229	\$8,022,381	\$6,923,543	\$8,001,713	²⁴ \$8,001,713	
City	\$1,146,077	\$759,109	\$1,000,086	\$1,119,874	\$1,443,764	\$325,996	\$1,664,432	\$1,713,552	
Reconciliation				\$257,845		\$1,009,139		(\$39,736)	
Revenues	\$5,919,349	\$6,256,893	\$6,029,463	\$5,915,042	\$6,339,600	\$5,671,112	\$6,565,037	\$6,079,419	
Sound Transit	\$5,000,000	\$5,000,000	\$5,000,000	\$5,000,000	\$5,000,000	\$5,000,000	\$5,000,000	\$5,000,000	
Fares	\$769,349	\$846,077	\$1,029,463	\$264,633	\$627,600		\$849,037	\$533,133	
ORCA ²⁵	\$709,780	\$780,878	\$970,065	\$264,633	\$588,000		\$798,095	\$501,145	
Pay Stations & Passes	\$59,569	\$65,199	\$59,398		\$39,600		\$50,942	\$31,988	
FTA Funding		\$258,185		\$650,409	\$700,000	\$688,201	\$700,000	\$530,286	
Grants – 5307/5309		\$258,185			\$700,000		\$700,000		
CARES/CRRSAA/ARPA Grants				\$650,409		\$688,201		\$530,286	
CARES/CRRSAA/ARPA Credits ²⁶									
Other	\$150,000	\$152,631			\$12,000	(\$17,089)	\$16,000	\$16,000	
Sponsorship	\$150,000	\$152,631			\$12,000	(\$17,089)	\$16,000	\$16,000	
Surplus/(Deficit)	(\$1,794,654)	(\$1,839,938)	(\$2,765,547)	(\$2,341,906)	(\$3,126,545)	(\$2,587,566)	(\$3,101,108)	(\$3,596,110)	
Farebox recovery	10%	10%	12%	3%	7%	3% ²⁷	9%	6%	
²⁸ Subsidy/Rider	\$2.03	\$1.59	\$2.03	\$3.55	\$4.47	\$3.70	\$2.91	\$3.37	

²⁴2022 Metro Operating Invoices include applied ARPA credits of \$1,331,031.

²⁵ORCA revenue (\$262,640) is credited towards Metro Operating Invoices and is not received directly by SDOT.

²⁶See note 25.

²⁷ORCA farebox revenue is credited towards Metro Operating Invoices and is not directly received by SDOT. Farebox recovery is calculated based on credited fare revenue from ORCA and ticket vending machine sales.

²⁸Subsidy/Rider projections for 2023 are based on observed growth in 2021 and 2022, 2024-2026 assume 3% annual ridership growth. CRRSAA grant billing 2021 expenditures is shown as hitting 2022 revised expenditures.

TABLE 5B: FIRST HILL STREETCAR PROJECTED OPERATING COSTS

	Projected				
	2023	2024	2025	2026	2027
Costs	\$9,748,428	\$9,759,837	\$10,229,069	\$10,721,201	\$11,237,360
Operating & Maintenance	\$9,748,428	\$9,759,837	\$10,229,069	\$10,721,201	\$11,237,360
Metro/KCM	\$8,401,799	\$8,821,889	\$9,262,983	\$9,726,132	\$10,212,439
City	\$1,346,629	\$937,948	\$966,086	\$995,069	\$1,024,921
Reconciliation					
Revenues	\$6,188,277	\$1,371,462	\$1,564,599	\$1,618,549	\$1,667,994
Sound Transit Contribution	\$5,000,000				
Fares	\$854,200	\$1,026,463	\$1,208,295	\$1,244,544	\$1,281,879
ORCA ²⁹	\$802,948	\$964,875	\$1,135,797	\$1,169,871	\$1,204,966
Pay Stations & Passes	\$51,252	\$61,588	\$72,498	\$74,673	\$76,913
FTA Funding	\$312,077	\$322,999	\$334,304	\$346,005	\$358,115
Grants – 5307/5309	\$312,077	\$322,999	\$334,304	\$346,005	\$358,115
Other	\$22,000	\$22,000	\$22,000	\$28,000	\$28,000
Sponsorship	\$22,000	\$22,000	\$22,000	\$28,000	\$28,000
Surplus/(Deficit)	(\$3,560,151)	(\$8,388,375)	(\$8,664,470)	(\$9,102,652)	(\$9,569,366)
Farebox recovery	9%	11%	12%	12%	11%
³⁰ Subsidy/Rider	\$2.50	\$5.72	\$5.74	\$5.85	\$5.97

²⁹These revenues are credited towards Metro Operating Invoices and are not received directly by SDOT.

³⁰Subsidy/Rider projections for 2023 are based on observed growth in 2021 and 2022, 2024-2026 assume 3% annual ridership growth.

TABLE 6: FIRST HILL STREETCAR PERFORMANCE HISTORIC AND ESTIMATED

	Historical						Estimated					
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2026	2026
³¹ Ridership	882,219	1,159,904	1,360,035	660,029	698,975	1,066,266	1,423,666	1,466,376	1,510,368	1,555,679	1,602,349	
Farebox Recovery Ratio	10%	10%	12%	3%	3%	6%	9%	11%	12%	12%	11%	
³² Productivity												
(Riders/Revenue Hour)	34	41	49	31	29	38	51	53	54	56	58	
³³ "Fare Evasion"	14%	20%	20%	23%	69%	68%	68%	68%	68%	68%	68%	
Reliability (On-Time Performance)	85%	88%	87%	63%	83%	83%	83%	83%	83%	83%	83%	

³¹Estimated Rider projections for 2023 are based on observed growth in 2021 and 2022, 2024-2026 assume 3% annual ridership growth.

³²2022-2026 revenue hours based on 2019 revenue hours.

³³Previous fare evasion rates were calculated through KCM fare inspection surveys and potentially underestimated non-payment. Fare evasion rates in 2021 were calculated by comparing the amount of "fare paying passengers" to NTD validated passenger numbers. Future projections assumed flat non-payment rates.

TABLE 7: SOUTH LAKE UNION PERFORMANCE HISTORIC AND ESTIMATED

	Historical						Estimated					
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2026	2026
³⁴ Ridership	535,288	513,523	503,374	89,414	107,145	214,648	383,310	385,967	397,546	409,473		
Farebox Recovery Ratio	23%	20%	20%	5%	8%	7%	14%	13%	13%	13%	13%	
³⁵ Productivity (Riders/Revenue Hour)	38	36	43	11	9	18	32	32	33	34		
³⁶ "Fare Evasion"	5%	9%	7%	3%	11%	11%	11%	11%	11%	11%	11%	
Reliability (On-Time Performance)	46%	39%	32%	46%	48%	48%	48%	48%	48%	48%	48%	

³⁴Estimated Rider projections for 2023 are based on observed growth in 2021 and 2022, 2024-2026 assume 3% annual ridership growth.

³⁵2022-2026 revenue hours based on 2019 revenue hours.

³⁶Previous fare evasion rates were calculated through KCM fare inspection surveys and potentially underestimated non-payment. Fare evasion rates in 2021 were calculated by comparing the amount of "fare paying passengers" to NTD validated passenger numbers. Future projections assumed flat non-payment rates.

6. CONCLUSION

6.1 2021 IN REVIEW

In 2021, the Seattle Streetcar system encountered both continued challenges caused by the COVID-19 pandemic and signs of recovery. SDOT spent 2021 working with Metro to keep employees and passengers safe, while recovering streetcar service levels through challenging staffing shortages. The streetcar experienced some ridership growth and stable fare revenue in 2021, compared to 2020, as more employees returned to some level of in-person work in 2021 and comfort traveling on transit increased.

Actual expenses paid by SDOT in 2021 decreased by 9%, with the 2021 report methodology reflecting actuals costs incurred in SDOT's accounting system, not the full costs to operate streetcar, offset by federal relief dollars, ORCA fare revenue, and Metro operating contributions. The three major funding packages for COVID-19 relief in 2020 and 2021 helped offset the loss of fare revenue due to decreased ridership during the pandemic. In 2022, SDOT will begin billing the \$1.2 million from ARPA that was allocated directly to SDOT for 2021 streetcar operations expenses and will receive \$2 million in Metro operating invoice credits negotiated based on funding Metro received on behalf of operating streetcar.

SDOT continued to make progress in complying with new federal safety regulations, which required the City to focus significant resources on new activities to meet the requirements of the law. In 2021, safety featured more prominently with a dedicated Streetcar Safety Officer and the new Streetcar Program Manager, putting the program in a better position to meet safety oversight obligations. The new Streetcar Program Manager's role will allow streetcar to plan for its future better with a focus on streetcar policy, finances, program oversight, and managing the operations interlocal agreement with King County Metro.

6.2 LOOKING AHEAD

SDOT anticipates streetcar operations, ridership, and revenue to continue to track with KCM Metro performance as the effects of the COVID-19 pandemic continue in 2022. As shown in 2021 data, the Seattle Streetcar continues to be a key inter-neighborhood connector and has observed steadily increasing ridership from lows in 2020, as riders are beginning to travel more and feel more comfortable riding transit. However, overall behavior changes following the pandemic complicate ridership projections for the upcoming year. The latest [Commute Seattle mode share survey](#) shows that from 2019 to 2021 remote work has increased by 612% and transit ridership for work has decreased by 25%. For the SLU Streetcar, employer actions such as Amazon's delayed return to office in South Lake Union, will continue to impact ridership.

Program wide, SDOT will be actively addressing a range of streetcar issues in 2022, including:

- Leading the policy and implementation process for zero youth fares for streetcar consistent with Move Ahead Washington, the statewide transportation package that offers local transit authorities grant funding if they offer free youth fares for individuals aged 18 and under.
- Planning for upcoming major expenses, such as upcoming major vehicle maintenance.
- Releasing an RFP for sponsorship program management to provide more predictable revenue for streetcar operations and streamline the sponsorship sale process.
- Continuing to implement federal safety regulation changes as a result of the Bipartisan Infrastructure Law (BIL).
- Working with Sound Transit on mitigation efforts for the West Seattle-Ballard Link Extension, the construction of which poses significant impacts to the operations of both SLU and FHS lines.



FRED HUTCH

KAISER PERMANENTE thrive

KAISER PERMANENTE th

HEALTH CARE THAT GOES WITH YOU

EVEN ON THE STREET

©Kaiser Per

The Seattle Department of Transportation
700 5th Avenue, Suite 3800
PO Box 34996
Seattle, WA 98124-4996
(206) 684-ROAD (7623)
www.seattle.gov/transportation



Seattle
Department of
Transportation

10.2021