

To: Operations & Scheduling Committee

Date: 01/31/2024

From: Melody Reeb, Director of Planning, Marketing, & Innovation

Reviewed by: *RF*

SUBJECT: On-Time Performance Update

Background:

Over the past couple years, the Service Planning and Scheduling department has focused its efforts on improving service reliability, particularly as frequencies were reduced due to the pandemic and the ongoing operator shortage has limited the ability to restore service. In addition, traffic patterns have continued to evolve, and congestion has increased significantly as the economy recovers from the pandemic. In order to respond quickly to these changing conditions, planning staff have been closely tracking on-time performance and run times in order to make timely schedule adjustments.

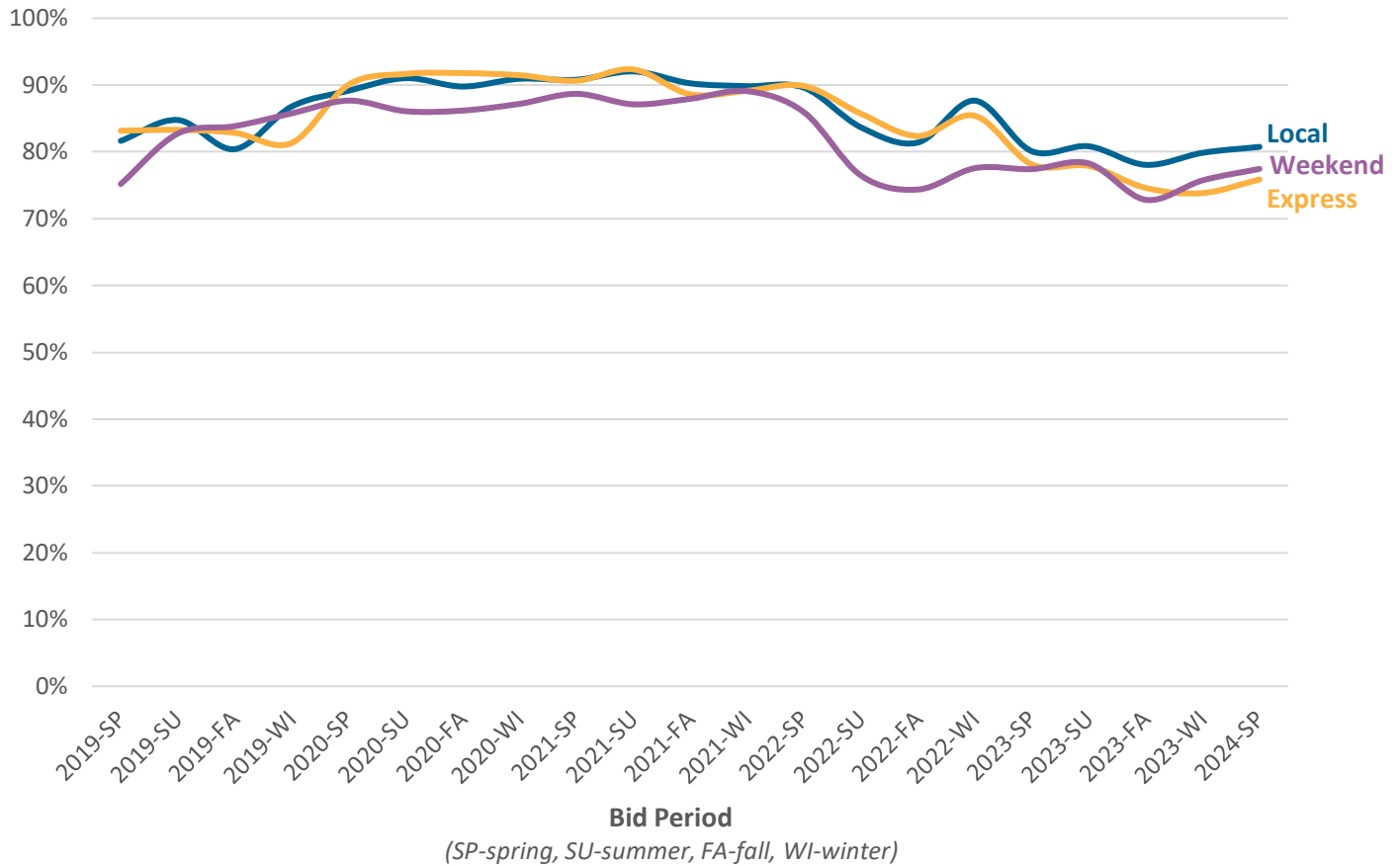
Historically, on-time performance and run time data has been collected and reported using the Clever Devices Computer-Aided Dispatch/Automatic Vehicle Location (CAD/AVL) system installed on the buses. However, obtaining useful and timely data from this system has been an ongoing challenge. In late 2022, staff began using Swiftly, a cloud-based transit data platform that provides more accurate and granular real-time data for on-time performance and runtimes. This has allowed staff to analyze and develop schedule changes more quickly in response to performance issues and/or operator concerns.

On-Time Performance Trends:

Following the COVID-19 shelter-in-place order in March 2020, traffic levels dropped dramatically, and congestion became nearly non-existent. The lack of congestion as well as lower ridership levels resulted in buses being able to move faster and make fewer stops. In order to prevent early departures and/or drivers having to hold at stops, staff made schedule adjustments for the Fall 2020 bid to reflect the existing operating conditions.

On-time performance remained relatively high at around 90% through the first half of 2022. However, as businesses reopened and schools returned in-person, traffic levels started to rise and have continued to increase. In addition, traffic and congestion patterns have not returned in the same way as pre-pandemic—demand is more spread out over the day and less concentrated around the traditional AM and PM commute hours. These changes have had a significant impact on-time performance, particularly on weekend routes, which have historically not faced the same traffic-related challenges as weekday routes. The following chart shows on-time performance trends by route type and bid period.

On-Time Performance by Route Type



Schedule Adjustments:

Since early 2022, staff have continuously made schedule adjustments to address on-time performance issues. Typically, schedule changes must be finalized at least three months prior to implementation in order to provide time to update passenger information (e.g., schedule brochures, information panels, website, etc.), notify riders, and conduct the operator bidding process. Because of this, it usually takes at least two bid periods once staff becomes aware of a scheduling issue to try and address it. More recently, staff have been able to use Swiftly to more closely monitor performance in real-time, enabling them to quickly identify issues and conduct the analysis needed to evaluate potential solutions.

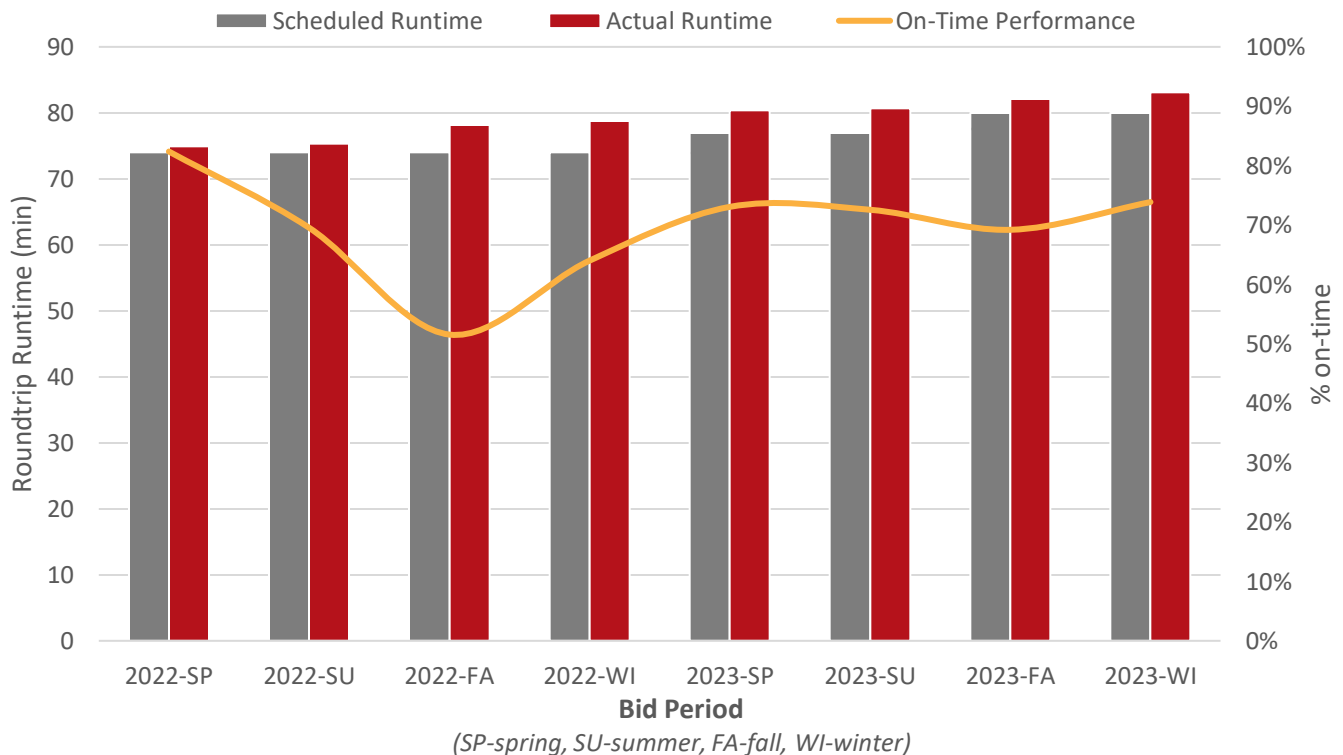
On-time performance can be impacted by a variety of factors. Runtime is the travel time between stops, and how closely the scheduled runtimes match actual conditions is the primary driver of on-time performance. However, there are additional considerations. Almost all of County Connection's routes have clock-face schedules, meaning that trips operate at regularly spaced intervals, which are meant to align with BART train times. However, there can be a large degree of variability in congestion and travel speeds throughout the day, and in order to strike a balance between on-time performance and efficiency, schedules are usually based on an average, which means that some trips will be late during times of peak congestion, while others will have additional recovery time. In addition, runtimes may intentionally be shortened at stops that are not suitable locations for buses to wait if they are running early. Finally, several of County Connection's routes are interlined, which is when two or more routes are connected together to improve scheduling efficiency, so the on-time performance on one route may have a cascading effect on subsequent trips on another route.

The following table summarizes schedule adjustments that have been made over the last couple years to address on-time performance issues. Staff have been able to improve performance on some routes. Most notably on Routes 35 and 335, staff worked with the City of San Ramon to relocate a stop from Sunset Dr to Camino Ramon, which has saved an average of 3 minutes per trip and increased on-time performance by about 4 percentage points.

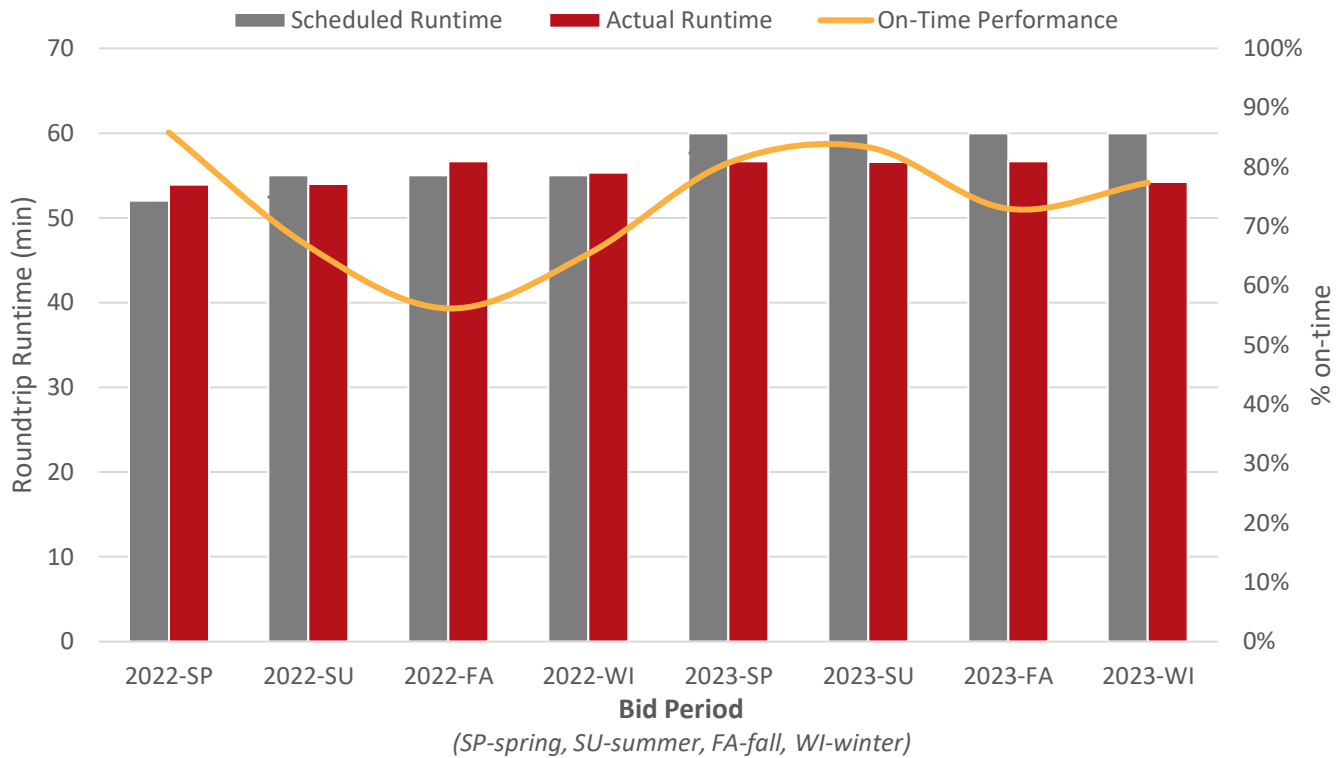
Bid	Route	Change
Summer 2022	335	Increased runtime
Winter 2022	321 & 335	Shifted recovery time
Spring 2023	10 & 20	Increased runtime and recovery time
	320	Increased runtime
	321 & 335	Increased runtime
Fall 2023	35	Increased runtime
	321	Increased runtime
Winter 2023	15	Increased recovery time
	35 & 335	Relocated stop at City Center
Spring 2024	321	Shifted recovery time

However, despite adding runtime, some routes continue to fall behind schedule. In particular, runtime has been added multiple times on Route 321 but is being outpaced by increasing traffic congestion. In addition, even though Route 335 now has plenty of runtime, because it's interlined with Route 321, its on-time performance is also impacted.

Route 321 On-Time Performance



Route 335 On-Time Performance



Staff continues to closely monitor on-time performance and identify areas for improvement. In addition to further analysis of Route 321, staff are also evaluating potential adjustments on Routes 5 and 91X, which have had more recent declines in schedule adherence. However, these types of schedule adjustments are short-term solutions, and as traffic congestion continues to rise, extending runtimes will ultimately degrade service levels. Instead, transit priority and other capital improvements that speed up buses and increase efficiency will be necessary to avoid future service cuts.

Financial Implications:

None, for information only.

Recommendation:

None, for information only.

Action Requested:

None, for information only.

Attachments:

None