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2019 Service Implementation Plan

October 2018

SOUNDTRANSIT

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Wayfinding through the document

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INTRODUCTION

What is the Service Implementation Plan?

BACKGROUND

Each year, Sound Transit prepares a Service Implementation Plan that guides delivery of ST Express bus, Sounder commuter rail, and Link light rail services. In coordination with the annual agency budget process, the Service Implementation Plan provides both a forward look at future service plans and a review of existing ridership and performance trends.

What's new in the 2019 Service Implementation Plan document?

This year's edition of the Service Implementation Plan refreshes the document with an easier to read two-column layout and consolidates ancillary tables and charts which were previously throughout the document into a single section in the appendix. Additionally, service changes are presented for March 2019 only. More information about potential service changes for September 2019 will be presented in early 2019.

Contents

MANAGING THE TRANSIT NETWORK

Service Standards

Since 1998, Sound Transit has used its Board-adopted *Service Standards and Performance Measures* to plan, monitor and manage Sound Transit services. This document:

- Describes how Sound Transit service should be designed to reflect the characteristics of a high-speed, limited-stop regional system.
- Sets guidelines used to design, evaluate and manage transit service with the objective of maximizing efficiency, effectiveness, and service quality in the system.
- Guides a multi-step process to identify the level and type of service that should be provided, as well as a process to implement any changes needed to meet established priorities.

For more information:

soundtransit.org/sip

servicechanges@soundtransit.org

1-866-940-4387

Service Changes

- **Development –** Sound Transit manages the transit network through service changes. Service changes may be developed out of four key processes:
  - Performance Monitoring – Identify services that do not meet service standards and evaluate options for improving performance as well as identify opportunities to meet demand for services that are performing well.
  - Voter approved plans – Completion of major high-capacity transit capital projects may result in modifying existing service to maximize network connectivity.
  - Budget – In coordination with voter approved plans, defines the limits to how much service Sound Transit is able to provide.
  - Regional coordination with partner agencies – Work with partner agencies to restructure service or to better facilitate transfers between local and regional service.
- **Title VI Evaluation** – Determine if potential adverse effects of service changes create an unfair burden on typically underrepresented communities.
- **Board Approval** – Major service changes are approved by the board as part of this document and the budget.
- **Implementation** – Service changes are made in March and September of each year.

Public Process and Board Approval

Each year the Service Implementation Plan is released publicly before a presentation to the Operations and Administration Committee of the Board of Directors. In years with proposed major service changes, the public is given the opportunity to comment on any major service changes at open-house style meetings held in areas most directly affected by the proposed service changes. Prior to presentation to the Board of Directors, a public hearing is held allowing opportunities for comment on any major service changes. Customers and members of the public are encouraged to comment on the draft plan through email, letter, telephone, or in-person at a public meeting.

Sound Transit *current service*

ST Express

ST Express bus offers fast, frequent, two-way service on 28 routes connecting Snohomish, King, and Pierce Counties. Sound Transit provides this bus service via service agreements with our transit partners: King County Metro, Pierce Transit, and Community Transit. ST Express provides service to over 50 transit centers and park-and-ride lots.

Tacoma Link

Tacoma Link light rail is a 1.6-mile light rail passenger line that runs through the heart of downtown Tacoma. There are six unique stations complete with artwork that reflects the history and community of Tacoma. Trains run every 12 minutes during the day on weekdays and Saturdays, and every 24 minutes weekday evenings and Sundays.

Sounder

Sounder commuter rail spans three counties, serving commuters on the north line from Everett to Seattle and on the south line from Lakewood to Seattle. Sound Transit owns the railway between Lakewood and Tacoma, and Burlington Northern Santa Fe Railway, owner of the railroad between Tacoma and Everett, operates Sounder service under a contract with Sound Transit. Amtrak provides maintenance for the Sounder fleet of locomotives and passenger cars.

Link

Link light rail operates on over 20 miles of alignment between the University of Washington Station in the City of Seattle and Angle Lake Station in the City of SeaTac, serving 16 passenger stations, including four stations in the Downtown Seattle Transit Tunnel (DSTT). King County Metro operates and maintains the system through an intergovernmental agreement with oversight by agency staff. Paratransit service is also operated by King County Metro within the Link service area.

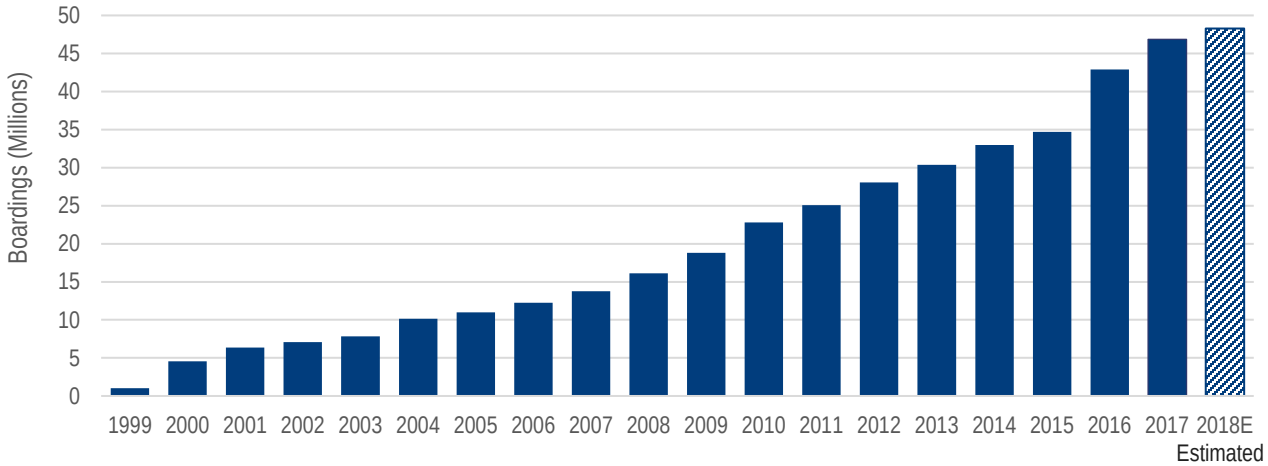


Figure 1: Actual and Estimated System-wide Ridership, 1999-2018

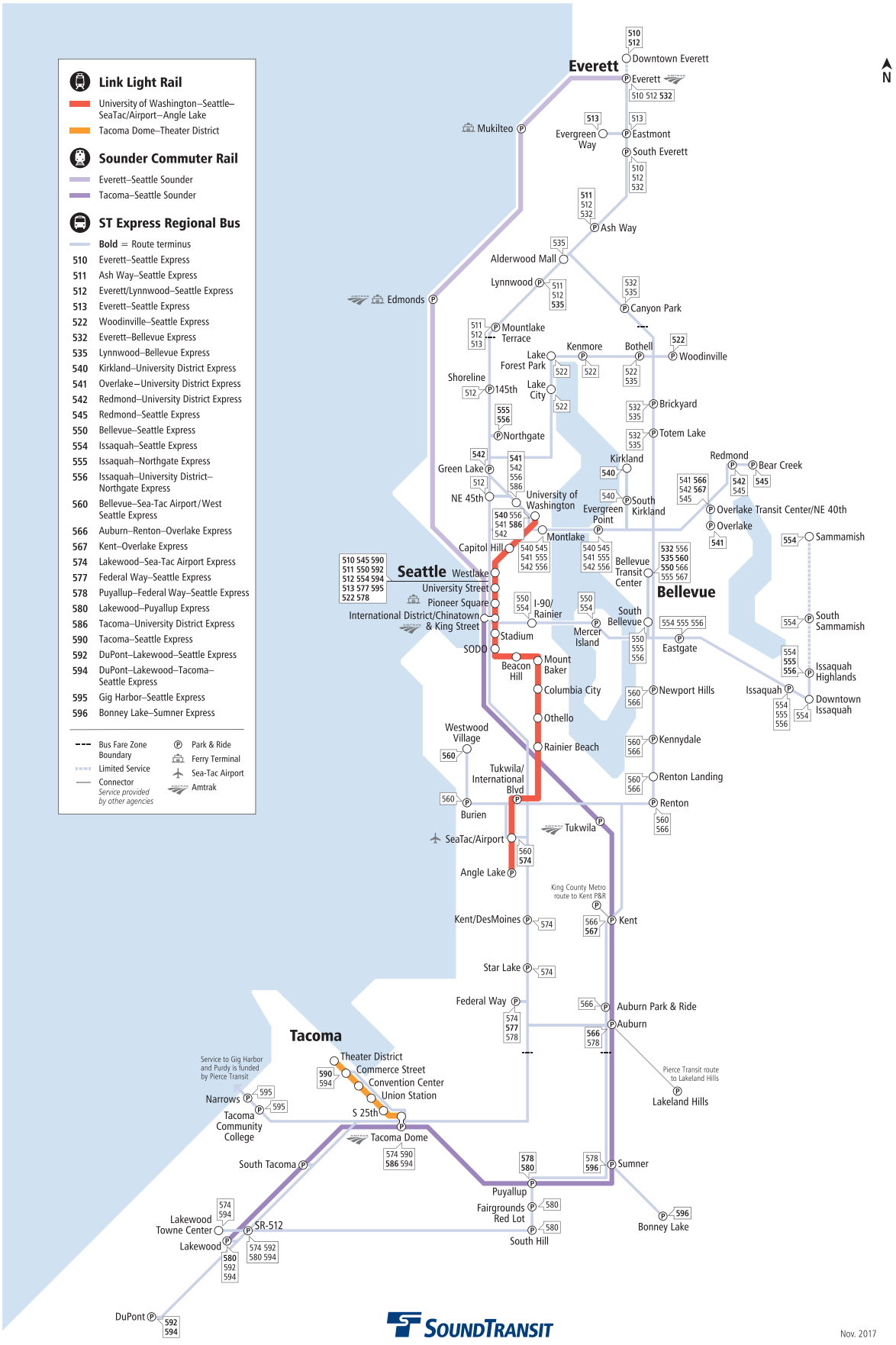
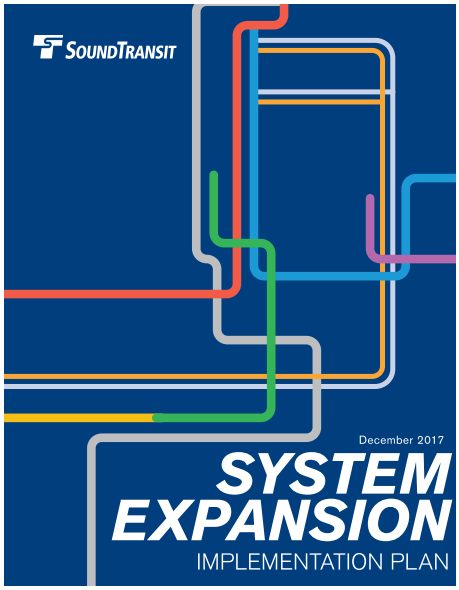


Figure 2: Existing Sound Transit System Map

Sound Transit future service

SYSTEM EXPANSION

In 1996, voters in Central Puget Sound approved the Sound Move plan with a mandate to build a mass transit system connecting major urban centers in Snohomish, King, and Pierce counties. Covering more than 1,000 square miles, the Sound Transit District serves a population of over 3 million people. The Sound Transit District is composed of 40 cities, including most of the urban areas of King, Pierce, and Snohomish counties. Voters approved a second phase of mass transit, Sound Transit 2 (ST2), in 2008 and a third phase of mass transit expansion, Sound Transit 3 (ST3), in 2016. Under the plans, the regional light rail system will reach over 50 miles by 2024 expanding to Lynnwood, Bellevue, Overlake, and Federal Way and over 110 miles by 2041 with expansions to Everett, Issaquah, Kirkland, West Seattle, Ballard, and Tacoma. The Sounder commuter rail line will expand to DuPont, and have frequent peak service between Seattle and Lakewood, and ST Express will continue to serve major regional travel corridors. New BRT lines will also serve SR 522 and I-405. Figure 3 shows the existing Sound Transit system ridership and projected system ridership after the completion of approved ST2 and ST3 projects.



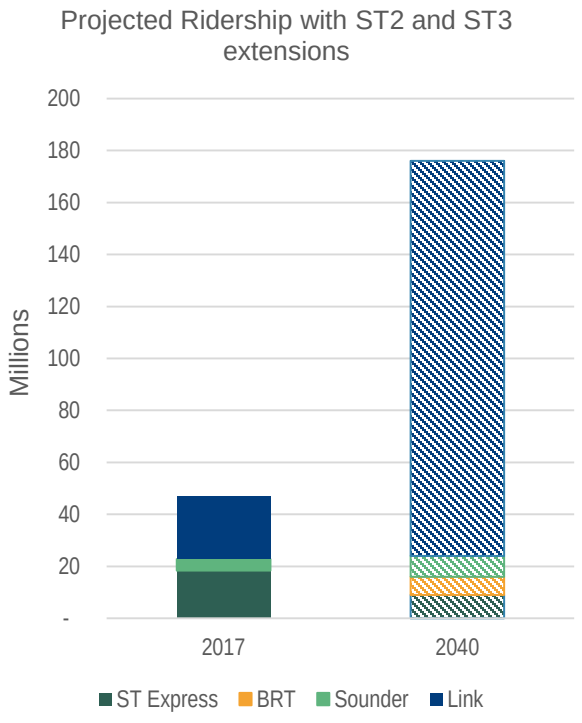


Figure 3: Projected Ridership with ST2 and ST3 extensions

Figure 4: Approved Sound Transit Projects System Map

2019 PROPOSED SERVICE PLAN

What will change in 2019?

2019 Overview

The coming year will bring significant changes to ST Express bus service. Construction projects will result in significant closures of transit facilities for region-wide improvements. Many changes proposed in 2019 are aimed to increase flexibility to mitigate the impacts from facility changes and ongoing congestion.

KEY CHANGES FOR 2019

Rail-only Downtown Seattle Transit Tunnel (DSTT)

The DSTT Tunnel will close to buses in March 2019 as a result of the Washington State Convention Center expansion and to prepare for East Link service. Buses currently in the DSTT will shift to surface streets, resulting in increased bus volumes on surface streets and longer bus travel times through downtown. Link will remain in the DSTT.

Montlake Freeway Station Closure

WSDOT's "Rest of the West" construction project on SR 520 will close the Montlake Freeway Station from March 2019 through 2023, impacting ST Express Routes 545 and 555. Extra Route 542 service will help mitigate the closure.

Seaway Transit Center Opening

Seaway Transit Center, located at Seaway Blvd and 75th Street SW in Everett, will open in early 2019 to serve the Boeing Everett manufacturing plant and Paine Field. Sound Transit is proposing to extend Route 513 to begin at the Seaway Transit Center. The extension will increase access to peak-direction connections with regional transit partners, including Community Transit (including the Swift BRT Green Line), Everett Transit, King County Metro and local private employer shuttles.

Congestion, Reliability and Capacity

Increased congestion has led to longer running times on nearly all ST Express routes over the last five years. Proposed changes add resources where possible and shift resources where necessary to mitigate the most severe construction impacts, meaning some routes may see decreased service.

SERVICE HOURS AND VEHICLES NEEDED

ST Express

This section describes several major service changes proposed for March 2019. September 2019 changes will be presented in early 2019. Increases in hours reflect investments in service and reliability due to construction impacts and congestion. Due to existing fleet constraints, added hours are not on pace with investments in years past.

YEAR		PLATFORM HOURS	PLATFORM MILES	PEAK VEHICLE COUNT
2017	Actual	780,901	16,298,931	256
2018	Estimated	790,772	16,428,796	258
2019	Estimated	819,722	16,883,534	270*

Table 1: ST Express Service Statistics 2017-2019

By Partner

Routes operated by King County Metro will see major changes, where hours are proposed for investment during the midday, evenings and weekends as part of mitigation measures for the SR 520 Montlake Freeway Station closure. Community Transit and Pierce Transit will experience slight decreases in platform hours, which reflect differences on which day of the week holidays fall.

	YEAR		PLATFORM HOURS	PLATFORM MILES	PEAK VEHICLE COUNT
Community Transit	2017	Actual	150,016	3,437,098	50
	2018	Estimate	146,352	3,460,460	50
	2019	Estimate	153,174	3,481,194	54*
	YEAR		**PLATFORM HOURS**	**PLATFORM MILES**	**PEAK VEHICLE COUNT**
King County Metro	2017	Actual	294,058	4,829,780	101
	2018	Estimate	300,350	4,803,099	102
	2019	Estimate	310,765	5,190,377	102
	YEAR		**PLATFORM HOURS**	**PLATFORM MILES**	**PEAK VEHICLE COUNT**
Pierce Transit	2017	Actual	336,827	8,032,053	105
	2018	Estimate	344,070	8,165,238	106
	2019	Estimate	351,283	8,118,228	118*

Table 2: ST Express Service Statistics 2017-2019 by Partner

Link

There are no major changes proposed in 2019. As a result, train platform hours and miles are not expected to change significantly. Differences between 2018 and 2019 reflect differences on which day of the week holidays fall.

YEAR		PLATFORM HOURS	PLATFORM MILES	PEAK TRAIN COUNT
2017	Actual	101,846	1,974,346	19
2018	Estimated	101,614	1,969,850	19
2019	Estimated	101,200	1,962,400	19

Table 3: Link Service Statistics 2017-2019

Sounder

There are no major changes proposed in 2019. As a result, train platform hours and miles are not expected to change significantly. Differences between 2018 and 2019 reflect differences on which day of the week holidays fall.

YEAR		PLATFORM HOURS	PLATFORM MILES	PEAK TRAIN COUNT
2017	Actual	12,075	340,503	11
2018	Estimated	13,134	372,222	11
2019	Estimated	13,200	372,300	11

Table 4: Sounder Service Statistics 2017-2019

Tacoma Link

There are no major changes proposed in 2019. As a result, train platform hours and miles are not expected to change significantly. Note that these estimates do not take into account potential reduced service due to Hilltop Tacoma Link Extension construction impacts.

YEAR		PLATFORM HOURS	PLATFORM MILES	PEAK TRAIN COUNT
2017	Actual	9,905	76,262	2
2018	Estimated	9,800	75,800	2
2019	Estimated	9,800	75,800	2

Table 5: Tacoma Link Service Statistics 2017-2019

* Total reflects a fleet expansion of 14 total vehicles (for an additional peak pull of 12 vehicles) by September 2019. Community Transit Peak Vehicle Count adds reflects interim conditions between March and September 2019. Pierce Transit reflects final September 2019 conditions

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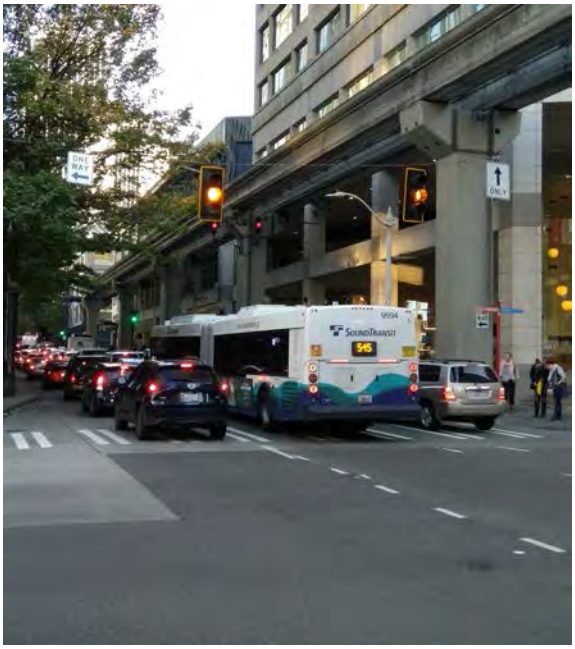
ST Express service plan

SERVICE CONTEXT

ST Express currently operates 28 routes throughout the three county service area. Many of these routes serve downtown Seattle, with other routes operating to downtown Bellevue or serving as connectors to Sounder service.

Service changes in the last few years have added hours to address ongoing reliability concerns and regional congestion. This has resulted in an increase of approximately 30,000 annual service hours and an additional 12 buses throughout our system. Modest resources will again be added in March 2019 and September 2019 to absorb impacts on the most affected routes, with some routes shifting providers as a result due to existing bus base capacity constraints. Riders can expect route conditions to worsen as a result of several factors:

- Additional bus congestion on downtown Seattle streets as the Downtown Seattle Transit Tunnel transitions to rail-only operations.
- Slow moving downtown surface streets during peak periods with critical choke-points continuing to slow transit
- Regional growth increasing highway congestion
- Construction impacts of both private development and public infrastructure investments, including light rail construction, across the region
- Constraints on regional bus base and maintenance capacity, limiting the number of buses available



2019 SERVICE STRATEGY

The 2019 service plan for ST Express aims to minimize the impact of closures and growing congestion on customers to the greatest extent possible. Below are five key themes that guided the proposed service changes.

Respond to Construction Impacts

ST Express service will adapt as a result of construction impacts throughout the region. Route 550 service will move to the surface in downtown Seattle as a result of the DSTT closure, while ridership will shift on ST Express routes along SR 520 as a result of the Montlake Freeway Station closure.

Improve Resource Efficiency

Several changes proposed in this document identify resources from underperforming services to be reallocated throughout the system to address other outstanding issues. These small tweaks to select routes increase the flexibility to respond to ongoing construction impacts and congestion.

Add Buses and Hours

Sound Transit has no additional operating capacity at King County Metro to respond to ongoing construction impacts and reliability concerns. As a result, several routes will change operators to free up capacity to respond. In March 2019, Sound Transit will add an additional 5 buses at Community Transit to respond to DSTT impacts with the movement of Route 540. By September 2019, Sound Transit is preparing to accommodate an another 9 vehicles at Pierce Transit, and shifting the 5 additional buses at Community Transit to Pierce Transit, to maintain existing service levels.

Improve Speed and Reliability

Service changes address as many reliability concerns as possible, sometimes shifting resources from lower-performing to higher-performing service. Even with limited resources, ST Express will make runtime adjustments to best reflect existing and future conditions. Additionally, Sound Transit will continue to work with partner jurisdictions to mitigate existing issues and improve regional mobility.

Service Integration

Our partner agencies complement our service by offering connections to many other regional and local routes. Some of these changes seek to improve integration in order to maximize the effectiveness of regional transit investments.

DEVELOPMENT OF PROPOSED SERVICE CHANGES

Sound Transit manages the transit network through service changes. Service changes are classified as either minor or major changes. All major service changes include public participation and require approval by the Sound Transit Board of Directors. Any change classified as minor may be made without Board approval, allowing staff to be responsive in addressing minor service quality issues.

Major Service Changes

Major service changes meet one or more of the following criteria **and require public outreach and Board approval:**

- Changes a route's weekly platform hours by more than 25 percent
- Moves the location of a stop by more than ½ mile
- Closes a stop without an alternative stop within ½ mile

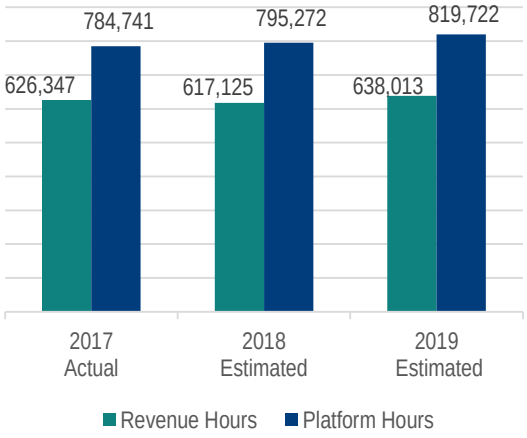
Minor Service Changes

Minor service changes meet one or more of the following criteria and are **implemented administratively**:

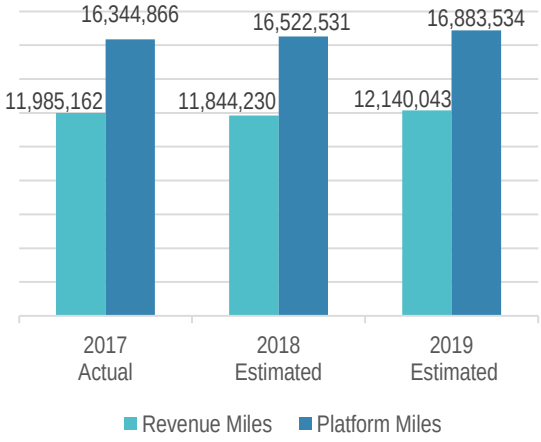
- Changes a route's weekly platform hours by less than 25 percent
- Makes minor adjustments to a schedule
- Temporarily closes a stop or adjusts route alignment due to construction

When a proposed service change saves resources, those resources will be reinvested into the same subarea in order to maintain equitable resource distribution.

REVENUE AND PLATFORM HOURS



REVENUE AND PLATFORM MILES



RIDERSHIP

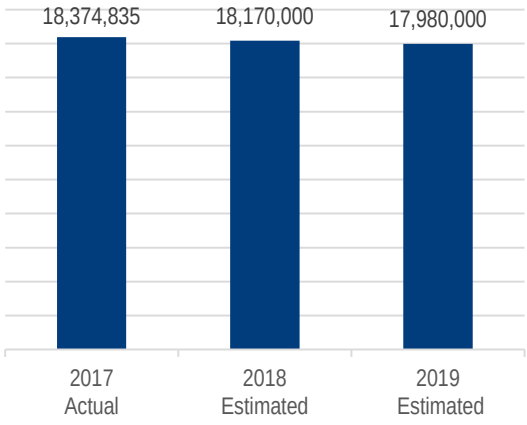


Figure 5: ST Express 2017-2019 Service Statistics

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Proposed Service Changes

2019 PROPOSED SERVICE CHANGES REGIONAL OVERVIEW

PAGE	ROUTE	TYPE	DESCRIPTION	MONTH	CORRIDOR
Major Service Changes					
23	513	Route Change	Routing change and new regional connections	March	I-5 North
21	550	Route Change	Routing and stop changes in downtown Seattle	March	I-90
22	580	Level of Service	Improve efficiency, remove lower performing trips	March	Sounder Connector
22	545, 555	Stop Closure	WSDOT closure of Montlake Flyer Stop	March	SR 520
Minor Service Changes					
24	512	Schedule Change	Running time adjustments Seattle - Shoreline	March	I-5 North
24	512	Stop Closure	Stop Change at 145th Street Freeway Station	Early 2019	I-5 North
24	541	Schedule Change	Add stop pair at 156th & 31st by Overlake Park-and-Ride	March	SR 520
24	596	Level of Service	Discontinue midday trip	March	Sounder Connector

Table 6: Proposed Major and Minor March 2019 Service Changes

The following pages show an overview of proposed service changes by corridor.

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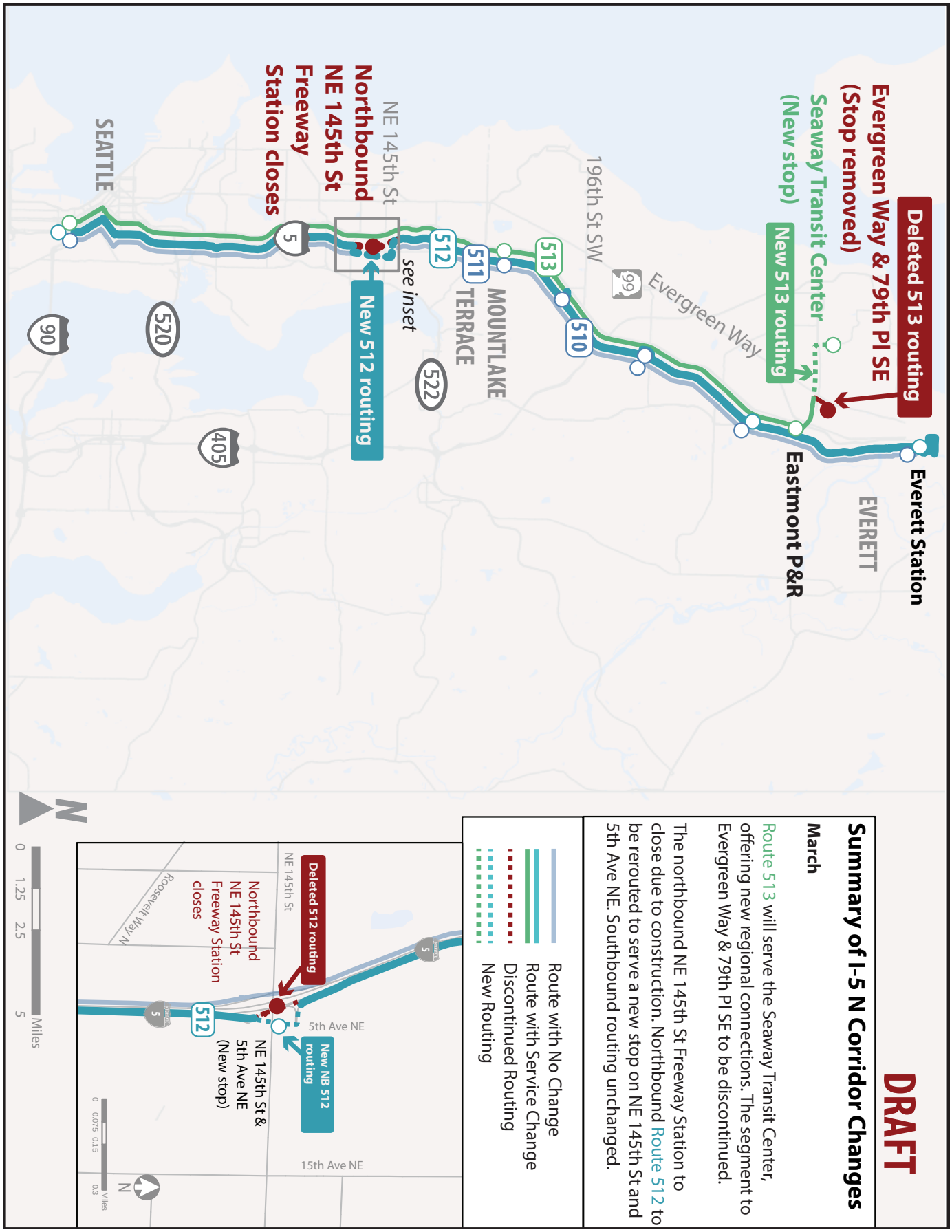

Figure 6: Summary of I-5 North ST Express Corridor Changes

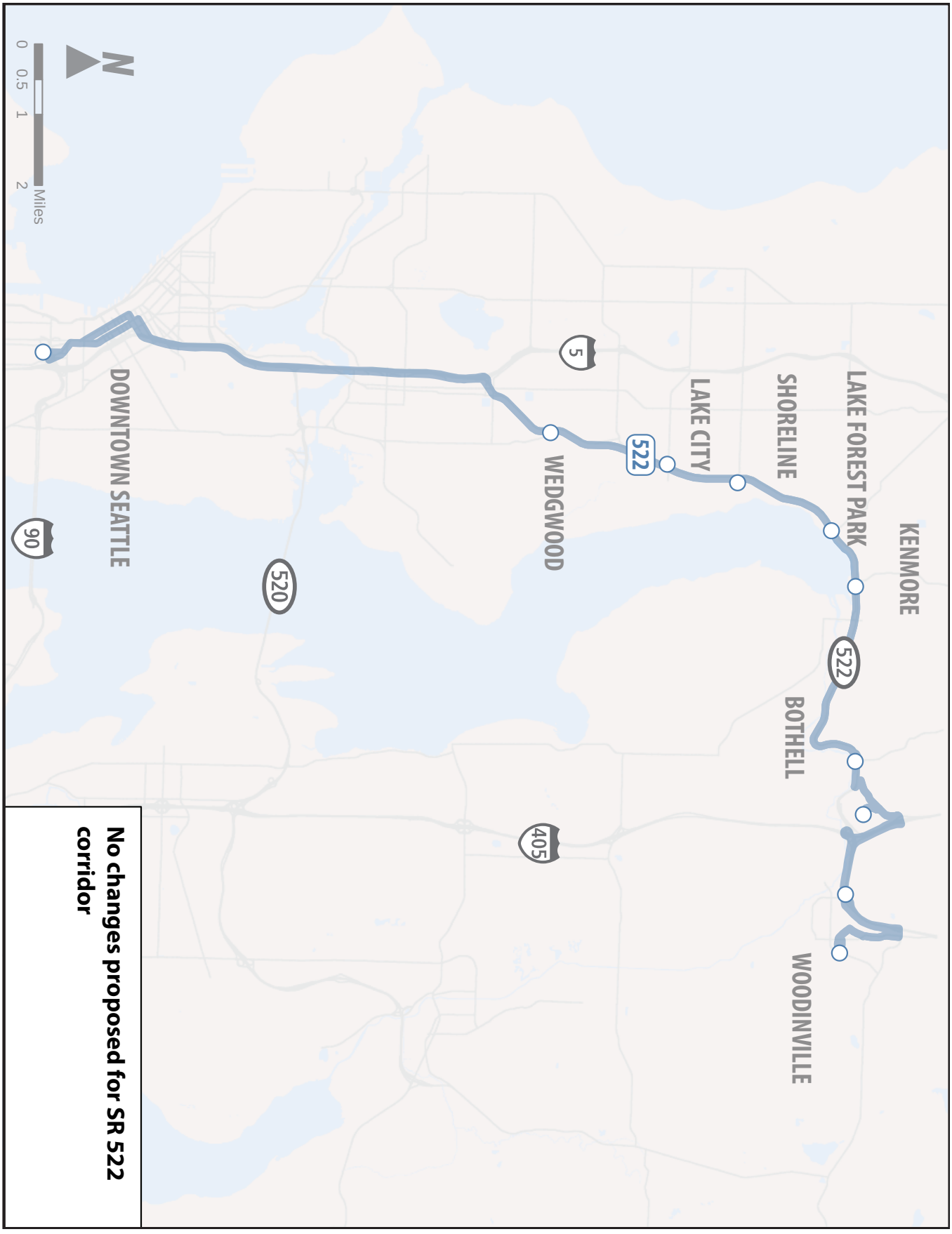

Figure 7: Summary of SR 522 ST Express Corridor Changes

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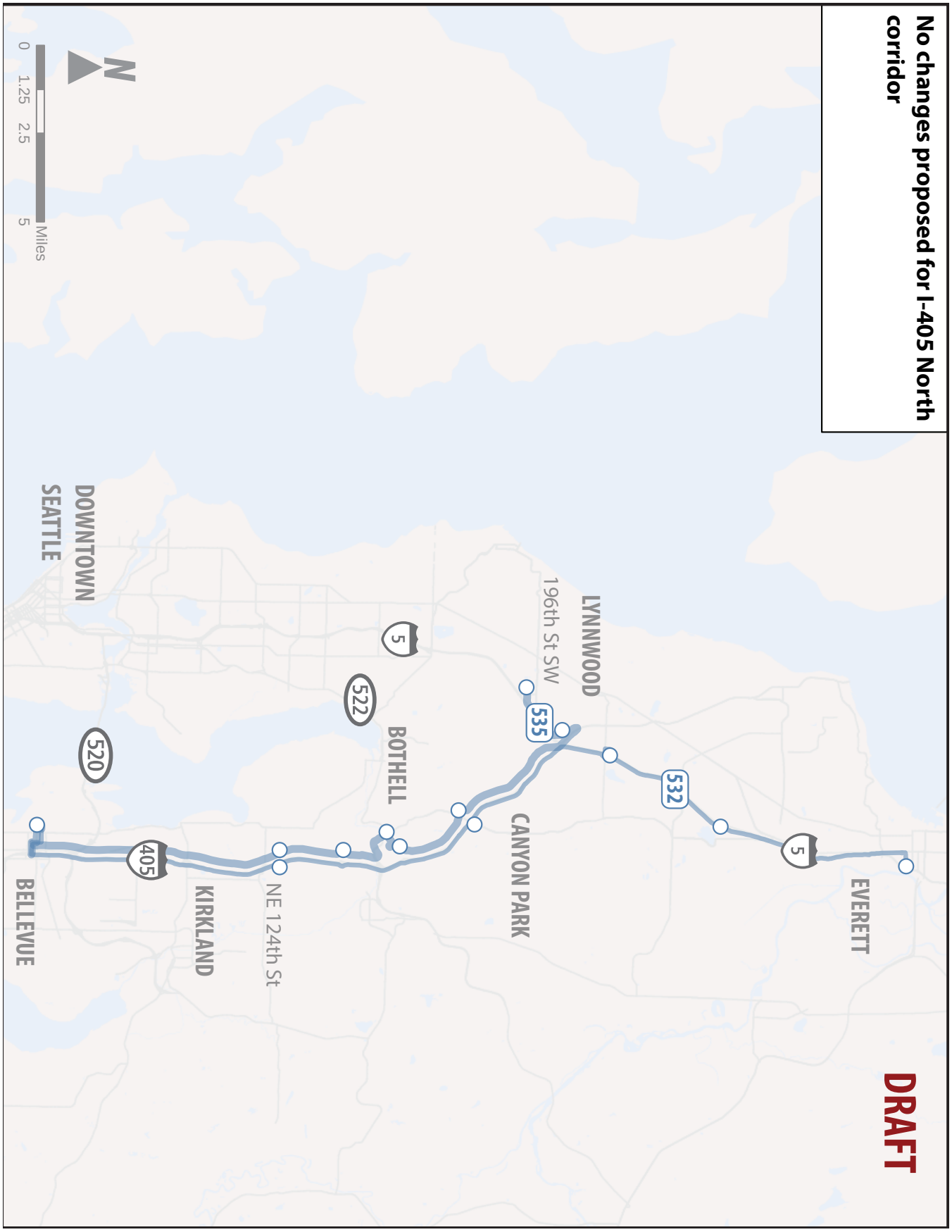

Figure 8: Summary of I-405 North ST Express Corridor Changes

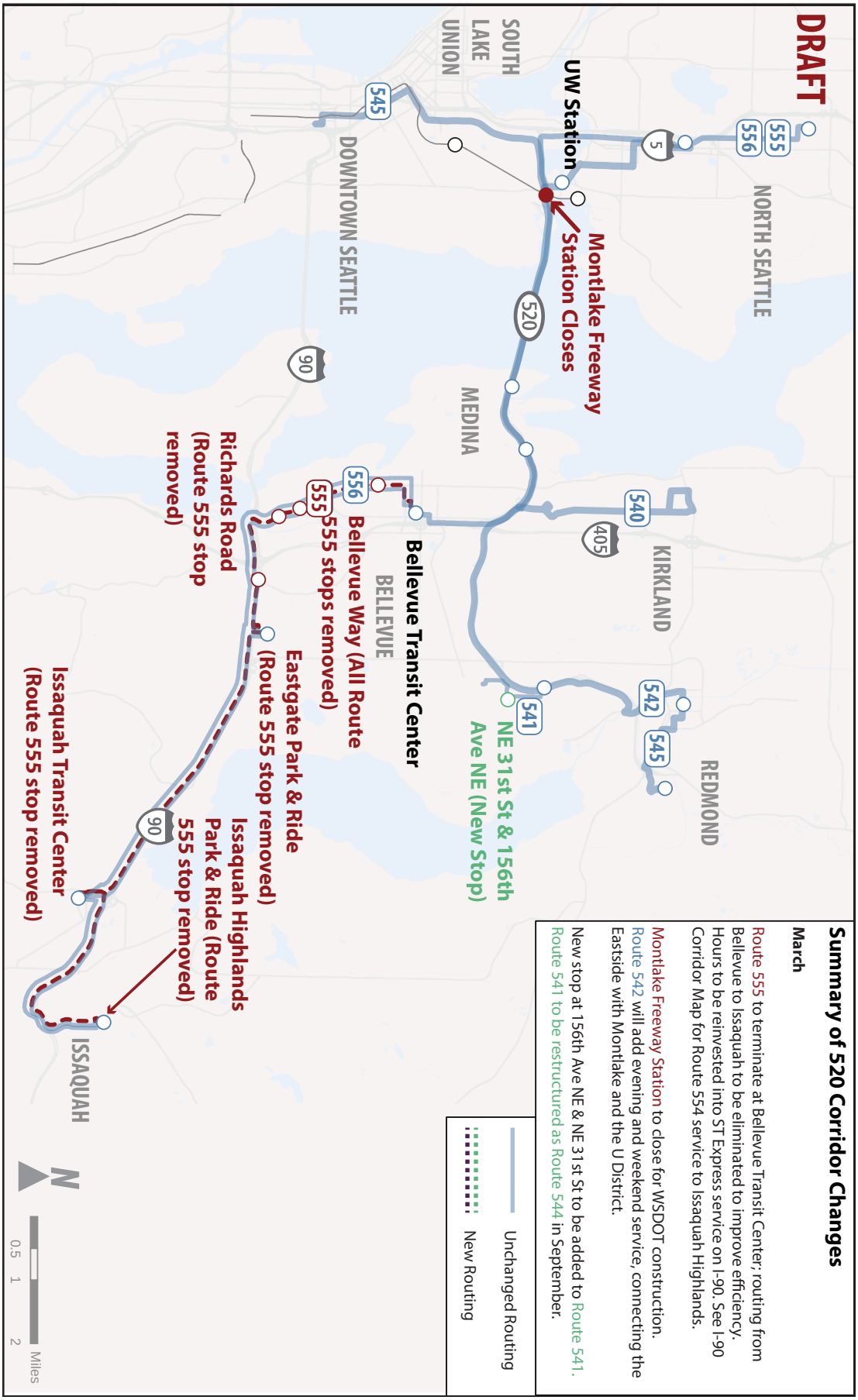

Figure 9: Summary of SR 520 ST Express Corridor Changes

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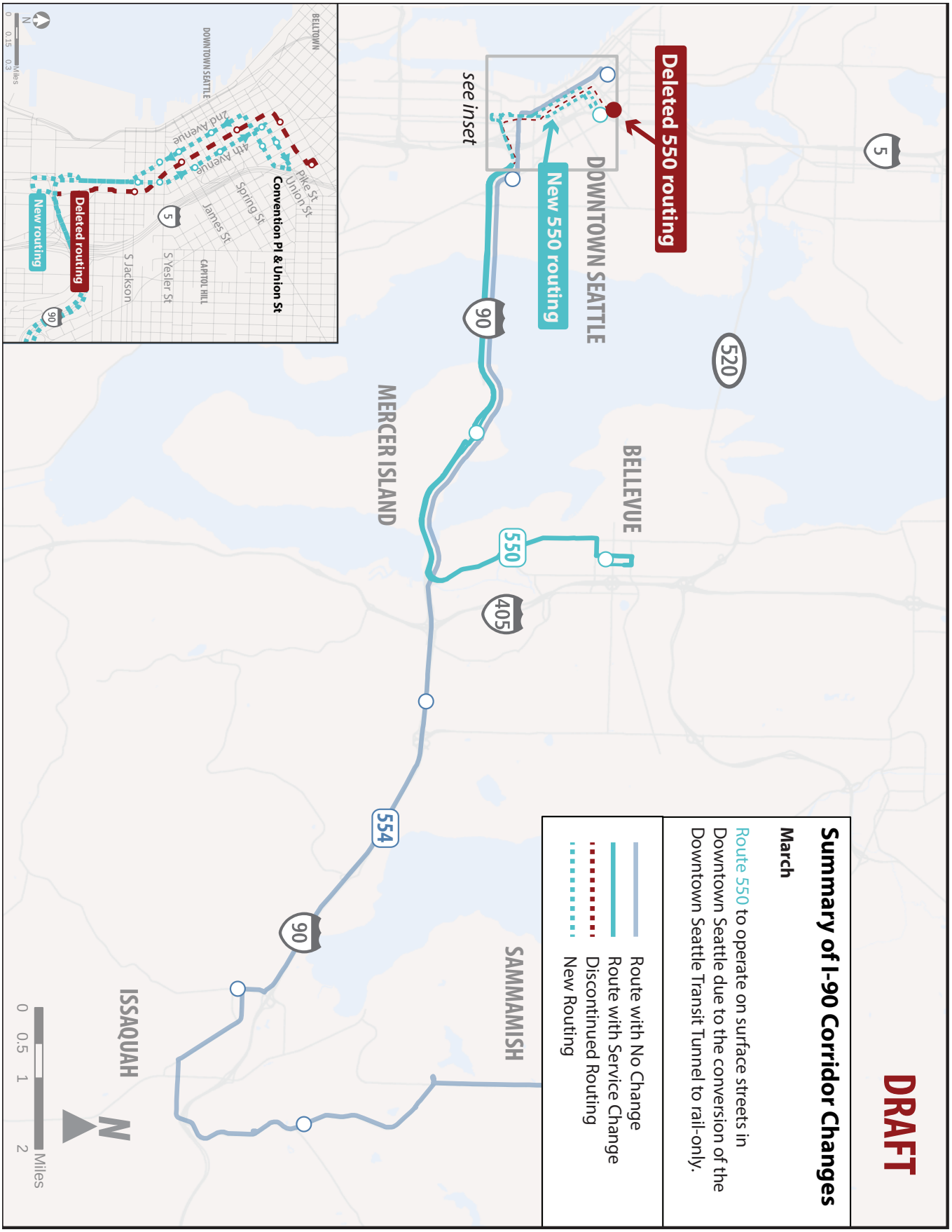

Figure 10: Summary of I-90 ST Express Corridor Changes

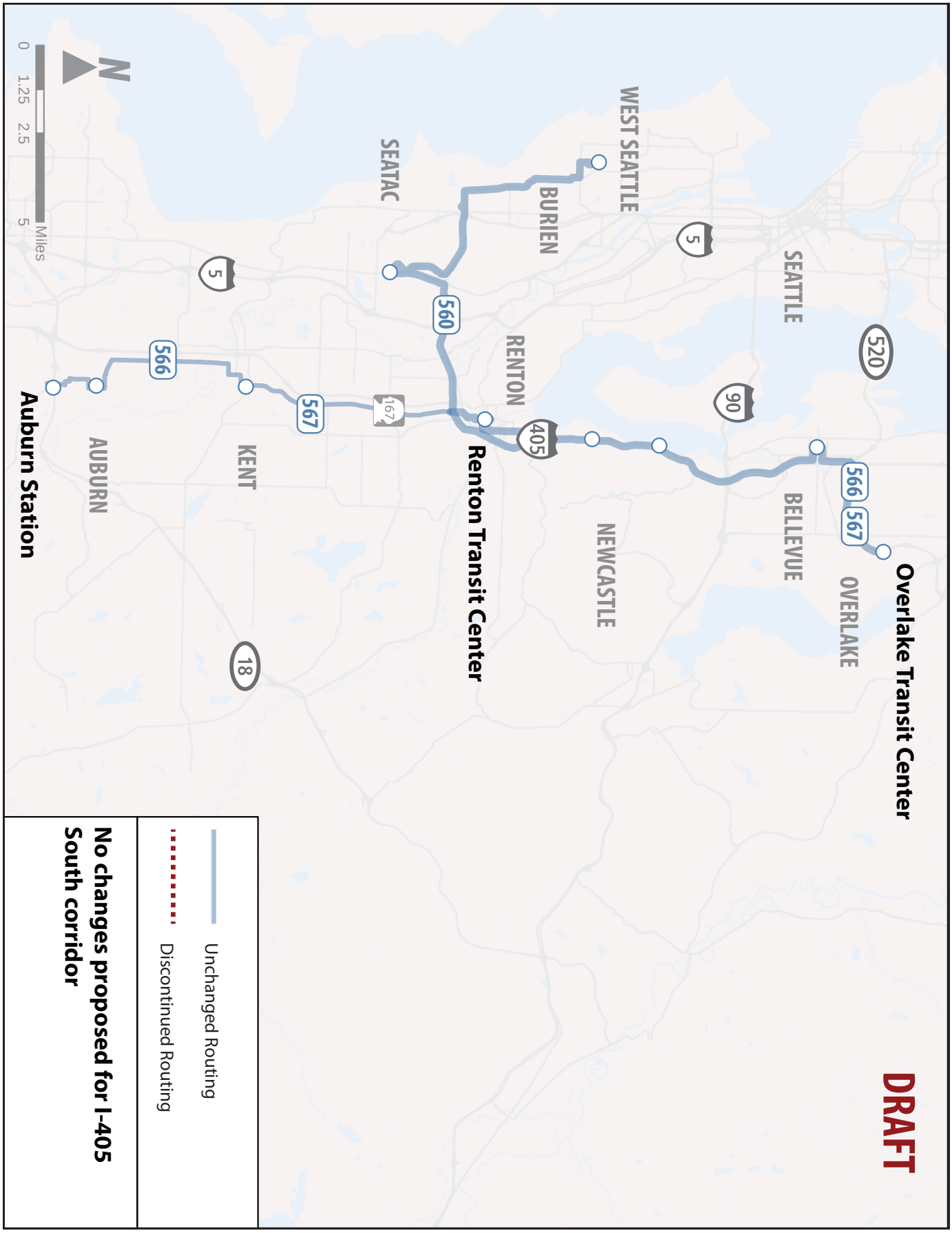

Figure 11: Summary of I-405 South ST Express Corridor Changes

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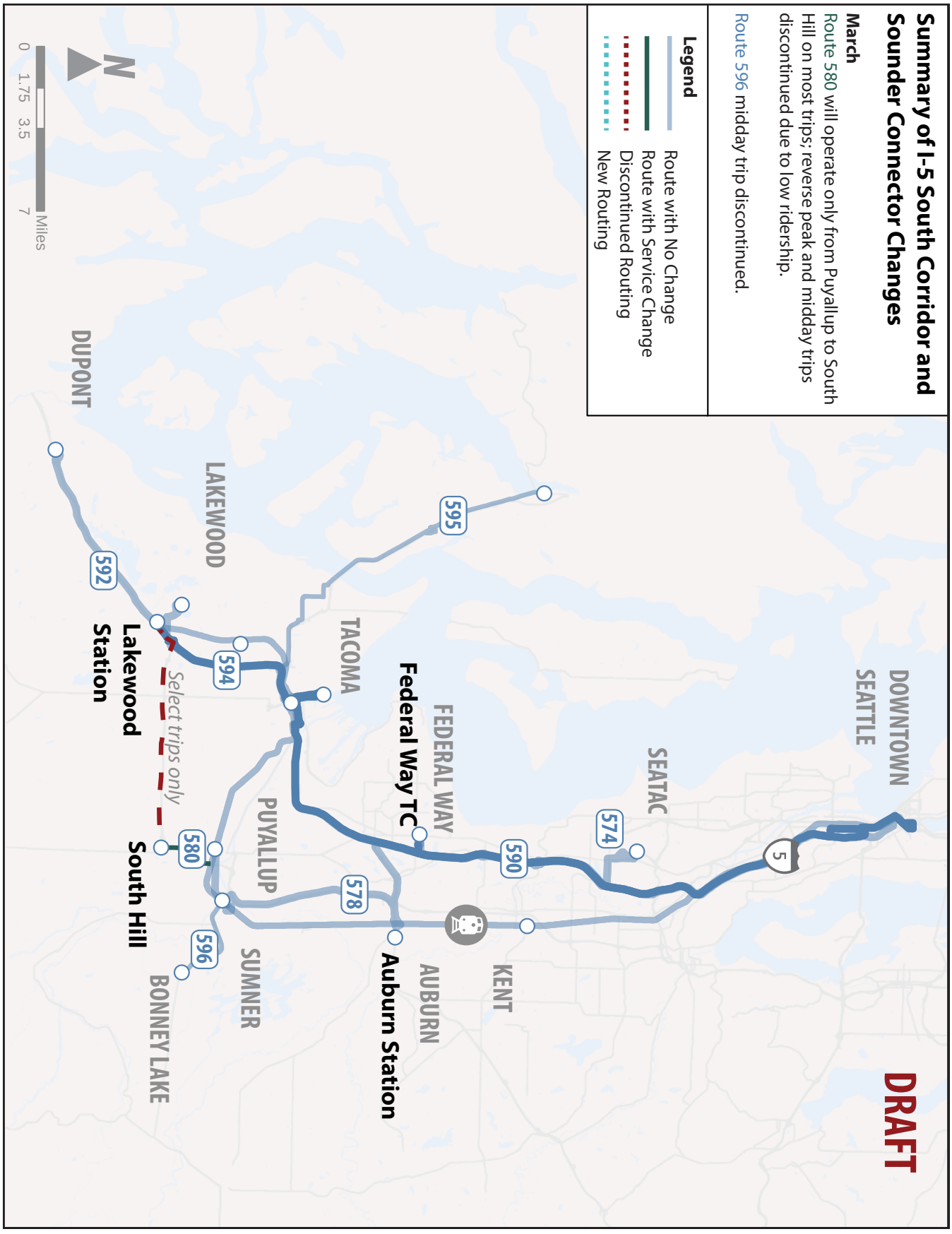


Figure 12: Summary of I-5 South and Sounder Connector ST Express Corridor Changes

DSTT Converts to Rail-Only **|** *Changes for Route 550*

In 2019, the DSTT will convert to rail-only as buses move operations to the surface streets of downtown Seattle. Route 550, which currently operates in separated right-of-way in the tunnel, will incur additional running time as it moves to streets with mixed traffic, traveling northbound on 4th Avenue and southbound on 2nd Avenue. Meanwhile, other downtown routes already operating on those streets will experience increased congestion from additional buses. All Metro bus routes that currently operate in the DSTT will move to the surface as well. Metro is conducting its own process to notify its riders of changes, but is working closely with Sound Transit to plan for changes. Figure xx shows the new proposed stops.

CUSTOMER IMPACTS

Riders of Route 550 will have new boarding and alighting locations downtown and longer travel times. The pathway has been chosen to avoid the most congested streets north of Westlake. To avoid downtown congestion, Route 550 customers may also choose to use Link and transfer at Pioneer Square Station eastbound 550 service.

In 2017, average transit travel times from Westlake to the International District were 7 minutes in the DSTT and 14 minutes on surface streets. Sound Transit plans to invest resources to the route to absorb some of those impacts and maintain reliability, but routes throughout East King County may see service reductions in order to compensate for the impacts to Route 550.

CUSTOMER BENEFITS AND IMPROVEMENTS

As part of a joint agency collaboration, Sound Transit is investing in improvements in downtown Seattle to speed up travel in key transit corridors. All downtown routes will benefit from some of the improvements, which include protected right turns on 2nd and 4th Avenues, painted bus lanes on 5th and 6th Avenues, and upgraded signage throughout.

Metro and the City of Seattle are also working to arrange a new northbound transit pathway using 5th and 6th Avenues. Several Metro routes plan to use this pathway, freeing up capacity on northbound 4th Avenue for more ST Express buses.

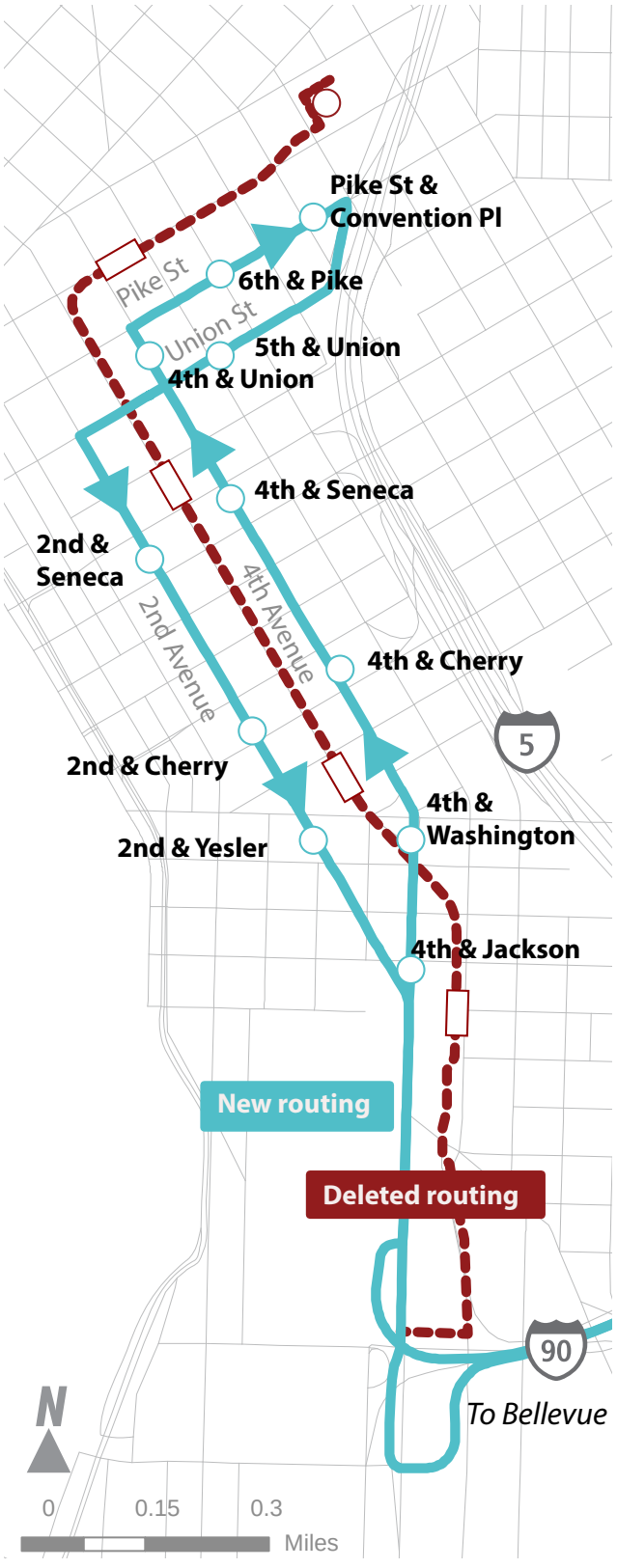


Figure 13: New 550 pathway in Downtown Seattle

DSTT Converts to Rail-Only | *Changes for Downtown*

Sound Transit collaborated with King County Metro and Community Transit to develop a plan for all bus routes moving out of the DSTT. As shown in Figure 14: Proposed downtown pathways, this plan spreads out routes amongst different streets and moves some existing surface routes to the new 5th/6th Avenue northbound pathway.

CUSTOMER IMPACTS AND BENEFITS

Other Sound Transit riders will notice more congestion as routes that previously operated in the tunnel now share the streets with other vehicles. While modest reliability investments will help temper some effects of congestion, regional bus base capacity constraints limit the number of buses available to add to service.

The removal of buses from the DSTT is expected to improve Link reliability by removing a major source of delay. A more reliable Link train will continue to allow ST Express customers to bypass downtown congestion by riding Link to another bus stop.

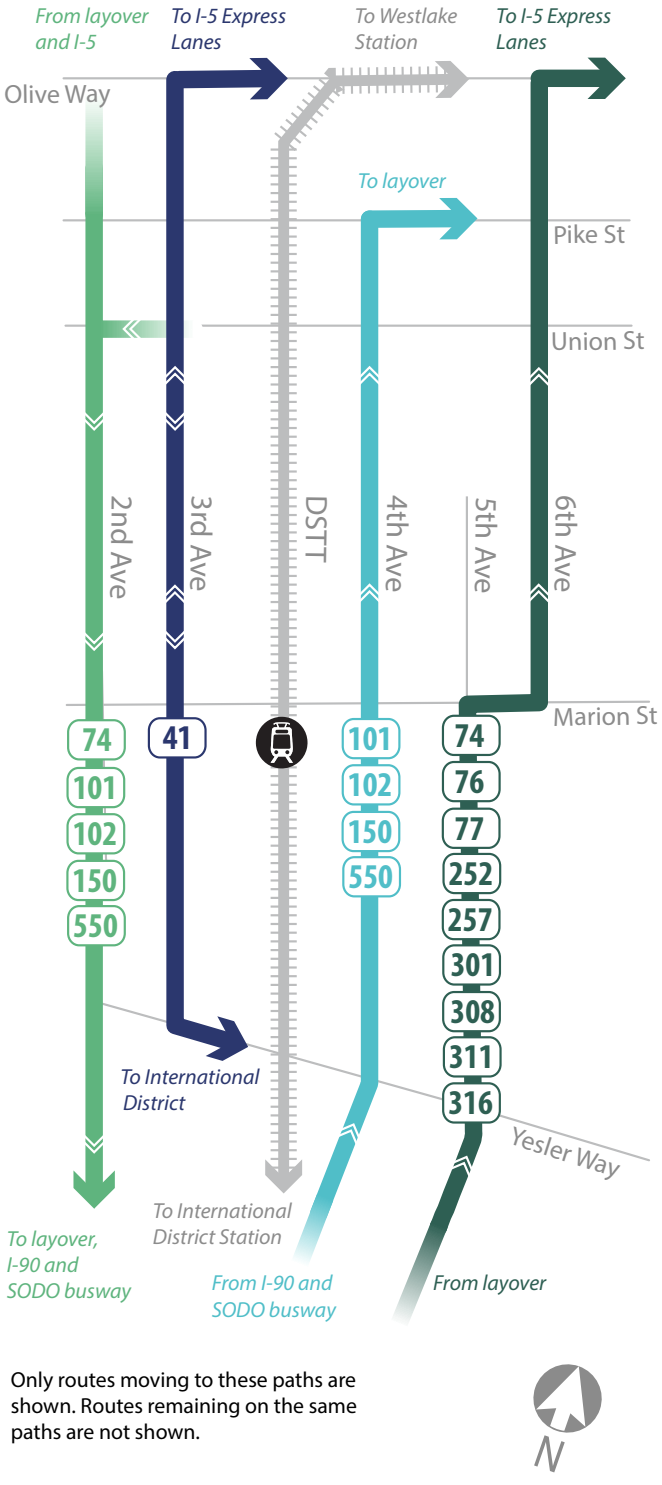


Figure 14: Proposed downtown pathways

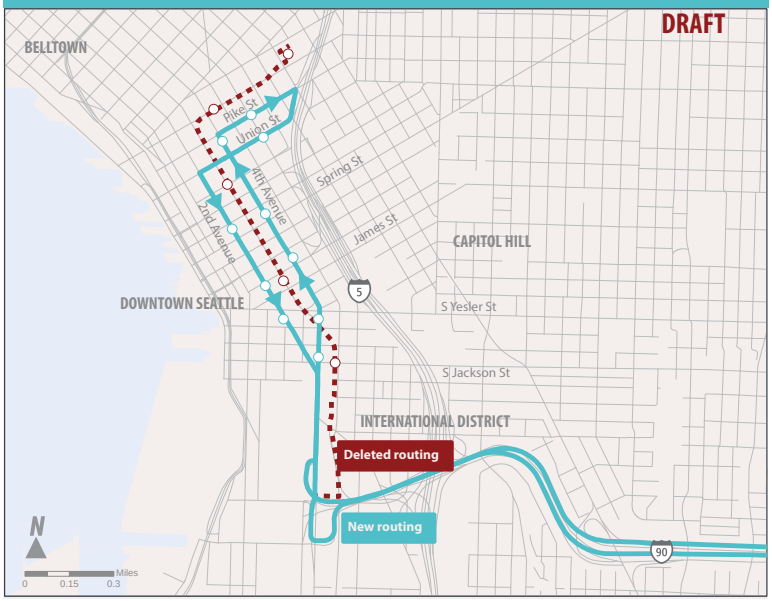
Proposed Service Changes by route

PROPOSED MAJOR SERVICE CHANGES

Routes 550 – New Routing on Surface Streets

MARCH

Strategy: Respond to Construction Impacts



As the DSTT becomes rail-only, Route 550 will operate on surface streets in Downtown Seattle.

Route 550 will no longer operate in the Downtown Seattle Transit Tunnel. Instead, after exiting I-90 it will travel northbound on 4th Avenue and southbound on 2nd Avenue, serving most of the same stops as Route 554.

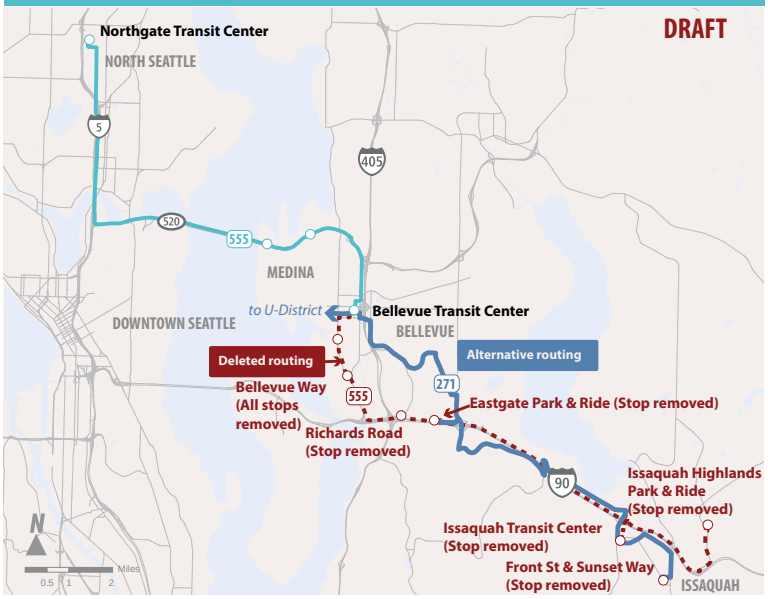
Daily Customer Impact: 10,700 (100%)

Longer and more variable travel time

Route 555 – Northgate to Bellevue only

MARCH

Strategy: Improve Resource Efficiency



Route 555 only operates between Northgate and Bellevue, Bellevue-Eastgate-Issaquah segment eliminated

Almost 80% of the current ridership on Route 555 is between the Northgate and Bellevue Transit Centers, with the Bellevue-Eastgate-Issaquah segment carrying an average of 10 riders per trip. The low-performing segment of the route would be eliminated and hours reinvested into Route 554.

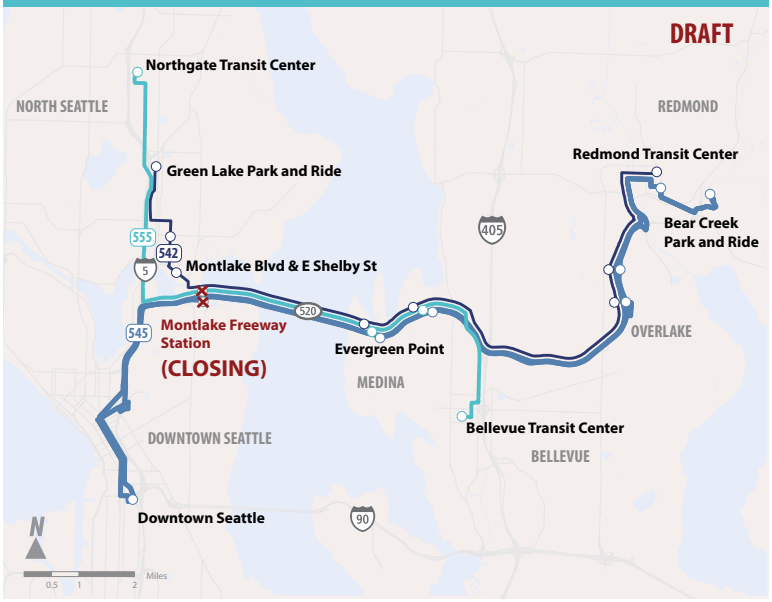
Customers can ride King County Metro Route 271 between Bellevue, Eastgate and downtown Issaquah or Route 241 to Richards Road.

Daily customer impact: 175 of 740 (24%) will incur a transfer and additional travel time

Routes 542/545/555 – Montlake Freeway Station Closure

MARCH

Strategy: Respond to Construction Impacts



Construction on SR-520 closes the Montlake Freeway Station; mitigation service added to Route 542

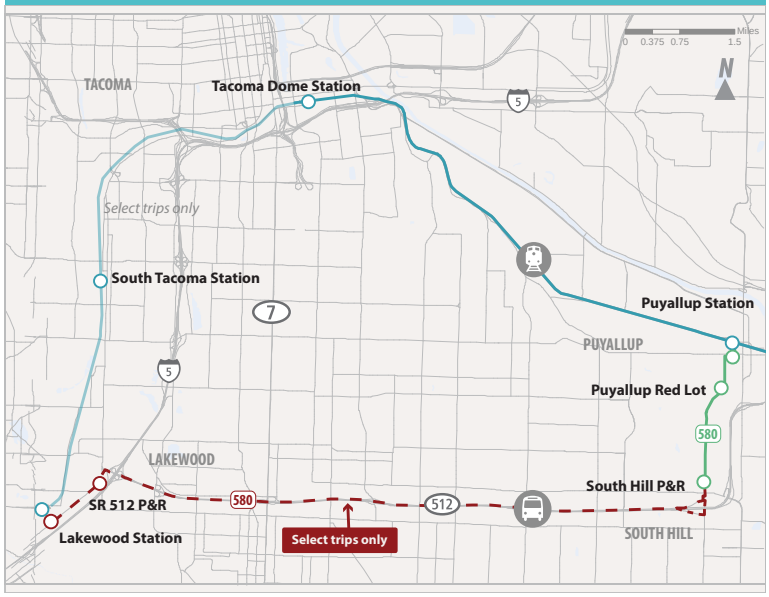
Starting March 2019, WSDOT construction along SR-520 will require the closure of the Montlake Freeway Station. To minimize the impact, WSDOT and Sound Transit are partnering to add Route 542 service on evenings and weekends to augment existing service. The closest alternative stops will be on Montlake Boulevard, south of the Montlake cut. Route 545 and 555 customers will need to transfer.

Daily Customer Impact: 350 of 10,300 (3%) will incur a transfer and additional travel time

Route 580 – SR 512 Service Modifications

MARCH

Strategy: Improve Resource Efficiency



Route 580 between Lakewood and South Hill discontinued on most trips.

This change would discontinue service on the lowest performing segment between Lakewood Station and South Hill when there is a corresponding Sounder trip traveling to or from Lakewood. Service to Lakewood would remain when connecting to Sounder trips starting or ending in Tacoma. Saved resources would be reallocated within Pierce County.

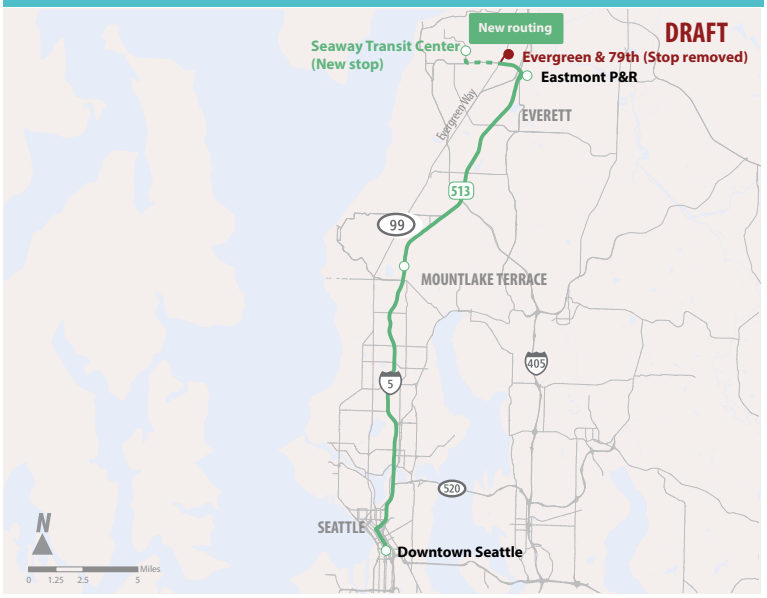
Additionally, due to low ridership, the following 580 trips are discontinued:

- AM trips to Lakewood and PM trips to Puyallup
- The 10:03 AM departure connecting to the midday train.

Daily customer impact: 40 of 750 (5%) will have fewer options from South Hill to Lakewood or SR 512 P&R to Puyallup.

Route 513 – Starts at Seaway Transit Center

Strategy: Service Integration



MARCH

Route 513 integrates with new Seaway Transit Center, no longer serving the Evergreen Way/79th Place stop.

In March 2019 the opening of the Seaway Transit Center will provide an opportunity to integrate ST Express service with local and regional service operated by Everett Transit and Community Transit. In order to leverage this opportunity, Route 513 would be restructured to serve the new transit center, and as a result would no longer serve the stops at Evergreen Way and 79th Place SE.

Daily customer impact: 66 of 636 (10%) will need to use a different stop

DRAFT

MINOR ST EXPRESS SERVICE CHANGES CONSIDERED

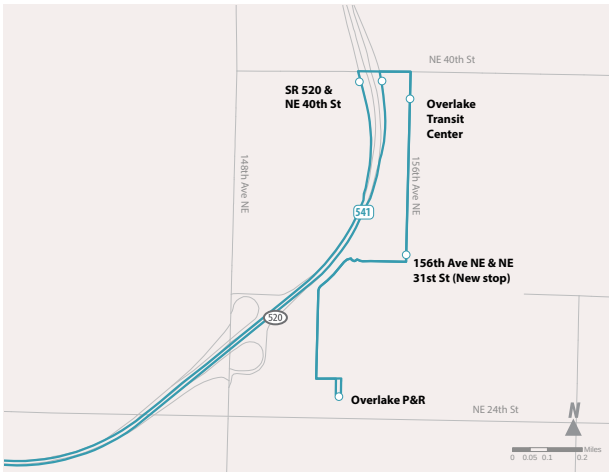
Below is a list of administrative service changes currently being analyzed for implementation in March 2019. This list is not exhaustive and is not subject to Board approval. Other minor changes to ST Express service may occur in 2019.

Route 512 Stop Change and Reliability Investment

Lynnwood Link construction at Shoreline South/145th St will close the northbound 145th Street Freeway Station in 2019. Route 512 is proposed to be rerouted to serve the stop on surface streets at 5th Avenue NE at NE 145th Street. Additionally, schedule changes may occur to improve reliability between downtown Seattle and Snohomish County.

Route 541 Stop Addition

With construction for East Link around Overlake Transit Center impacting pedestrian access, service planning is evaluating adding a stop to Route 541 at the intersection of 156th Avenue NE and NE 31st Street to reduce walk time for customers in the area. This stop would serve the southeast portion of the Microsoft Campus.



Route 596 Midday Trip Discontinuation

Route 596 is currently timed to every peak direction Sounder trip. The Bonney Lake Park-and-Ride lot is at capacity by the end of the morning commute, and the midday 596 trip averages 2 to 4 passengers. This trip is proposed for discontinuation.

Link service plan

SERVICE CONTEXT

Link extensions in 2016 expanded service north to the University of Washington and south to Angle Lake. Since the opening of the three new stations, ridership has grown tremendously. In response to the increased demand for Link service, Sound Transit responded by adding more 3-car trains during peak and off-peak periods.

In preparation of the system expansion to Northgate, Bellevue and Redmond, additional fleet vehicles will be delivered and placed into pre-revenue service for testing before being deployed into service.

2019 SERVICE STRATEGY

All available resources are being utilized during weekday peak periods; however, Sound Transit will continue to monitor ridership and respond where possible especially during special events.

Staff analyzed the possibility of extending service spans to accommodate additional late night service or to continue all late night trains that currently terminate at Beacon Hill to downtown Seattle, but because track maintenance windows cannot be further shortened, there are no proposed changes to extend late night service.

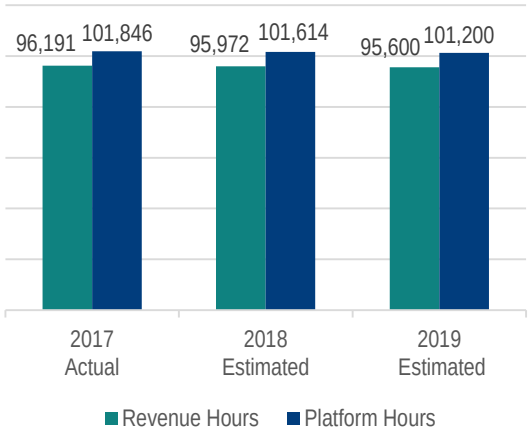
With the DSTT becoming rail-only in 2019, Link service is expected to be more reliable.

Why are there two-car trains during the peak? Can't you add more?

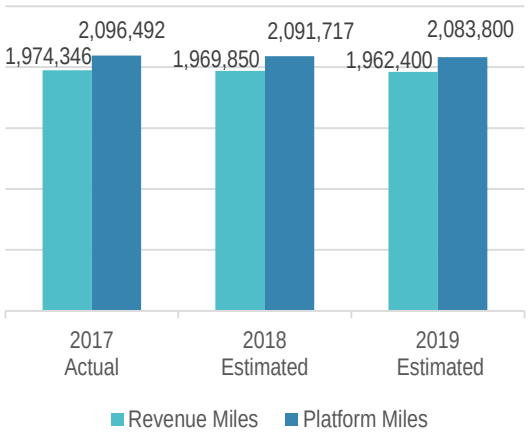
Currently, Link operates 3-car trains all day with additional 2-car trains during peak periods. With our fleet of 62 vehicles, it is difficult to make all trains have three cars without a reduction in frequency or other significant schedule changes. The vehicles not in service may be in for longer term repairs and maintenance, or set aside in case a train in-service has a mechanical problem.

Sound Transit is aiming to receive new light rail vehicles from Siemens in 2019 and, once testing is complete, increase the number of 3-car trains available during peak periods.

REVENUE AND PLATFORM HOURS



REVENUE AND PLATFORM MILES



RIDERSHIP

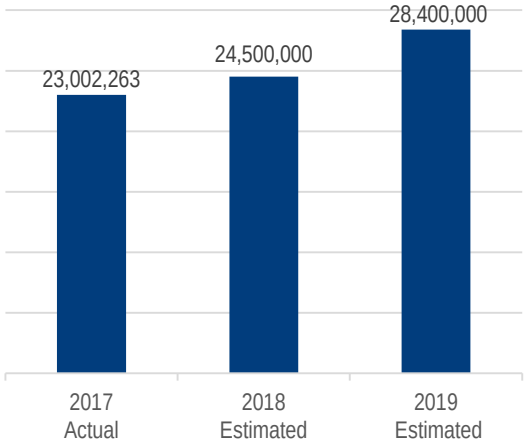


Figure 15: Link 2017-2019 Service Statistics

Sounder service plan

SERVICE CONTEXT

Sounder service has added three round trips in the past three years, with the addition of a midday round trip in September 2016 and two peak round trips in September 2017. These trips have been well utilized, resulting in ridership increases of 15 percent from 2015 to 2017.

2019 SERVICE STRATEGY

With the completion of trip additions from the ST2 measure, there are no planned major changes in 2019 for Sounder. Minor changes to Sounder schedules may arise from the scheduling of Amtrak Cascades trains which share tracks with Sounder.

The two factors that may have the greatest influence on Sounder ridership in 2019 are station construction projects and changes to ST Express. The Puyallup and Sumner Station Parking and Access Improvement projects may impact Sounder ridership due to the closure of parking facilities and capacity improvements. Increasing congestion on I-5 and overcrowding on ST Express may push people toward Sounder which operates in its own dedicated right of way.

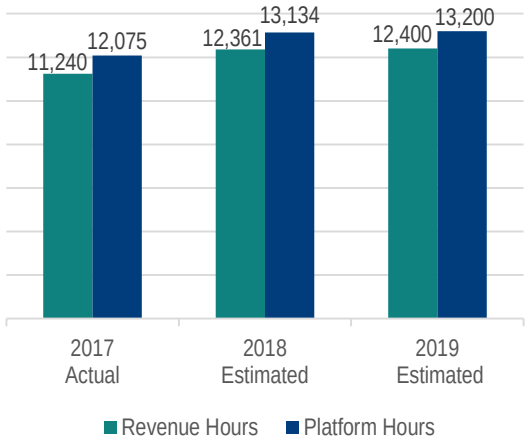
Service Planning will continue to plan for serving select major events in the Puget Sound region, and will use the criteria established in the Service Standards and Performance Measures document to guide service plans.

Why don't we run later weekday trains or more weekend service?

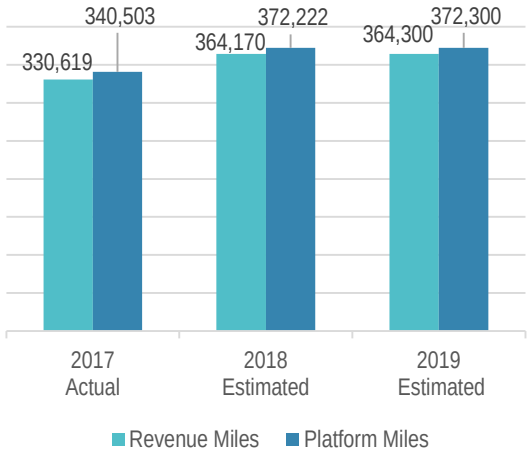
Sounder service is coordinated with BNSF who owns the majority of the track that Sounder operates on. Further agreements would need to be negotiated with BNSF in order to run more scheduled trips.

Additionally, work schedules and minimum rest periods between work shifts for train conductors dictate how late we can run service. That's why we can only run special event service for weekend day games rather than night games.

REVENUE AND PLATFORM HOURS



REVENUE AND PLATFORM MILES



RIDERSHIP

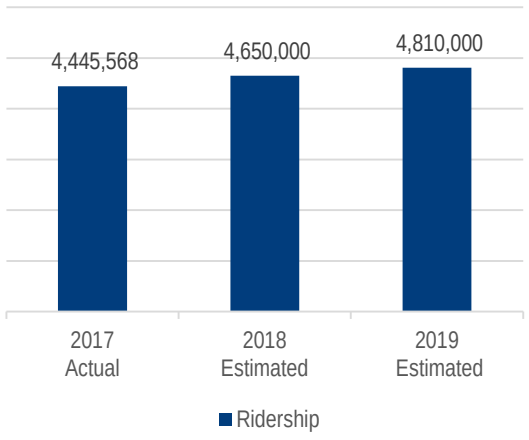


Figure 16: Sounder 2017-2019 Service Statistics

DRAFT

Tacoma Link service plan

SERVICE CONTEXT

Tacoma Link has not changed its service model since the opening of the 11th and Commerce station in 2011. Service operates every 12 minutes during weekdays and Saturdays, while operating every 24 minutes on weeknights and on Sundays.

Ridership is primarily driven by special events at the Tacoma Dome as well as connections between Tacoma Dome Station and UW Tacoma or the Theater District.

2019 SERVICE STRATEGY

There are no major changes proposed to Tacoma Link service. Budgeted hours and miles for 2019 Tacoma Link service are consistent with prior years. The Hilltop Tacoma Link Extension will begin construction in 2019 which may result in disruptions to service from January through April 2019 while a temporary turn back track is installed at the existing Theater District Station.

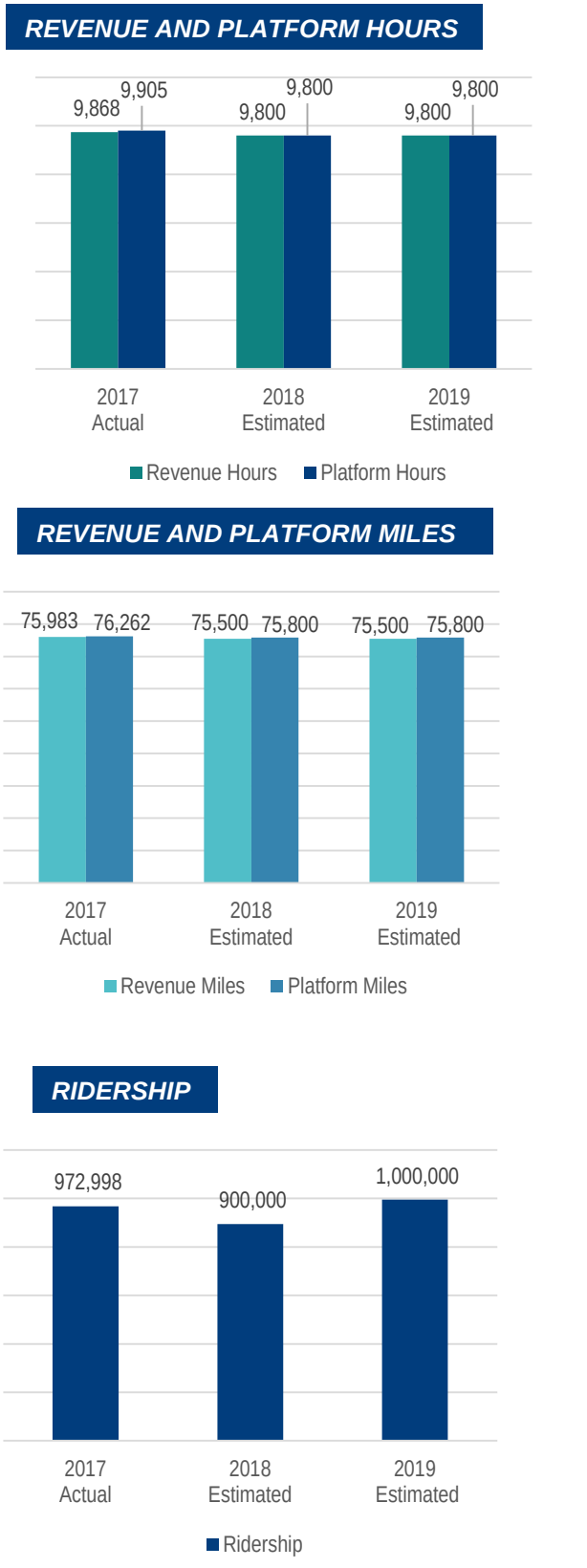


Figure 17: Tacoma Link 2017-2019 Service Statistics

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Adverse Effects

The adopted Sound Transit major service change policy, described above, also defines potential adverse effects of major service changes and thresholds for determining whether the proposed service change would have a disparate impact on minority populations and/or a disproportionate burden on low-income populations. The definitions are as follows:

- A **potential adverse effect** is defined as a geographical or time-based addition or reduction in service which includes but is not limited to: changes to span of service, changes to frequency of service, or elimination of routes or route segments.
- A **disparate impact** occurs when the minority percentage of the population adversely affected by a major service change is greater than the average minority percentage of the population of Sound Transit's service area.
- A **disproportionate burden** occurs when the low income percentage of the population adversely affected by a major service change is greater than the average low income percentage of the population of Sound Transit's service area.

Per Sound Transit's policy, if any disparate impact or disproportionate burden is found during the service equity analysis, Sound Transit will consider steps to avoid, minimize, or mitigate the adverse impacts and reanalyze the modified changes to determine if the impacts are removed or lessened.

DEFINITIONS AND DATA ANALYSIS

The following sections describe the data definitions and methodologies used by Sound Transit to develop estimates for Title VI populations within the Sound Transit service area.

Demographic Analysis Methodology and Title VI Data Definitions

Sound Transit uses census demographic data to identify Title VI communities (Minority, Low Income, & Limited English Proficiency) for service equity analysis and calculates the system-wide or mode specific average representation of these communities within the general population. Only Minority or Low Income status are used to determine if a disparate impact or disproportionate burden must be mitigated or analyzed. However, identifying Limited English Proficiency (LEP) residents helps Sound Transit to ensure that outreach efforts reach diverse customers. Sound Transit uses the 2010 designated Census Tracts as the geographic basis for assessing the Title VI populations.

Sound Transit uses the most recent five-year demographic estimates available from American Community Survey (ACS). The ACS dataset identifies Minority, Low Income and LEP populations as follows:

- **Minority:** Persons who self-identify as being one or more of the following ethnic groups: American Indian and Alaska Native, Asian, Black or African American, Hispanic or Latino, Native Hawaiian and Other Pacific Islander.
- **Low income:** Persons whose household income is below the federal poverty level.
- **Limited English Proficiency (LEP):** Persons who identify a language other than English as their primary language and are not fluent in English.

The following sections describe the methodology for identifying each of the Title VI populations for the purposes of the annual service equity analysis.

SERVICE EQUITY ANALYSIS

Title VI Evaluation

Introduction

As part of the annual Service Implementation Plan (SIP), Sound Transit conducts a service equity analysis, also known as a Title VI evaluation analysis, to ensure that changes to transit service are consistent with Title VI policies defined by the Federal Transit Administration (FTA) and Board policies defined by the Sound Transit Board of Directors. The FTA is responsible for ensuring that federally supported transit services and related benefits are distributed by applicants and recipients of FTA assistance in a manner consistent with Title VI, Section 601 of the Civil Rights Act of 1964, which states:

No person in the United States shall, on the grounds of race, color or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.

This section of the SIP provides an assessment of potential impacts to minority, low income and limited English speaking communities associated with the proposed changes in this Service Implementation Plan.

POLICIES AND DEFINITIONS

The section below describes Sound Transit's approved policies for conducting and identifying major service changes, as well as for assessing their impacts on Title VI populations.

Service Standards and Performance Measures

Service standards and performance measures are a set of guidelines that are used to design, evaluate and modify transit service. The standards and measures establish baselines to obtain optimum efficiency and effectiveness in the system on a short-term basis, while maintaining or improving the quality of service. Planning and day-to-day management of transit service is based on the established service standards and performance measures. The guidelines provide a multi-step process to identify the level and type of service that should be provided, as well as a process to implement any changes needed to meet established priorities.

The *Service Standards and Performance Measures* defines the criteria for making major or administrative service changes, as well as guidelines and driving factors for the type of changes needed to ensure Sound Transit services are meeting the demand for regional transit in the Puget Sound area.

Major Service Change

Resolution R2013-18, adopted by the Sound Transit Board of Directors in 2013, established policies for conducting equity analyses of major service changes and assessing the impacts on minority and low income populations. This policy defines a major service change as follows:

- A major service change is any single change in service on an individual bus or rail route that would add or eliminate more than 25 percent of the route's weekly platform service hours,
- Move the location of a stop or station by more than a half mile.
- Closing or removing a stop or station without replacement within a half mile.

Service Area Methodology

Most transit agencies in the United States define their service area as a buffered distance around each of their transit routes. Given the unique service characteristics of Sound Transit service – limited stops connecting regional urban and employment centers – the agency defines its service area based on a radial distance from each transit stop, rather than the transit route alignment. Table 7 below provides details on Sound Transit's service area by stop type.

STOP TYPE	SERVICE AREA (MILES)
Bus stop without parking	0.5
Rail station without parking	1.0
Major bus facilities with parking	2.5
Rail station with parking	5.5

Table 7: Service Area Definitions

Sound Transit Title VI Population Estimates

Using the demographic analysis and Title VI definitions previously outlined in this section, percentages for the three Title VI populations for the Sound Transit service area are identified by census tract and the district overall.

The population representation for any census tract is calculated using the percentage of area that falls within the district or mode's service area to estimate the specific number of people that fall within each of the Title VI categories. For example, if a census tract total is 10 acres and 3 acres are in the service area, based on the previously identified methodologies, then 30 percent of the tract's total population, and in turn the respective Title VI populations, is considered to be within the service area. This methodology assumes an even distribution of population throughout the census tract.

Table 8 shows the Title VI population averages for the Sound Transit service area using the 2012 – 2016 ACS Dataset. Minority and low-income averages serve as a comparison in the service change analysis to determine if mitigation must be considered, while LEP averages help to advise the outreach strategy. The maps at right (Figure 18, 19) show census tracts with minority and low-income populations above the Sound Transit district average.

TITLE VI POPULATIONS	PERCENTAGE OF DISTRICT POPULATION
Minority	38.1%
Low Income	11.8%
Limited English Proficiency	10.1%

Table 8: ST District Populations

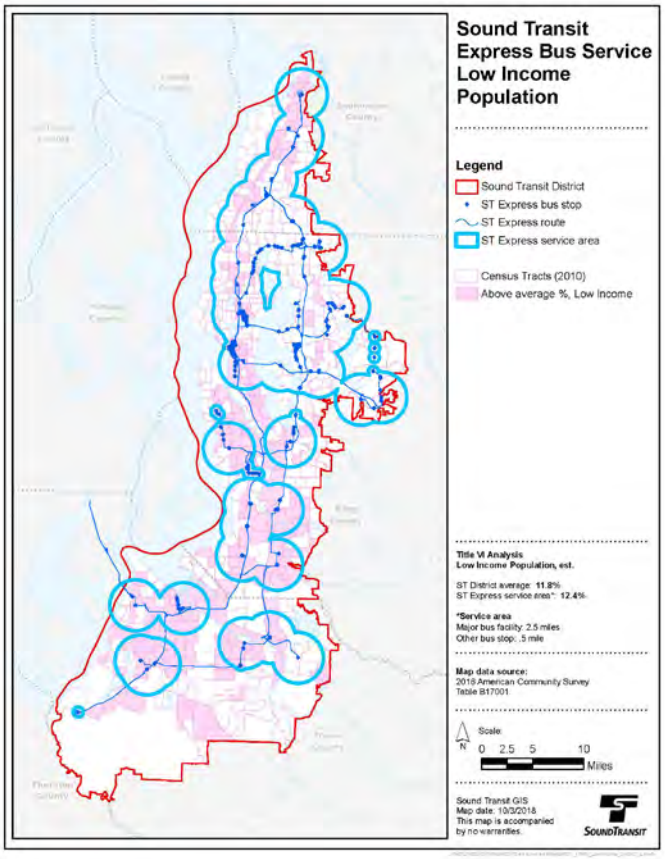


Figure 18: ST Express Bus Service Low Income Population Map

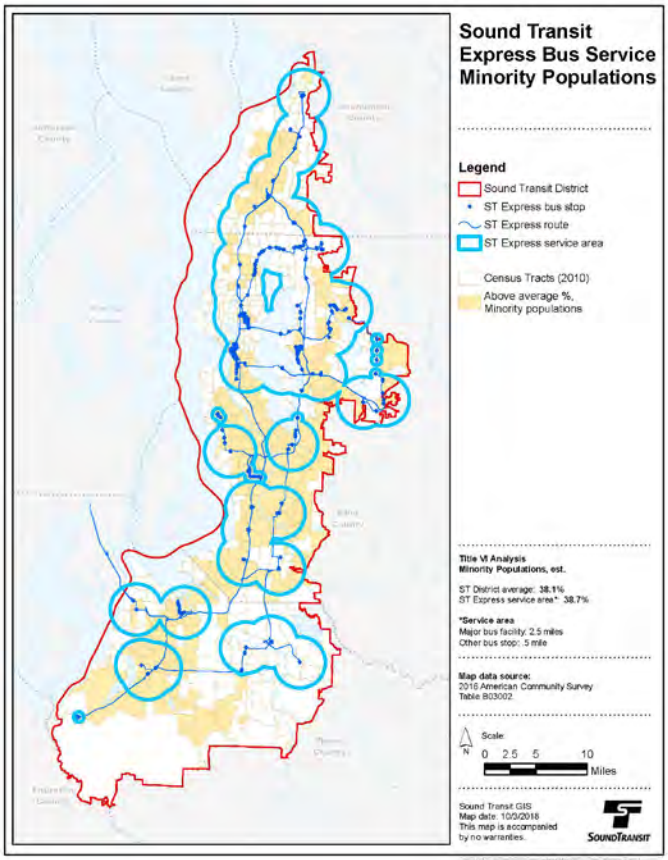


Figure 19: ST Express Bus Service Minority Population Map

Title VI Evaluation of 2019 Proposed Service Changes

Each major service change being proposed has been evaluated to determine if it is causing a disparate impact or disproportionate burden to minority or low-income populations. This section describes anticipated impacts of each change and either what steps have been taken to mitigate the impact or why full mitigation is not possible. In some cases, the LEP population may be cited in order to ensure robust, multilingual outreach.

NEW SURFACE ROUTING FOR ROUTE 550 AS DSTT BECOMES RAIL-ONLY

The removal of Route 550 from the Downtown Seattle Transit Tunnel will impact the entire Route 550 service, causing slower speeds as buses run on surface streets.

The closure of the DSTT to buses is unavoidable due to the sale of the Convention Center and impending Link extensions closing access to the DSTT. In anticipation, regional agencies including Sound Transit, have worked together over the last few years to develop strategies that would improve traffic flow and the passenger experience on surface streets through the methods outlined in the 2019 Service Plan section. This Title VI analysis addresses impacts to Route 550 only.

SERVICE CHANGE DEVELOPMENT PROCESS

Sound Transit worked with King County Metro to look comprehensively at all bus routes expected to use Downtown Seattle surface streets in 2019 and determine the preferred routing for each route. Routes were balanced among surface streets in order to avoid overburdening one street. Route 550 will travel northbound on 4th Avenue and southbound on 2nd Avenue. In assigning a routing for Route 550, staff considered and balanced many priorities, including:

- Minimize change to existing surface routes.
- Preserve travel speeds, to the extent possible.
- Keep routes serving the same markets together, such as ST Express and Community Transit services traveling towards Snohomish County.
- Retain the current skip-stop pattern on 4th Avenue, where each route serves one of two sets of stops.
- Balance high-frequency and high-ridership routes among different pathways, balancing the impacts from additional bus traffic.

Figure 20: New Route 550 Pathway in Downtown Seattle

CUSTOMER IMPACTS

Customers will notice longer travel times and reduced reliability if they ride Route 550 through Downtown Seattle.

NUMBER OF IMPACTED CUSTOMERS

In 2017, about 9,000 customers (87%) on Route 550 boarded or alighted in the DSTT. Many other customers per day boarded Metro bus routes in the DSTT. Because current DSTT bus routes will shift operations to several different surface streets, riders of all Downtown Seattle buses will experience additional congestion and travel time increases.

COMPARISON OF IMPACTED POPULATIONS

Route 550 changes will impact all riders on Route 550 because reliability issues originating in Downtown Seattle are likely to ripple throughout the line. Therefore, the entire service area of Route 550 was compared to the service area of the Sound Transit District to determine if the Route 550 service area was disproportionately impacted.

DATA

Table 9 shows the percentage of low-income, minority, and LEP populations in the Route 550 service area as compared with the Sound Transit district overall.

AREA	LEP	LOW INCOME	MINORITY
Sound Transit District	10.1%	11.8%	38.1%
Route 550 Service Area	9.8%	12.7%	38.6%

Table 9: Title VI Populations of the Route 550 Service Area

MAPS

Maps showing percentages of minority, low-income, and LEP populations in the Route 550 service area by census tract can be found in the Appendix.

FINDINGS

The Route 550 service area has both a low-income population and minority population that are slightly above their respective averages for the Sound Transit District, resulting in a disparate impact and disproportionate burden.

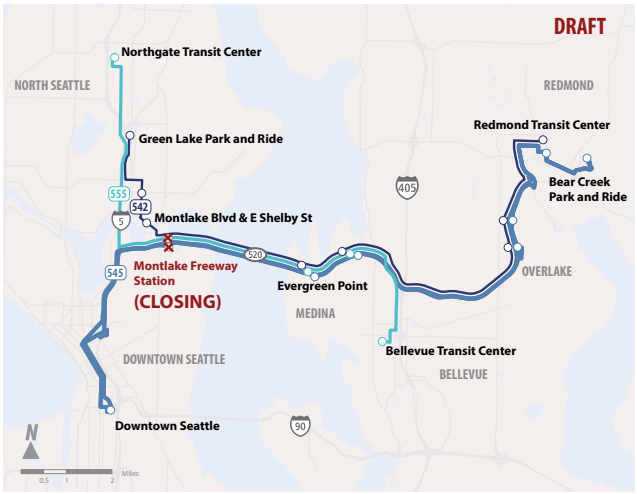
CONCLUSION

The removal of buses from the DSTT is inevitable due to Convention Center expansion and impending Link Light Rail expansion; therefore, longer travel times are inevitable because will face more severe congestion on surface streets than they do in tunnel. However, Sound Transit is committed to mitigating the impacts to the extent possible. Rather than let reliability deteriorate on Route 550 as travel times increase, Sound Transit has proactively added resources to the route to absorb longer running times without impacting service levels.

MONTLAKE FREEWAY STATION CLOSES

DESCRIPTION OF CHANGE

Starting March 2019, WSDOT construction along SR-520 will require the closure of the Montlake Freeway Station, impacting Sound Transit, Metro, and Community Transit service and riders. To minimize the impact, WSDOT and Sound Transit are partnering to add Route 542 service on evenings and weekends to augment existing service. The stop at Montlake Boulevard & Shelby Street will be the closest alternative stop. Route 545 and 555 customers will need to switch routes or transfer and from Route 542 to reach Montlake.



CUSTOMER IMPACTS AND BENEFITS

In 2017, about 350 customers per day out of 10,300 (3%) boarded at Montlake Freeway Station on Routes 545 or 555. These customers will incur additional travel time as they will need to ride Route 542 from Montlake and may need to transfer to reach their final destination. Customers who currently ride Route 545, which is very frequent at peak hours, will also need to wait longer for less frequent Route 542 service.

However, customers traveling between the U-District and Overlake or Redmond will benefit from evening and weekend service on Route 542.

COMPARISON OF IMPACTED POPULATIONS

Initially, only the service area of the Montlake Freeway Station was analyzed and there was found to be no disparate impact or disproportionate burden. However, in order to more accurately capture the riders who transfer or alight at this stop and would therefore still be impacted, this Title VI analysis expanded on the previous methodology.

This change will impact riders in the vicinity of every Route 545 and 555 stop because any of those riders could be currently using Montlake Freeway Station. At the same time, riders at every Route 542 stop will benefit from a longer span of service. Therefore, two customer populations were analyzed for this service change. The Route 545 and 555 service area population was considered the impacted population. The Route 542 service area population was considered the benefited population, even though the geographic areas overlap significantly.

The percentage of minority, low-income and LEP residents in each population was compared to the ST district overall to determine if a disproportionate benefit or impact existed.

DATA

Table ***10*** shows the percentage of low-income, minority, and LEP populations in the impacted service area as compared with the benefited service area, the Montlake Freeway Station service area, and the Sound Transit district overall.

AREA	LEP	LOW INCOME	MINORITY
ST District	10.1%	11.8%	38.1%
Impacted Service Area (Route 545 & 555)	10.1%	9.6%	36.2%
Benefited Service Area (Route 542)	7.7%	10.8%	30.6%
Montlake Freeway Station	3.2%	4.9%	26.5%

Table 10: Title VI Population in the Montlake Area

MAPS

Maps showing percentages of minority, low-income, and LEP populations in the impacted and benefited service areas by census tract can be found in the Appendix.

RESULTS

Both the impacted and benefited service areas have Title VI populations at or below the ST District average so there is no disparate impact or disproportionate burden.

CONCLUSION

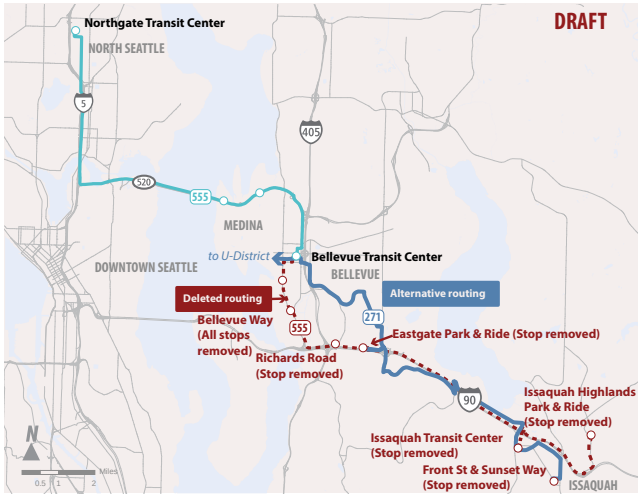
Because there is no disparate impact or disproportionate burden to Title VI populations, no mitigation is necessary. However, mitigation service on Route 542 is being offered because WSDOT funding was available and because not mitigating service would have caused a significant customer impact on nights and weekends.

ROUTE 555 TRUNCATES AT BELLEVUE TRANSIT CENTER

DESCRIPTION OF CHANGE

Almost 80% of the current ridership on Route 555 is between the Northgate and Bellevue Transit Centers, with the Bellevue-Eastgate-Issaquah segment carrying an average of 10 riders per trip. The low-performing segment of the route would be eliminated and hours reinvested into Route 554.

Customers can ride King County Metro Route 271 between Bellevue and downtown Issaquah.



CUSTOMER IMPACTS

While the majority of Route 555 riders alight at or before Bellevue Transit Center in the AM, about 175 of 740 daily customers (24%) proceed further east. These customers who board at Northgate would need to transfer at Bellevue Transit Center to Metro Route 271, incurring both a transfer penalty and additional travel time. Customers who normally board in Bellevue would simply board Route 271. Additional travel time would depend on how far a rider is traveling; to downtown Issaquah,

COMPARISON OF IMPACTED POPULATIONS

Because Route 555 operates only eastbound in the AM peak and only westbound in the PM peak, this change will impact residents in the vicinity of every stop except the Issaquah Highlands, where riders cannot board in the mornings. Even riders living near non-impacted stops may be impacted if they currently alight at an impacted stop. Therefore, the population of the service area of every stop except Issaquah Highlands was considered the Route 555 impacted service area. This population was compared to the ST Express service area as a whole to determine if a disparate impact would occur.

DATA

Table 11 shows the percentage of low-income, minority, and LEP populations in the Route 555 impacted service area as compared with the Sound Transit district overall.

AREA	LEP	LOW INCOME	MINORITY
Sound Transit District	10.1%	11.8%	38.1%
Route 555 Impacted Service Area	9.2%	9.3%	32.7%

Table 11: Title VI Populations of the Route 555 Impacted Area

MAPS

Maps in the appendix show percentages of minority, low-income, and LEP populations in the impacted and benefited service areas.

RESULTS

The Route 555 impacted service area does not have a LEP, minority, or low-income population that is greater than that of the Sound Transit district overall. Therefore, this change does not result in a disparate impact or disproportionate burden.

Given that some individual census tracts in the impacted service area do have disproportionate LEP populations, outreach about this change will be sensitive to those language needs.

CONCLUSION

This service change affects only about 24% of the current ridership of Route 555 and is necessary to use resources more efficiently. These resources will be redeployed elsewhere in East King County, primarily to restore Route 554 trips eliminated due to the closure of the Rainier Freeway Station. By redeploying resources, more riders can be served and more destinations reached than if resources continue to be spent on unproductive trips with parallel service available. Therefore, impacts to Route 555 will not be mitigated.

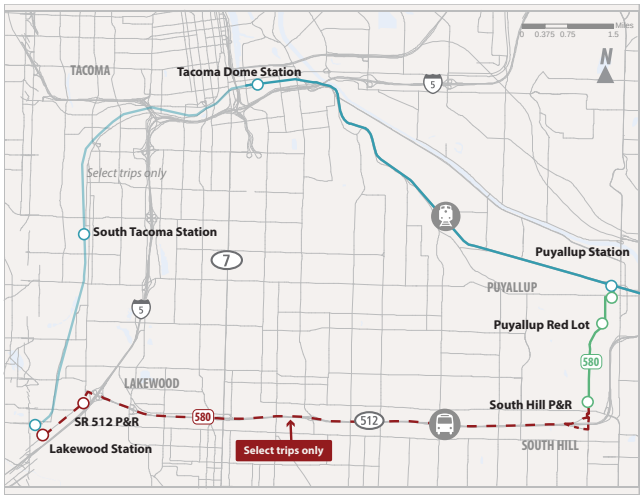
ROUTE 580 TRUNCATES MOST TRIPS AT SOUTH HILL P&R

DESCRIPTION OF CHANGE

This change would discontinue service on the lowest performing segment of Route 580 between Lakewood Station and South Hill Park-and-Ride, when there is a corresponding Sounder trip traveling to or from Lakewood. Service to Lakewood would remain when connecting to peak-direction Sounder trips starting or ending in Tacoma. Saved resources would be reallocated within other Pierce County ST Express services.

Additionally, due to low ridership, the following 580 trips would be discontinued:

- 3 AM trips to Lakewood and 3 PM trips to Puyallup
- The 10:03 AM departure connecting to the midday Sounder south line train.



CUSTOMER IMPACTS

Of the 750 daily Route 580 customers, on average 40 (5%) travel on the trips or segment proposed to be removed and would be impacted by this change. Some customers, traveling between Puyallup and Lakewood on trips with a corresponding Sounder train, could use Sounder to reach Lakewood Station or Puyallup Station, though they would incur a higher fare of $4.00.

Customers traveling between South Hill, the SR 512 park-and-ride lot, and Lakewood could ride Pierce Transit Route 4, or use a different park-and-ride lot to reach their final destination. Customer traveling between Lakewood and the SR 512 park-and-ride in the peak direction could also ride ST Express Route 592.

COMPARISON OF IMPACTED POPULATIONS

This change will impact riders residing near all five stops on Route 580. Therefore, the entire service area of Route 580 was compared to the service area of the ST District overall to determine if the Route 580 service area was disproportionately impacted.

DATA

Table 12 shows the percentage of low-income, minority, and LEP populations in the Route 580 service area as compared with the Sound Transit district overall.

AREA	LEP	LOW INCOME	MINORITY
Sound Transit District	10.1%	11.8%	38.1%
Route 580 Service Area	8.9%	17.7%	42.3%

Table 12: Title VI Populations for Route 580

MAPS

Maps showing percentages of minority, low-income, and LEP populations in the Route 580 service area by census tract can be found in the Appendix.

RESULTS

The Route 580 service area has both a low-income population and minority population that are above their respective averages for the Sound Transit District.

Route 580 does not have a disproportionate population of Limited English Proficient riders, but information will still be made available in various languages.

CONCLUSION

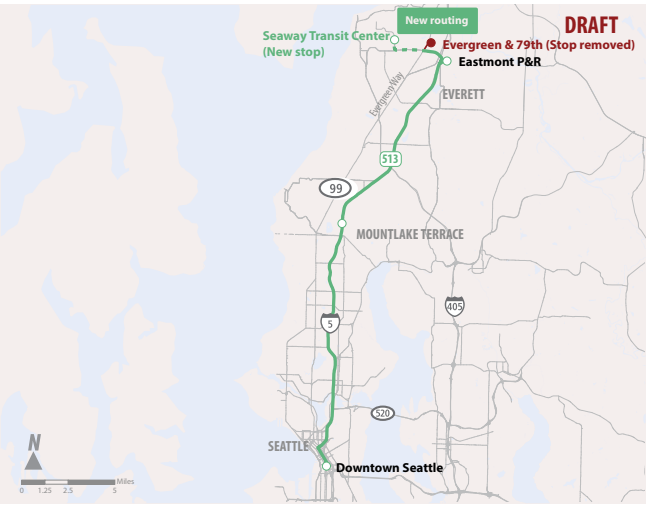
This service change affects only 40 riders or 5% of the current ridership of Route 580, and alternative service is available on Pierce Transit Route 4. This change also will help to use ST Express resources more efficiently; therefore, Sound Transit believes this to be a justifiable change.

In order to mitigate these impacts, customer care will use Rider Alerts, texts, and in-person street teams to ensure that riders are aware of their options. Additionally, resources saved from the change will be used to add a new trip to Route 592, which serves a high proportion of minority and low-income populations, including Lakewood and the SR 512 park-and-ride. Route 592 has higher ridership per trip than Route 580 and the change will serve more riders than current service.

ROUTE 513 REDIRECTED TO SEAWAY TRANSIT CENTER

DESCRIPTION OF CHANGE

In March 2019 the opening of the Seaway Transit Center will provide an opportunity to integrate ST Express service with local and regional service operated by Everett Transit and Community Transit. In order to leverage this opportunity, Route 513 would be restructured to serve the new transit center, and as a result would no longer serve the stop pair at Evergreen Way and 79th Pl SE.



CUSTOMER IMPACTS AND BENEFITS

Currently, 66 riders or 10% of current Route 513 customers board or alight at Evergreen & 79th Pl and will need to use a different stop to access Route 513 and may incur longer trip times to reach their final destinations. Customers could use the nearby Eastmont park-and-ride lot or ride local service to the Seaway Transit Center, which does not include parking.

Integrating Route 513, alongside restructured Community Transit and Everett Transit's service, at the new Seaway Transit Center will provide an opportunity for riders to reach new destinations and be connected to a greater part of the regional bus network. In addition, serving the Seaway Transit Center will provide an opportunity to be better connected to the Boeing Everett Plant/Industrial Center and to Boeing's new employee shuttle service the Seaway Transit Center.

COMPARISON OF IMPACTED POPULATIONS

For this analysis, the population of the service area before the change, including Evergreen Way & 79th Pl SE, was compared with the population of the service area after the change, including the Seaway Transit Center, to determine what populations the new service at Seaway Transit Center would primarily benefit and impact.

DATA

Table 13 shows the percentage of low-income, minority, and LEP populations in the proposed new Route 513 service area as compared with the current Route 513 service area.

AREA	LEP	LOW INCOME	MINORITY
Sound Transit District	10.1%	11.8%	38.1%
Current Service Area	10.4%	12.8%	35.9%
Proposed New Service Area	10.3%	12.8%	35.9%

Table 13: Title VI Populations for Route 513

MAPS

Maps showing percentages of minority, low-income, and LEP populations in the Route 513 service area by census tract can be found in the Appendix.

RESULTS

The data shows that fewer minority populations would be served with the proposed change, compared to the Sound Transit district average. Based on the agency's Title VI policies, this change would have a disparate impact on minority populations served by Route 513.

The proposed changes would not change the proportions of low income or minority proportions compared to the service area Route 513 provides today.

Beyond communicating this change and doing targeted outreach to the impacted customers, Sound Transit will not be mitigating the disparate impact of this change, as integrating service with other transit agencies at regional transit centers will benefit more than just riders of Route 513.

DRAFT

Service Quality Monitoring by route

Route	Description	Percent of Population in Title VI Category			OTP			Trips Operated			Customer Complaints per 100,000 boardings			Passenger Overcrowd Rate		
		Title VI Category			2016	2017	2018	2016	2017	2018	2016	2017	2018	2016	2017	2018
Target		M	LI	LEP	85%	85%	85%	99.8%	99.8%	99.8%	15	15	15	0%	0%	0%
510	Everett-Seattle	36%	15%	10%	85%	87%	87%	99.9%	99.9%	99.8%	10	11	11	1%	0%	1%
511	Lynnwood-Seattle	36%	12%	10%	82%	84%	86%	99.9%	99.9%	99.9%	2	2	2	2%	3%	2%
512	Everett-Seattle	36%	13%	10%	89%	91%	92%	99.9%	99.9%	99.9%	4	3	4	1%	0%	1%
513	Evergreen/79th-Seattle	35%	12%	10%	81%	84%	86%	99.9%	99.7%	99.8%	6	7	4	0%	0%	1%
522	Woodinville-Seattle	30%	9%	8%	85%	85%	89%	99.6%	99.8%	99.8%	1	6	3	3%	4%	4%
532	Everett-Bellevue	37%	11%	10%	95%	95%	94%	99.8%	99.9%	99.9%	16	4	13	3%	2%	3%
535	Lynnwood-Bellevue	34%	8%	9%	97%	97%	98%	99.9%	100.0%	99.9%	4	7	9	0%	0%	1%
540	Kirkland-U. District	31%	8%	8%	75%	70%	72%	99.7%	99.9%	99.9%	10	11	7	0%	0%	0%
541	Overlake-U. District	42%	9%	13%	82%	83%	89%	99.7%	99.8%	99.8%	5	9	5	0%	0%	0%
542	Redmond-U. District	30%	10%	7%	88%	86%	87%	99.8%	99.9%	99.8%	6	5	2	0%	0%	0%
545	Redmond-Seattle	34%	11%	8%	86%	85%	90%	99.7%	99.7%	99.7%	5	4	4	7%	5%	3%
550	Bellevue-Seattle	40%	10%	11%	86%	89%	90%	99.6%	99.7%	99.7%	2	2	3	7%	5%	4%
554	Issaquah-Seattle	37%	9%	9%	87%	83%	89%	99.7%	99.6%	99.7%	5	6	6	2%	2%	1%
555	Northgate-Issaquah	31%	10%	8%	70%	75%	80%	100.0%	100.0%	100.0%	17	23	46	1%	0%	0%
556	Issaquah-Northgate	33%	11%	9%	70%	74%	76%	99.6%	99.9%	99.7%	16	12	13	0%	0%	0%
560	Westwood Village-Bellevue	48%	12%	14%	79%	81%	85%	99.8%	99.9%	99.8%	5	7	8	0%	0%	0%
566	Auburn-Overlake	51%	18%	16%	80%	77%	78%	99.7%	99.8%	99.7%	13	9	6	0%	0%	0%
567	Kent-Overlake	51%	18%	16%	87%	87%	85%	99.9%	99.9%	99.9%	16	13	24	1%	1%	0%
574	Lakewood-SeaTac	51%	18%	12%	75%	70%	74%	99.8%	99.8%	99.7%	6	7	4	0%	0%	0%
577	Federal Way-Seattle	45%	14%	11%	65%	74%	75%	99.9%	99.9%	99.9%	8	6	9	1%	1%	1%
578	Puyallup-Seattle	37%	14%	9%	71%	73%	76%	99.8%	99.7%	99.7%	6	8	4	1%	1%	1%
580	Lakewood-Puyallup	39%	16%	8%	70%	72%	78%	99.8%	100.0%	99.9%	6	7	5	3%	6%	4%
586	Tacoma-U. District	42%	24%	9%	83%	79%	77%	100.0%	100.0%	99.9%	18	19	3	0%	0%	0%
590	Tacoma-Seattle	39%	19%	7%	74%	73%	76%	99.6%	99.6%	99.7%	12	7	6	1%	1%	0%
592	Olympia-Seattle	45%	18%	9%	71%	70%	71%	99.9%	99.8%	99.8%	8	15	19	0%	0%	0%
594	Lakewood-Seattle	45%	20%	9%	80%	78%	77%	99.8%	99.7%	99.8%	7	10	8	1%	0%	0%
595	Gig Harbor-Seattle	32%	13%	6%	79%	74%	77%	99.8%	99.8%	99.7%	27	32	12	0%	0%	0%
596	Bonney Lake-Sumner	18%	9%	2%	82%	82%	84%	100.0%	100.0%	99.9%	4	20	12	0%	0%	0%
ST Express System Total		*38%*	*13%*	*9%*	*81%*	*81%*	*83%*	*99.8%*	*99.8%*	*99.8%*	*9*	*10*	*9*	*1%*	*1%*	*1%*
Sound Transit District Total		*38%*	*12%*	*10%*												

Table 14: Service Quality by Route

Sound Transit monitors key performance indicators on each of its routes to identify trends overtime and areas for improvement. Table 14: Service Quality by Route shows an example of how these metrics are evaluated. Red indicates relatively poor performance for that metric, while green indicates relatively good performance. Certain trends emerge from this analysis:

- Many routes in South King county and Pierce county with high Title VI populations also have the poorest OTP, in part due to the corridors on which they are located. The 2019 service plan identifies some of these routes for reliability investments.
- Overcrowding occurs on many Title VI routes, such as Route 550, and 580, but metrics have mostly improved since 2017. Non-Title VI routes with overcrowding include Route 545 and 522.
- Customer complaint rates are highest on many Title VI routes, including Route 567 and 592, as well as Route 555, a non-Title VI route.
- Routes with the poorest metric of Trips Operated are split between Title VI and non-Title VI routes. This metric largely depends on the operating partner, whose bus and operator constraints and policies on missed trips dictate which trips are not delivered on a given day.

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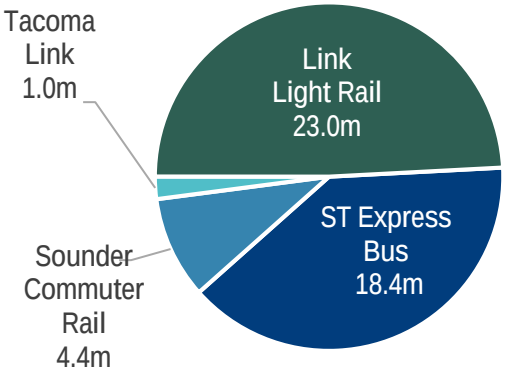
RIDERSHIP

How many people used Sound Transit?

System Overview

NEW RECORD IN 2017

Sound Transit, with its two light rail lines, two commuter rail lines, and 28 express bus routes, serves as an integral part of the regional transit system in Central Puget Sound. In 2017, ridership on Sound Transit services hit a new record, with 47 million boardings on our trains and buses. Several factors contributed to the 2017 ridership results, with these factors continuing to influence 2018 ridership.



Link Light Rail Growth

Ridership on Link light rail continued to grow in 2017, spurred by the opening of University Link as well as Angle Lake Station in 2016. Additional use during special events pushed ridership up past 2016 levels.

Regional Traffic Congestion & Construction

Congestion resulted in shifts in ridership, with some choosing to take Link and Sounder rather than ST Express on routes that parallel I-5. Additional construction impacts for East Link resulted in declining ST Express ridership on Routes 545 and 550.

New Sounder Trips

Two new sounder trips on the South line resulted in increased ridership on Sounder as well as ST Express Routes 580 and 596 which connect to Sounder at Puyallup and Sumner stations.

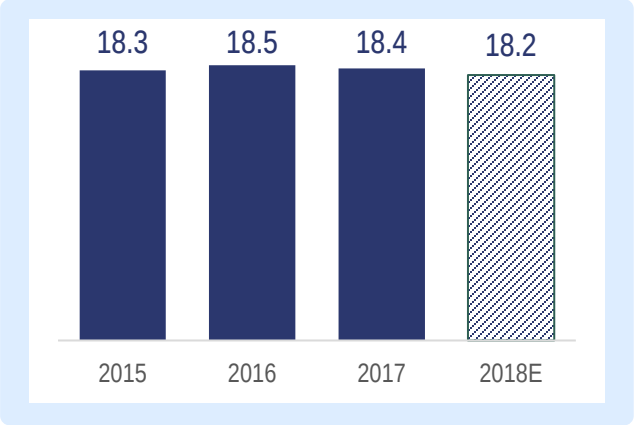
Tacoma Link Events

The year 2017 saw a return of the Festival of Sail event which drew large crowds on Tacoma Link. Additional events at the Tacoma Dome such as Garth Brooks resulted in increased event ridership on Tacoma Link.

Ridership by mode

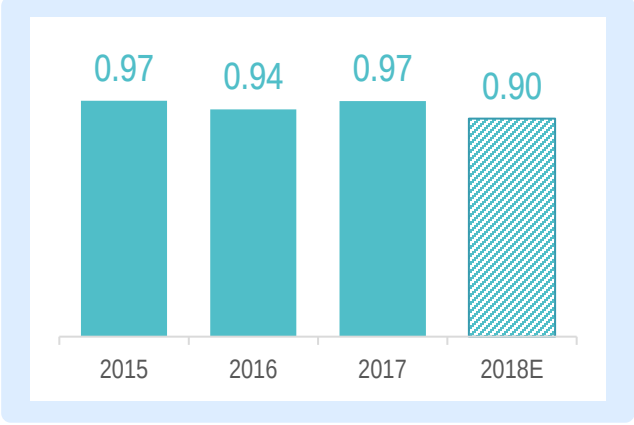
ST EXPRESS

ST Express bus ridership was neutral over the past several years due to increasing congestion as well as the closure of several park-and-rides to facilitate the Link system expansion. Ridership in 2018 is expected to be slightly down from 2018 as a result of the closure of the Rainier Freeway Station for East Link construction as well as additional congestion.



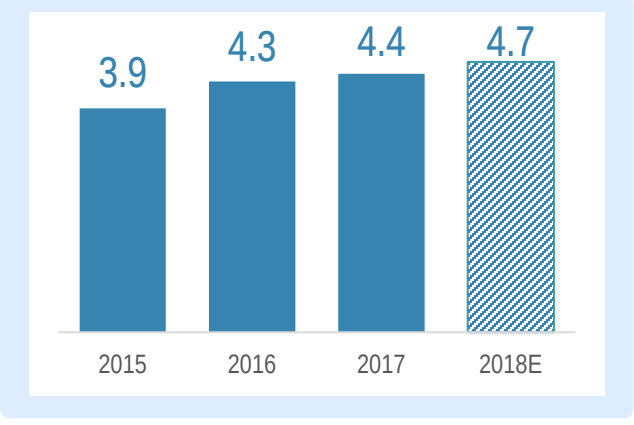
TACOMA LINK

Tacoma Link had ridership increases compared to prior years due to the Festival of Sail which drew large crowds in 2017 as well as larger attendance special events at the Tacoma Dome such as the three day Garth Brooks shows, which drew crowds on Tacoma Link. Ridership estimates for Tacoma Link in 2018 are down due to the extended closure of the Tacoma Dome for renovations.



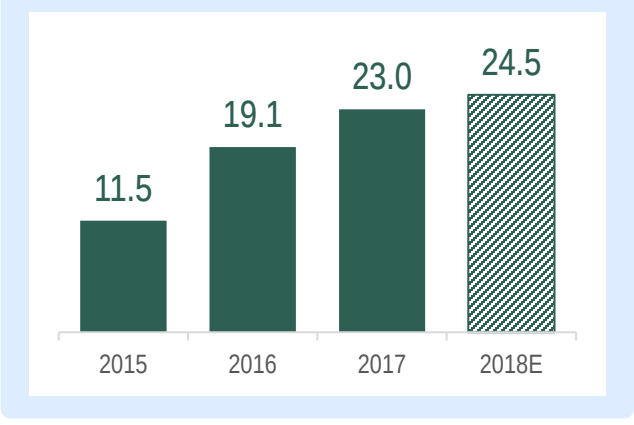
SOUNDER

Sounder growth has been driven by additional trips that were implemented in September 2016 and 2017, adding three new round trips on the south line. This growth is anticipated to continue in 2018.



LINK LIGHT RAIL

Link ridership was up in 2017 which reflected the first full year of operation of the University Link and Angle Lake extensions to the system. Ridership has been robust and continues to grow in 2018, spurred by passengers avoiding congestion as well as special events.



ST Express Ridership

ST Express bus ridership has recovered since the Great Recession of the late 2000s, but more recently has seen stagnating ridership growth, even with additional hour investments over the past several years. In the past year, ridership has begun to slowly decline rather than grow, which is a result of several factors that will be discussed further in this section. In general, ridership on ST Express buses is lower in the December holiday season and highest during the summer months. This section's analysis will look at ridership by time of day, corridor and route level. Stop-level ridership can be found in the facility maps later in this section as well as in the Appendix.

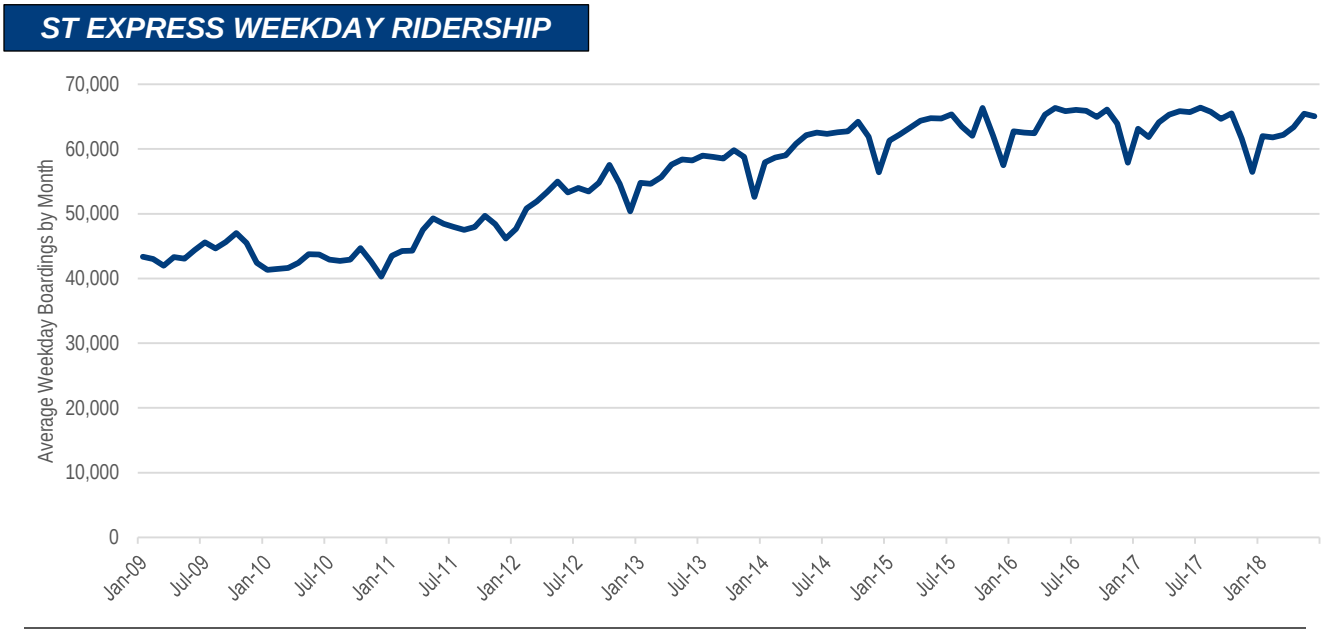


Figure 21: Average Weekday ST Express Ridership, 2009-2018

RIDERSHIP BY TIME OF DAY

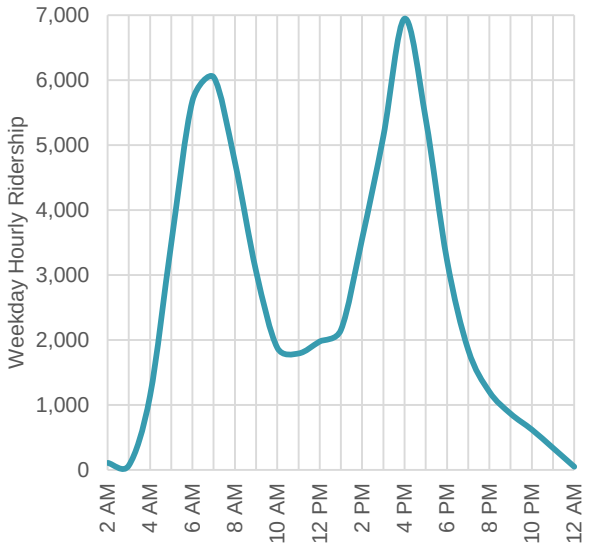


Figure 22: Weekday ST Express Ridership by Hour, Spring 2018

Weekday ridership has two distinct peaks corresponding with commute periods. PM peak ridership is higher and less spread out compared to the morning peak, a reflection of different morning departure times based on distance traveled but consistent departure times from job centers.

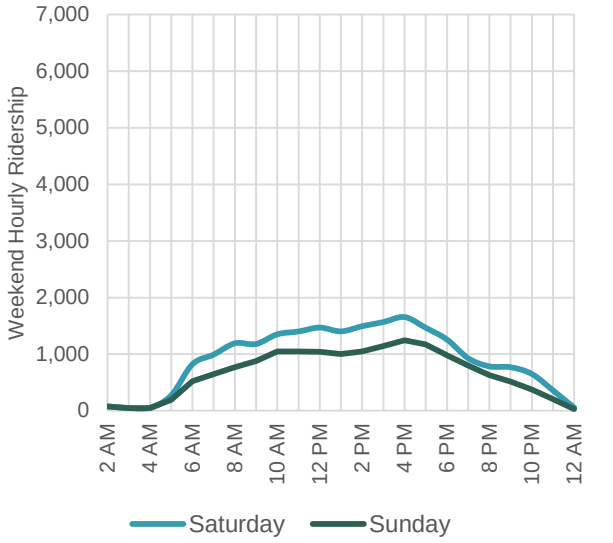


Figure 23: Weekend ST Express Ridership by Hour, Spring 2018

Weekend ridership is steady during the day, with Saturday ridership higher than Sunday ridership. On both weekdays and weekends, ridership has a slight peak at 4pm, which is likely the result of events ending around that time.

Ridership by Route

Largest ridership corridors in the Sound Transit District connect Seattle to East King County. Both the SR 520 corridor and the I-90 corridor have over 14,000 boardings a day. These buses have service during peak periods of every 5 to 7 minutes and provide a fast connection across Lake Washington. I-5 North and I-5 South (Pierce and King) together form the next strongest corridors in the Sound Transit system. I-405 corridors from Bellevue to Snohomish and South King County are commute oriented, with peak service having higher ridership compared to the all-day, all week service.

Sounder connectors provide connections between park-and-rides in Pierce County to Sumner and Puyallup stations. The park-and-rides are approaching capacity, resulting in limited ridership growth once those spots are filled.

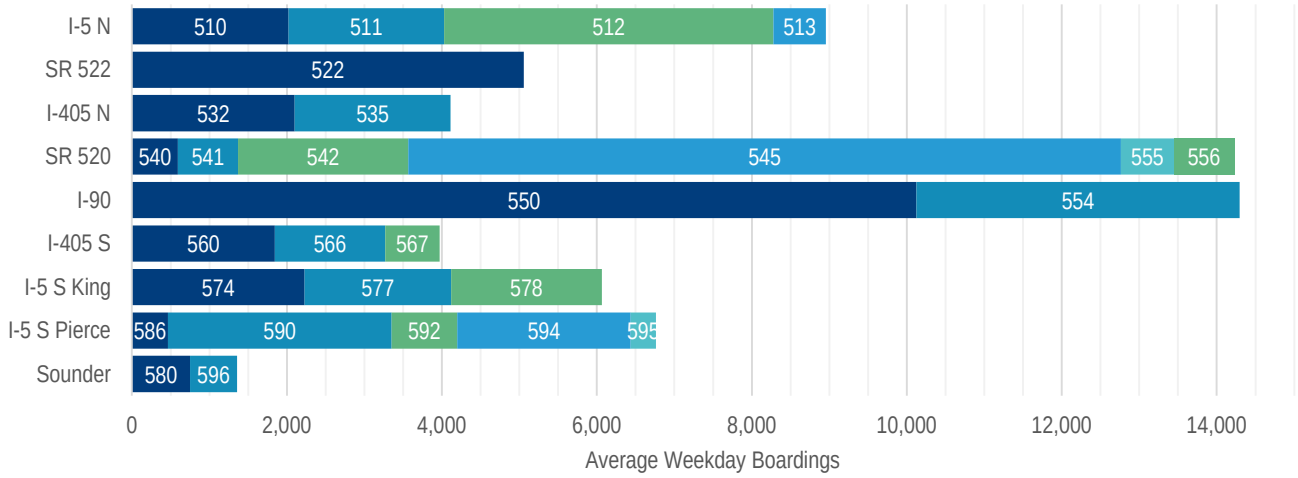


Figure 24: ST Express Ridership by Corridor

ST EXPRESS YEAR-OVER-YEAR ROUTE RIDERSHIP

With small service changes in 2017, ridership at the route level had very small changes from year to year.

The biggest change for any individual route was the result of park and ride closures. Route 550 experienced the largest change at a decrease of about 500 boardings. This is roughly equal to the number of stalls lost in the South Bellevue Park-and-Ride closure.

Route 541 increased with a corresponding decrease in 545 ridership. This was likely the result of the closure of the park-and-ride at Overlake Transit Center and riders shifting to Overlake Park-and-Ride which Route 541 serves.

Ridership declines continue on Routes 574, 592, and 594 due to congestion at the Pierce-King county boundary, resulting in lower on-time performance and less reliable service.

Sounder connectors continue to grow as a result of the new Sounder South round trips.

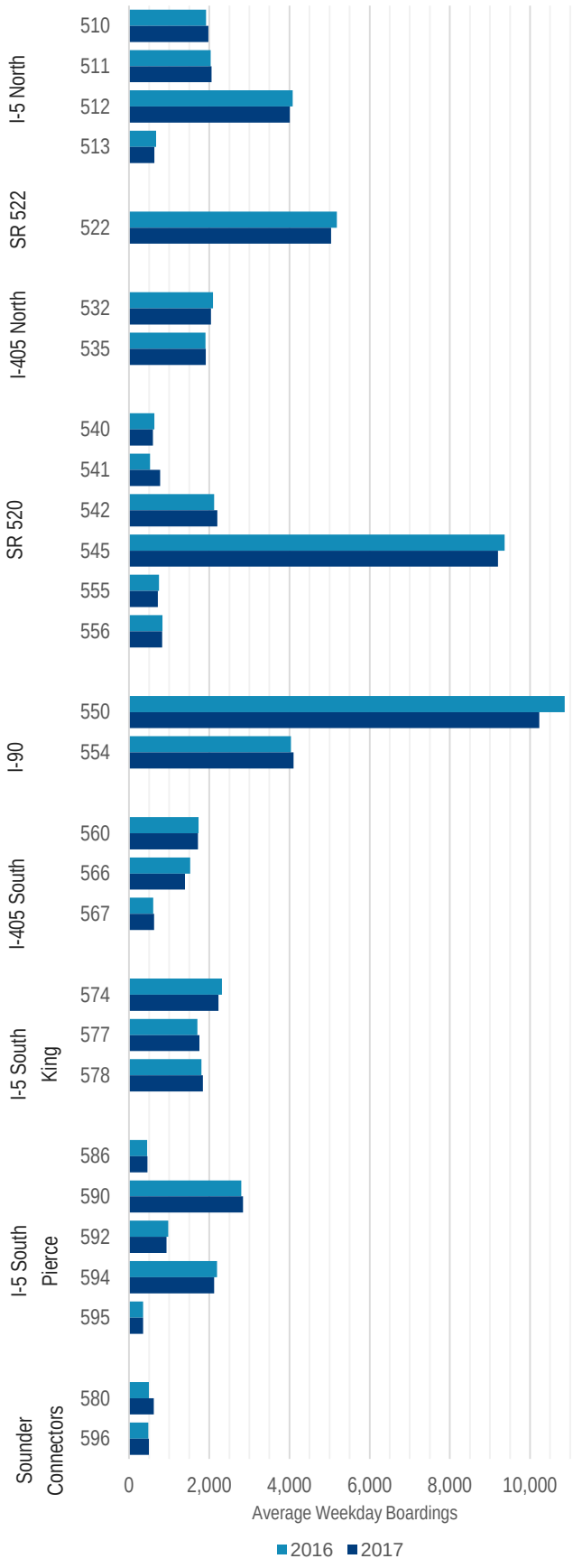
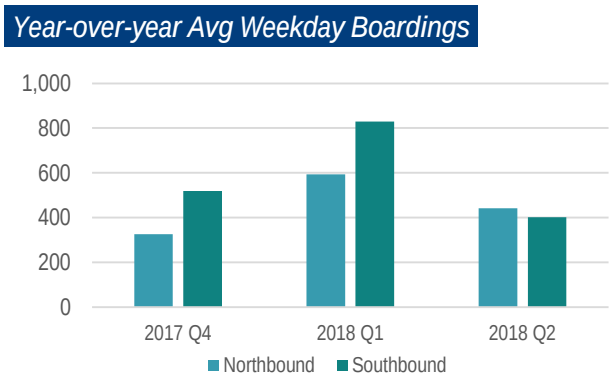


Figure 24: ST Express Ridership by Route, 2016 to 2017

New Sounder South Line Trips *drive ridership growth*

September 2017 marked the most recent Sound Transit service expansion on Sounder south line by implementing two new round trips and adding five cars to the mid-day train to make all south line trains 7-cars.

These service changes have resulted in significant ridership gains over the past year. In the second quarter of 2018, average weekday boardings northbound increased by 442 passengers and southbound increased by 401 passengers. Q1 2018 year-over-year (YOY) growth was abnormally high due to decreased Q1 2017 ridership from the Tacoma Trestle project.



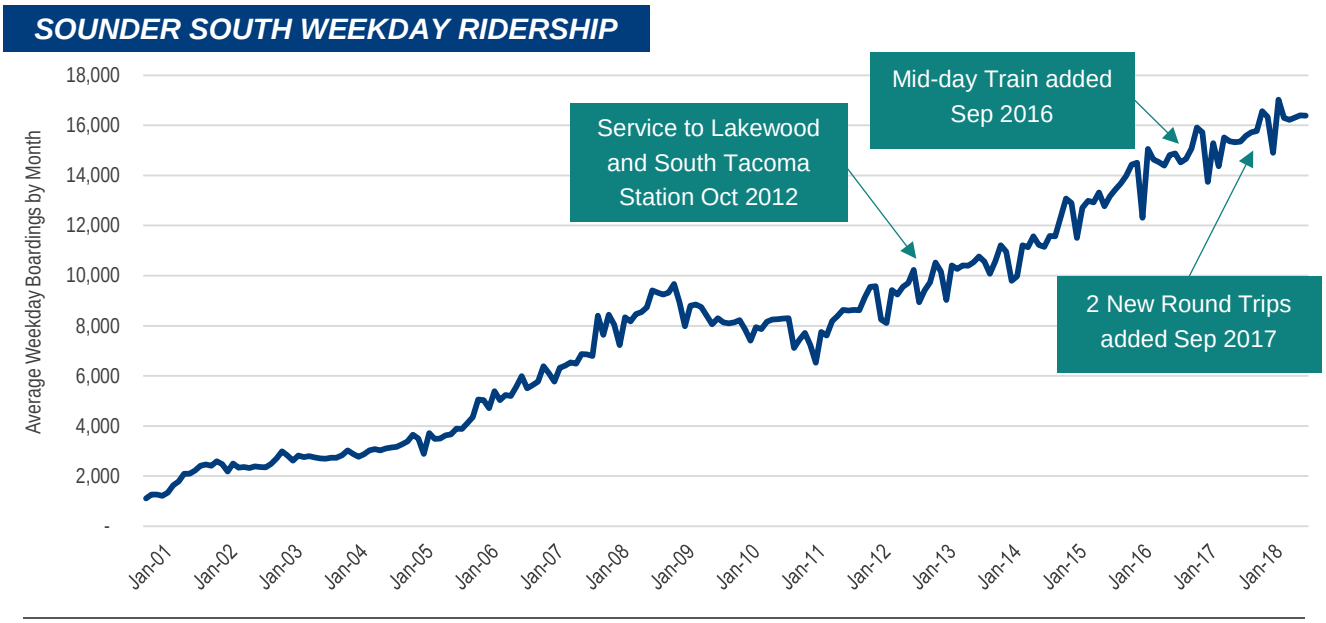


Figure 26: Average Weekday Sounder South Ridership, 2001-2018

South Line Trip-Level Ridership

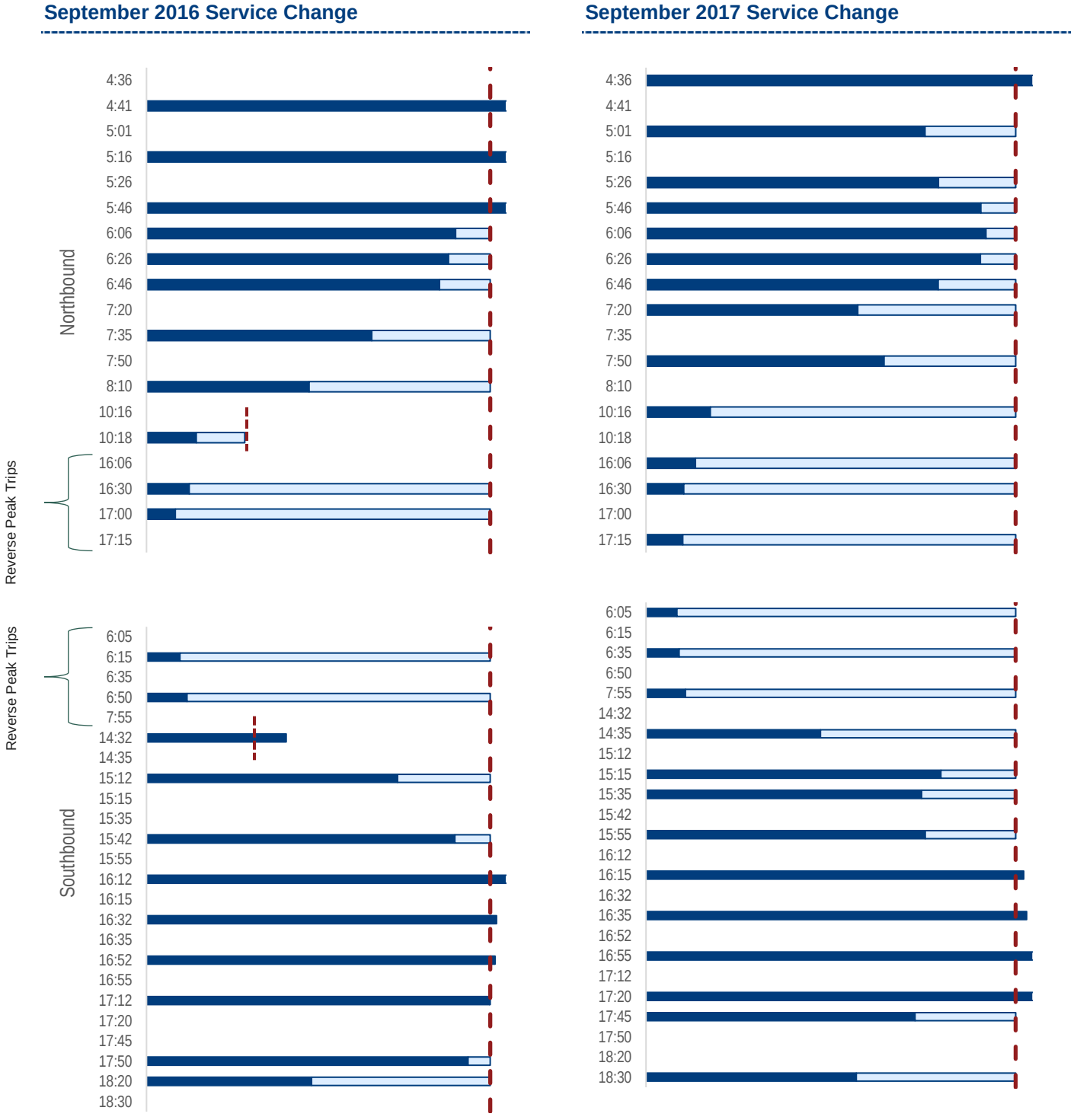


Figure 27: Sounder South Ridership by Trip

The majority of ridership growth occurred on peak trains. The two new round trips added in the September 2017 service change eased crowding on the early morning trains and added more evening trip options. The five added cars to the mid-day train also provided much needed capacity on the afternoon southbound train.

South Line Station-Level Ridership

Average weekday ridership by station. Oct 2016 – Sep 2017 represents data before the September 2017 service change and Oct 2017 – Jun 2018 reflects data after the change.

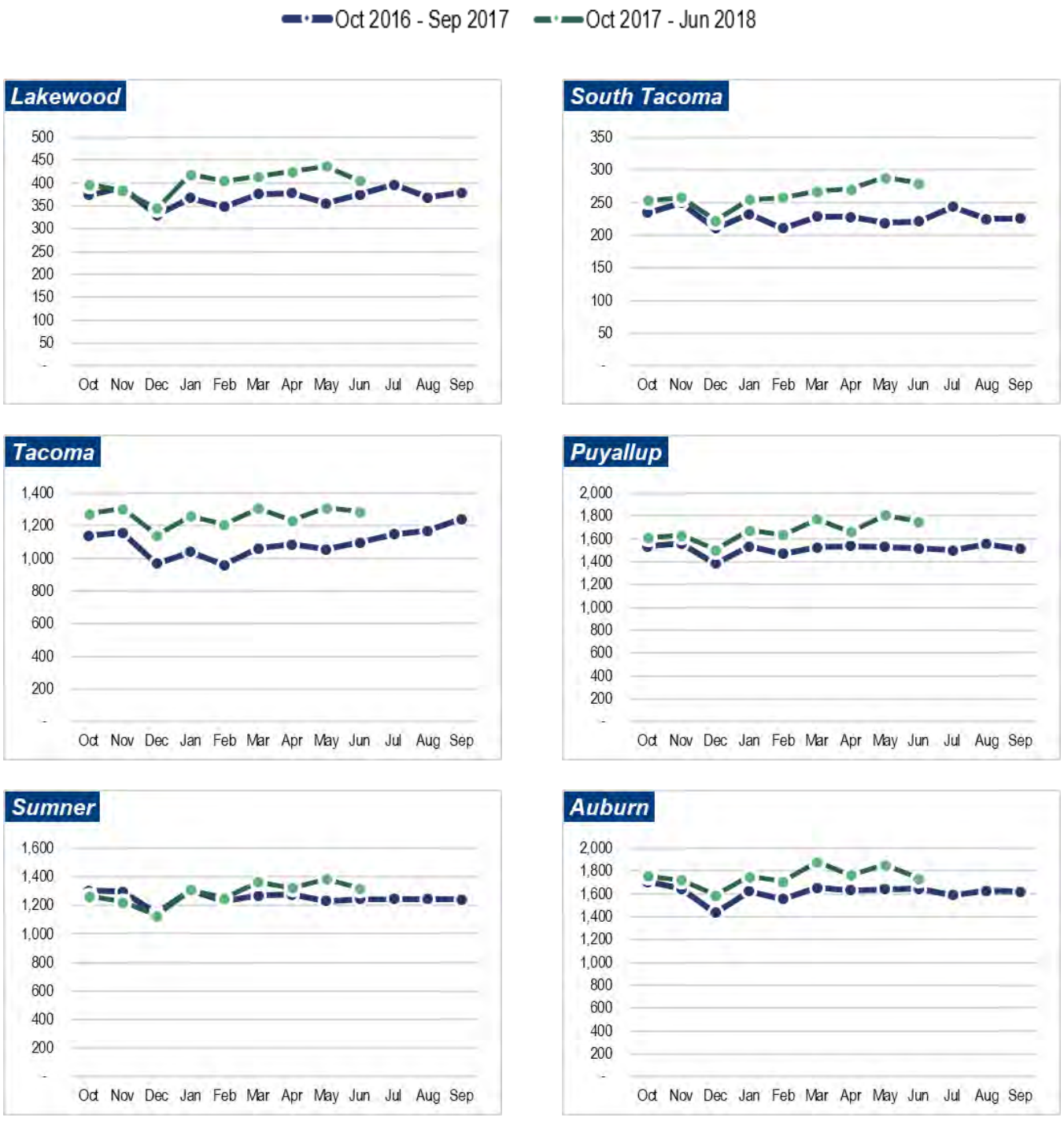
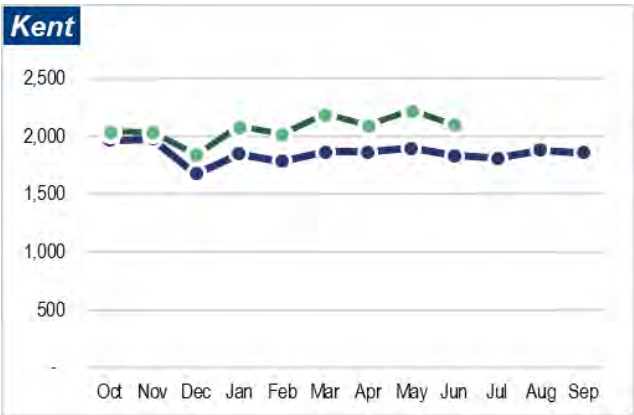
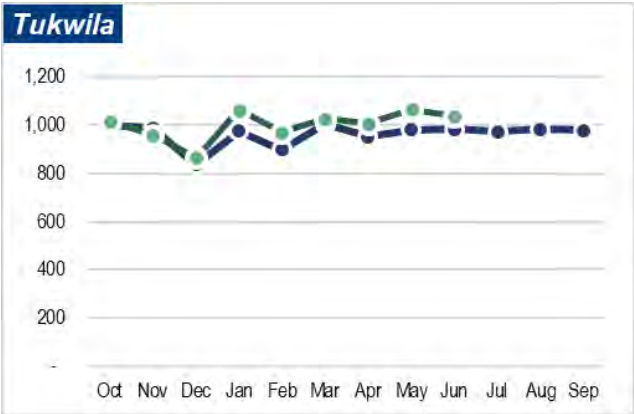


Figure 28: Sounder South Ridership by Station

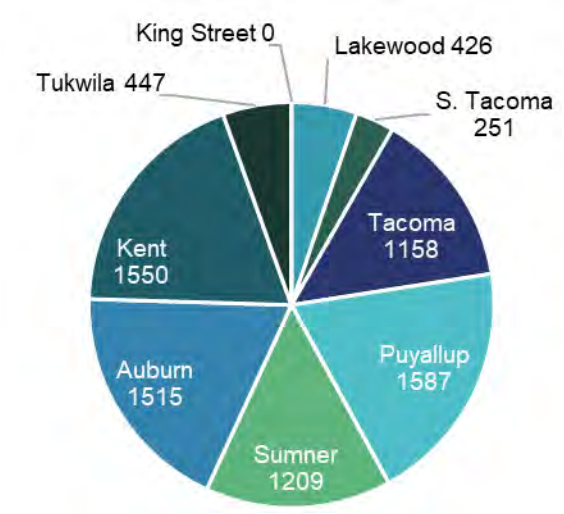

Kent
2,500
2,000
1,500
1,000
500
-
Oct Nov Dec Jan Feb Mar Apr May Jun Jul Aug Sep


King Street Station
8,000
7,000
6,000
5,000
4,000
3,000
2,000
1,000
-
Oct Nov Dec Jan Feb Mar Apr May Jun Jul Aug Sep

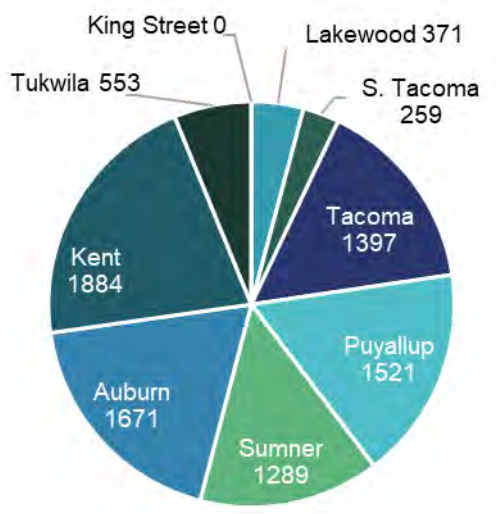

Tukwila
1,200
1,000
800
600
400
200
-
Oct Nov Dec Jan Feb Mar Apr May Jun Jul Aug Sep

Peak Direction Travel Patterns

Northbound Boardings



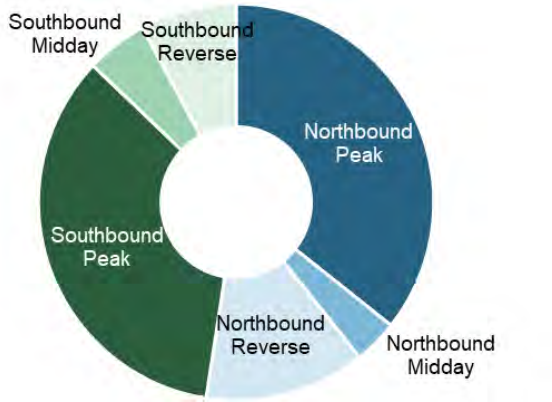
Southbound Alightings



- About 60% of northbound boardings occur at Puyallup, Auburn, and Kent stations, each totaling roughly 19%.
- More riders alight at Kent, Auburn, and Tacoma in the afternoon than board in the morning, which seems to indicate an alternative mode choice for their morning commute.

Figure 29: Sounder South Ridership by Station

On which trains did growth occur?



Train	YOY Growth
Northbound Peak	301
Northbound Midday	30
Northbound Reverse	111
Southbound Peak	292
Southbound Midday	42
Southbound Reverse	66

Table 15: Ridership Growth on Sounder South by Time of Day

Sounder Connections

What percentage of Sounder South riders take a bus to get to the station?

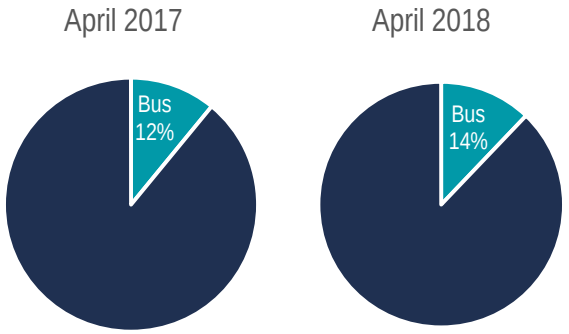


Figure 30: Transfer Patterns to Sounder South

What connections do Sounder riders make once they get downtown?

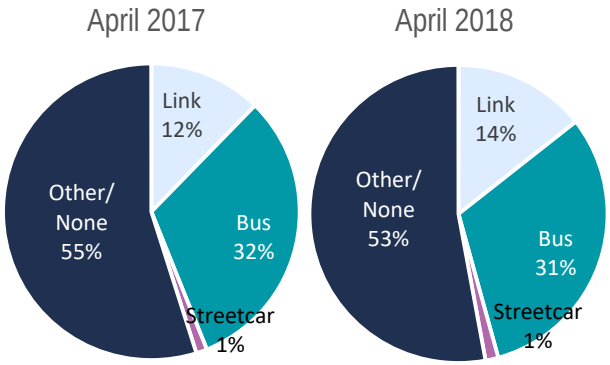


Figure 31: Transfer Patterns from Sounder South

Of the transfers that occur downtown, how many transfers are in the tunnel vs. street level?

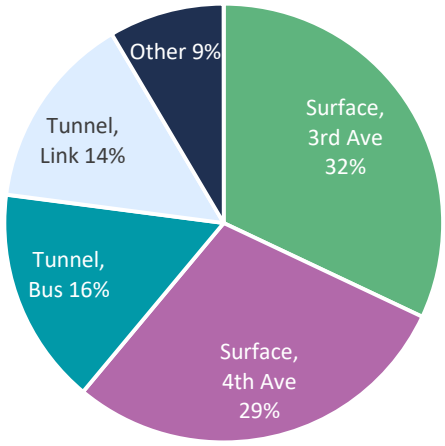


Figure 32: Transfer Locations at King Street from Sounder South

What buses do Sounder South riders take to get to the station?

Route	Percent
Sound Transit Route 580	26%
Sound Transit Route 596	25%
Pierce Transit Route 497	11%
Pierce Transit Route 400	6%
King County Metro Route 180	5%
King County Metro Route 186	3%
Other	24%

What buses do Sounder riders transfer to downtown?

Route	Percent
King County Metro Route 40	7%
Sound Transit Route 545	6%
Sound Transit Route 590	5%
Sound Transit Route 567	4%
Sound Transit Route 512	4%
King County Metro Route 150	4%
Sound Transit Route 550	4%
Kent County Metro Route 70	4%
King County Metro Route 255	3%
King County Metro Route 5	3%
King County Metro Route 212	3%
Other	53%

- When Sounder riders transfer downtown it's pretty evenly split where riders catch their transfer - about one third catch their transfer on 3rd Avenue, one third on 4th Avenue, and one third in the downtown Seattle transit tunnel.

Sounder North Line

Sounder north line ridership has grown over the past 10 years, but more recently has remained fairly stable, as shown in the graph below. Major dips in average weekday ridership are due to mudslide activity which shuts down tracks for a minimum of 48 hours after the incident.

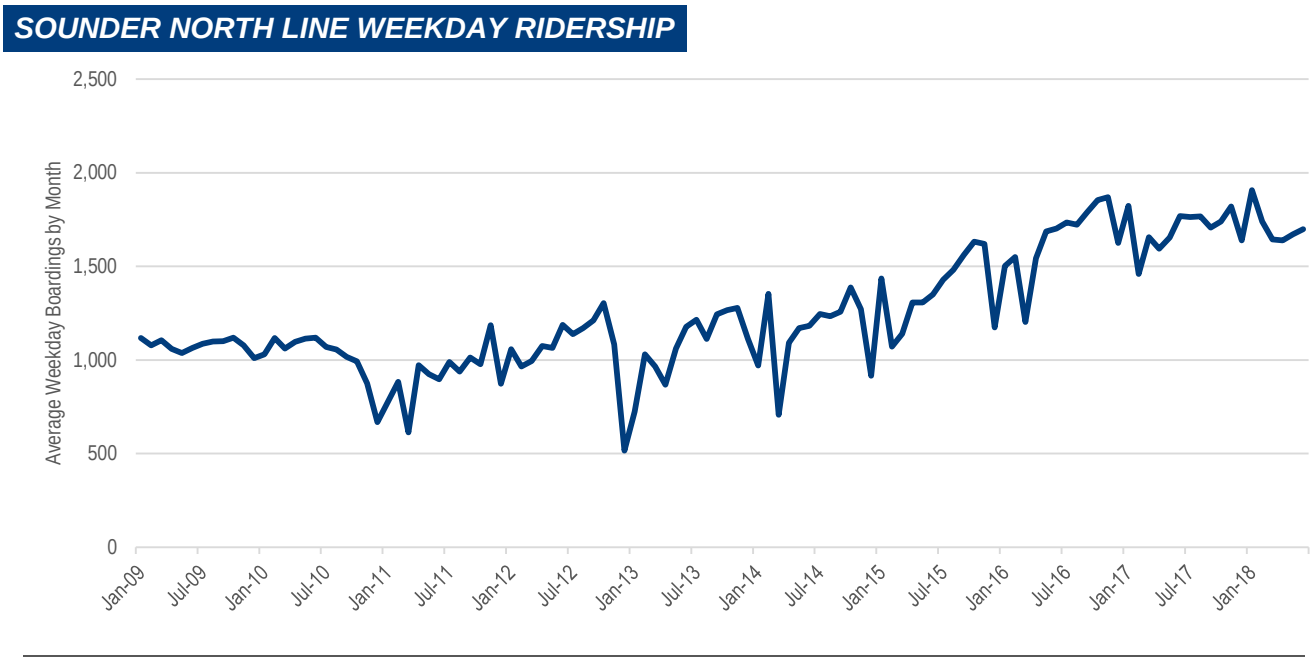
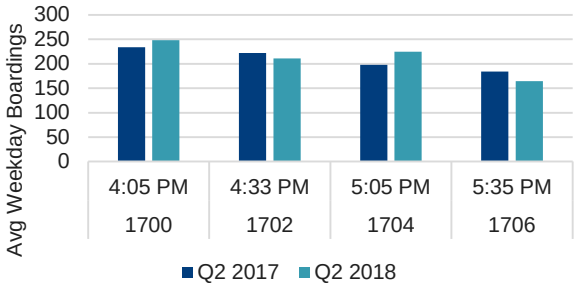


Figure 33: Average Weekday Sounder North Ridership, 2009-2018

TRIP ANALYSIS

Service most recently changed in February 2018, where consists of 2 and 3 cars was altered to reflect more recent ridership patterns of higher ridership on the later two cars. After the change, no major changes in ridership patterns have been observed.

Sounder North Northbound



Sounder North Southbound

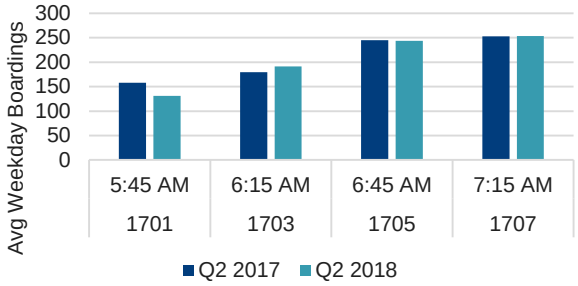
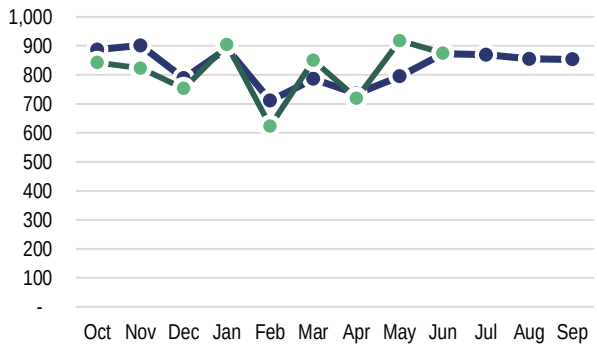


Figure 34: Sounder North Ridership by Train, 2017-2018

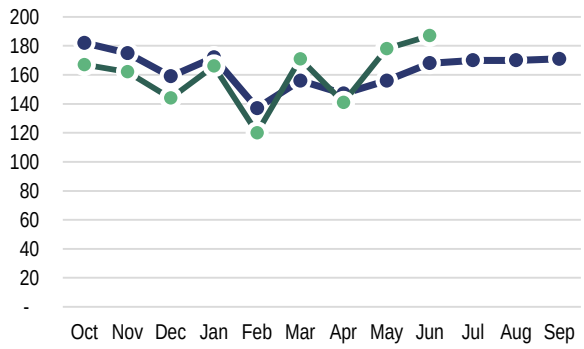
STATION LEVEL ANALYSIS

Average weekday ridership by station. Oct 2016 – Sep 2017 represents data before the September 2017 service change and Oct 2017 – Jun 2018 reflects data after the change. February 2018 ridership declines are due to mudslides. Growth has only been observed at Mukilteo Station most recently.

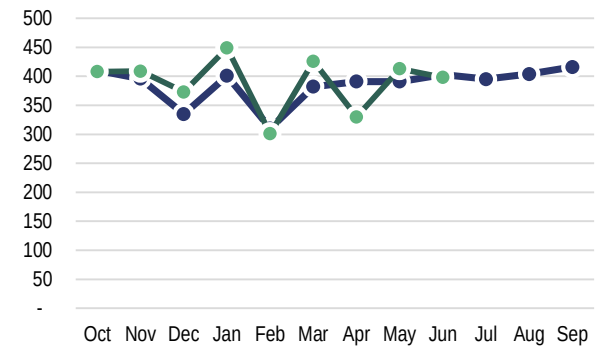
King Street Station



Mukilteo



Edmonds



Everett

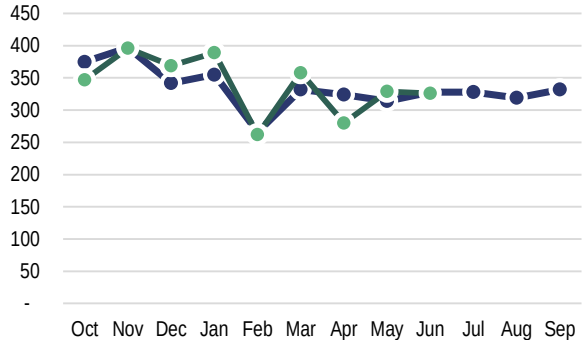


Figure 35: Sounder North Ridership by Station, 2017-2018

Link Ridership

CONTINUED RIDERSHIP GROWTH

Ridership is up year-over-year. Continued growth even though there have been no system expansion over the last year. Ridership peaks in the summer and is lower during the winter months. University Link more than doubled ridership in 2016, with 2018 ridership projected to be about 6 percent higher than that in 2017.

LINK LIGHT RAIL WEEKDAY RIDERSHIP

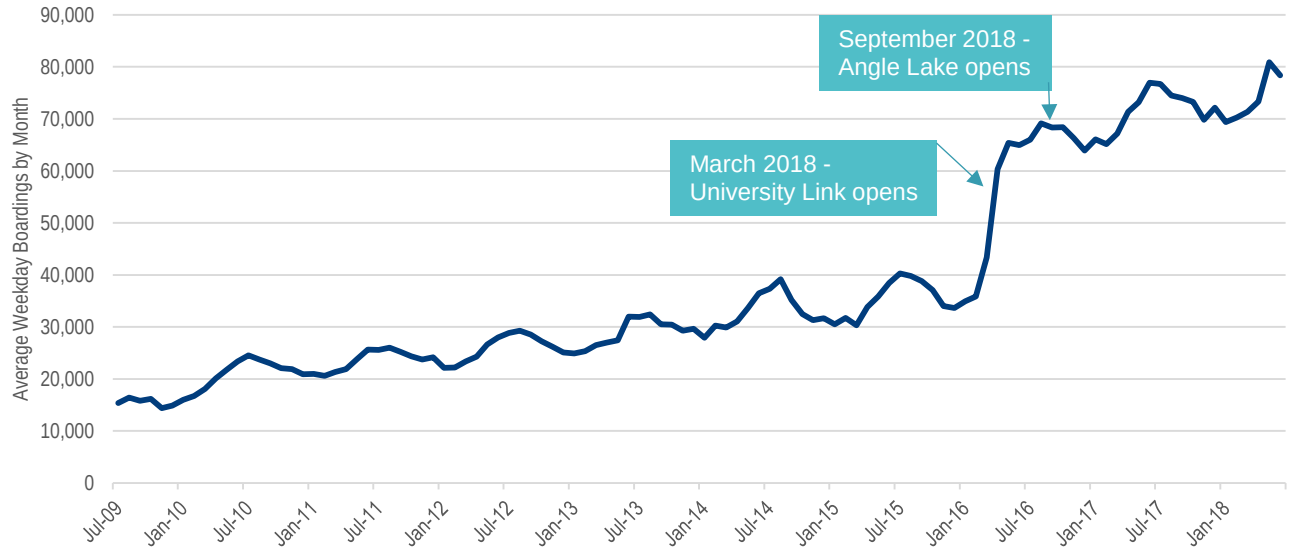


Figure 36: Average Weekday Link Ridership, 2009-2018

Weekday Ridership by Time of Day

Ridership has grown in 2018 compared to 2017. This ridership growth has occurred primarily in the peak periods as well as in the evening when Mariners games end. The Mariners promotion in spring 2018 allowed ticket holders to ride Link for free from 3 hours prior to game start time through the end of the service day. This potentially explains the higher PM peak ridership gain compared to the AM peak gain. Early morning, midday, and late evening ridership has been consistent compared to the prior year.

Peak period, peak direction trains are routinely at capacity, and ridership growth will likely plateau for trips during these time periods until additional train cars are available to be placed in service. This will likely not occur until the Northgate extension in 2021.

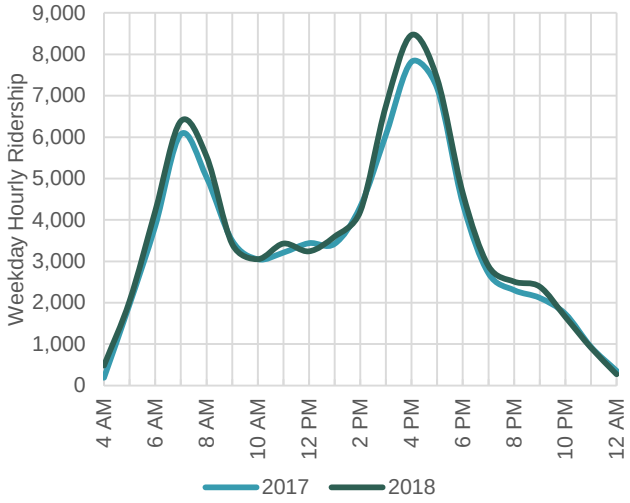


Figure 37: Weekday Link Ridership by Time of Day, Spring 2017 to Spring 2018

Special Events & Ridership

Special Events such as sporting events (Mariners, Seahawks, Sounders) or major conventions (Bumbershoot, SakuraCon, Emerald City ComiCon, PAX West) are major draws to ridership. Certain weekend days can have ridership increases of up to 50 percent from a regular day!

Saturday Ridership by Time of Day

Saturday ridership in the second quarter of 2018 averaged 56,700 boardings, a slight increase over 2017. This growth is driven by sporting events primarily, with the Mariners promotion likely drawing additional crowds onto Link. Ridership grew during the midday and early afternoon hours, coinciding with the start and end time of daytime sporting events.

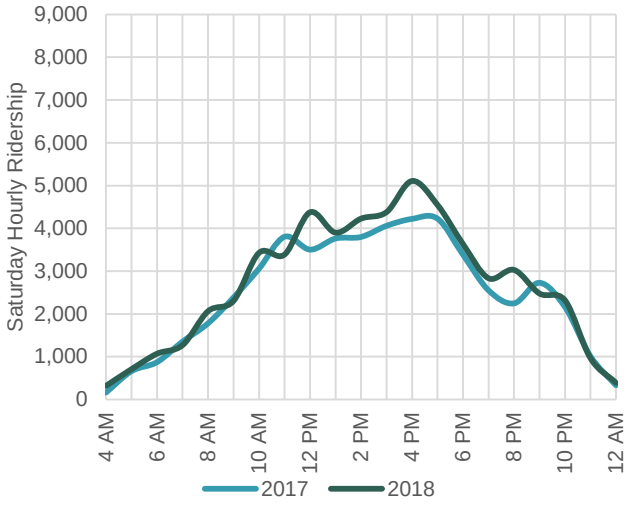


Figure 38: Saturday Link Ridership by Time of Day, Spring 2017 to Spring 2018

Sunday Ridership by Time of Day

Sunday ridership in the second quarter of 2018 averaged 44,600. As with Saturday ridership, Sunday ridership has grown in 2018 during the midday and early afternoon hours. These ridership gains likely correspond to sporting event times.

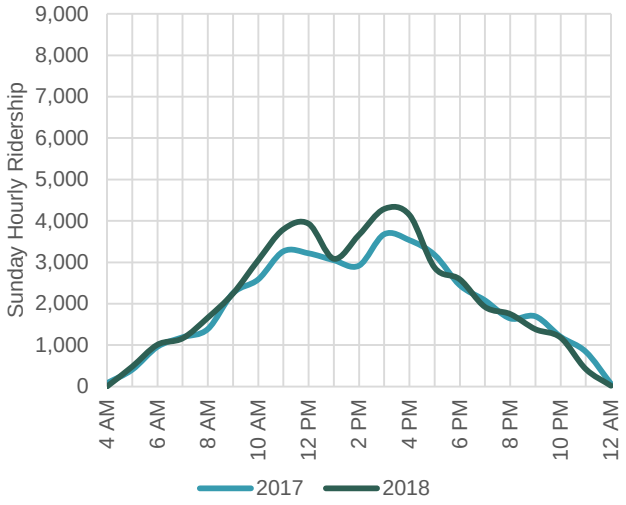


Figure 39: Sunday Link Ridership by Time of Day, Spring 2017 to Spring 2018

LINK BOARDING BY STATION

Weekday Boardings and alightings – Compare 2017 vs 2018 Q2 to Q2.

All stations experienced ridership growth, with the largest growth occurring at Westlake, International District, and UW Stations, each gaining over 500 passengers per day.

Nearly a quarter of boardings are on the University Link segment. An additional thousand passengers boarded a Link train on this extension over 2017, accounting for a quarter of the ridership growth.

Another third of Link boardings occur in downtown Seattle. Ridership here is heavily dependent on bus frequency and reliability in the tunnel.

Stadium and SODO stations had little change in ridership.

12 percent of boardings occur in the Rainier Valley. Most ridership growth in the Rainier Valley occurred at Rainier Beach station.

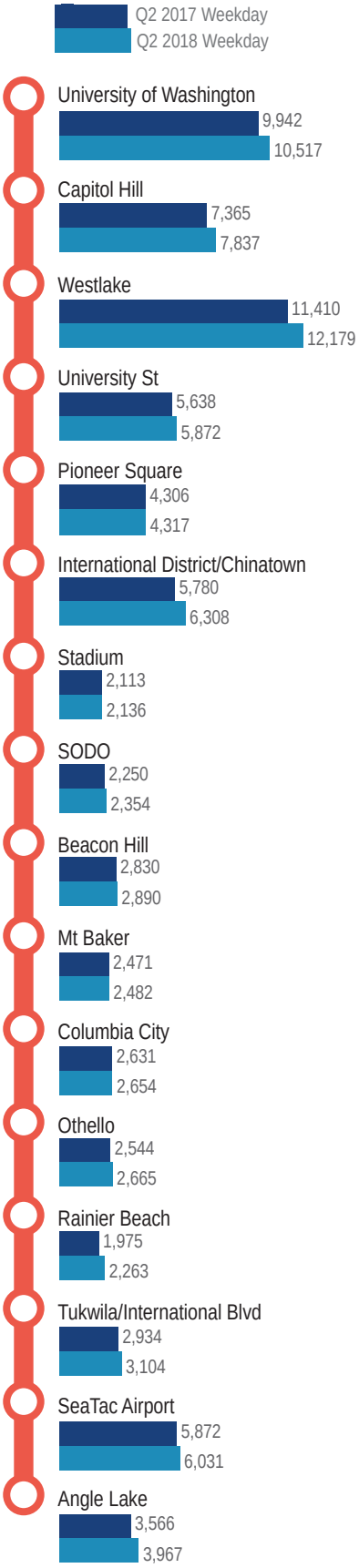


Figure 40: Link Ridership by Station, Spring 2017 to Spring 2018

Tacoma Link Ridership

RIDERSHIP HIGHLY VARIABLE

Ridership on Tacoma Link is heavily dependent on special events in the Tacoma Dome to drive ridership. Special events can draw an additional 1,000-2,000 boardings compared to a regular weekday. Overall, without special events, Tacoma Link has an average weekday ridership of around 3,000 passengers. By time of day, as seen on the right, ridership is fairly consistent across the day without a specific peaking phenomenon. Ridership is heavily correlated with school times at UW Tacoma, with certain trips experiencing much heavier ridership compared to adjacent trips. Saturday ridership is roughly half that of weekday ridership, and Sunday ridership, with service every 24 minutes, is half that of Saturday ridership.

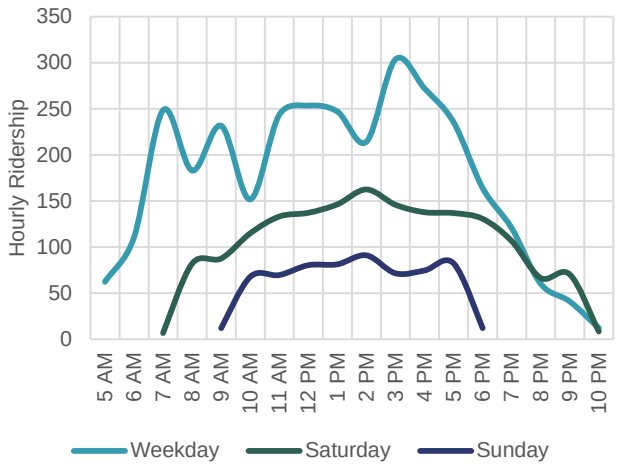


Figure 41: Tacoma Link Ridership by Hour, Spring 2018

TACOMA LINK WEEKDAY RIDERSHIP

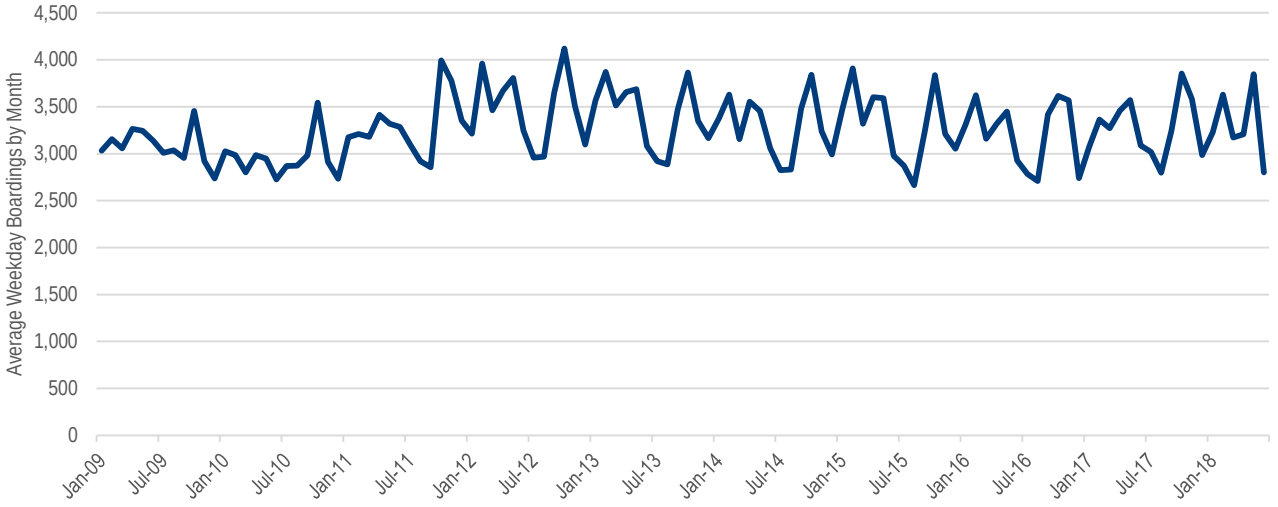
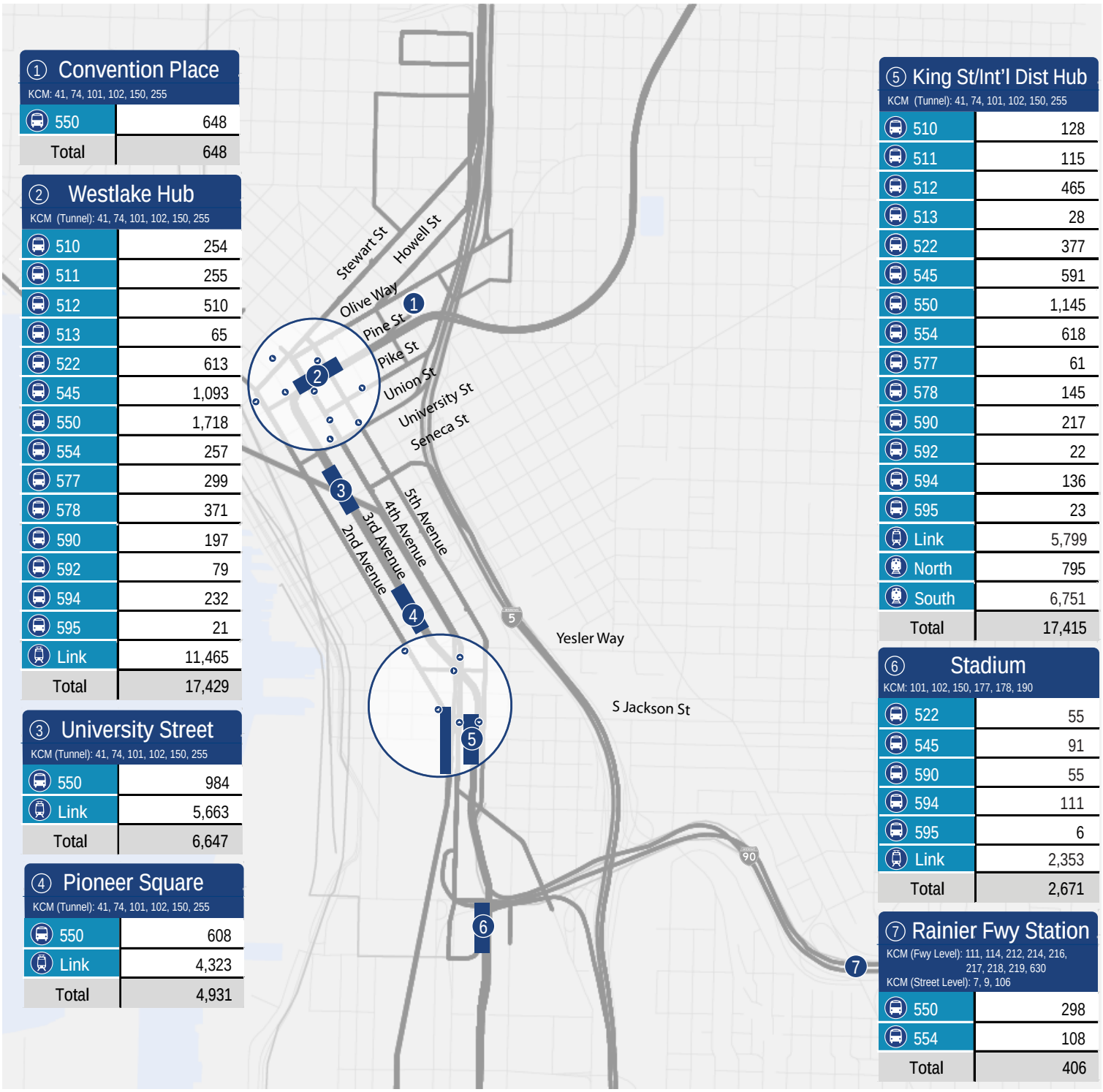


Figure 42: Average Weekday Tacoma Link Ridership, 2009-2018

Boardings in Downtown Seattle



① Convention Place
KCM: 41, 74, 101, 102, 150, 255

550	648
Total	648

② Westlake Hub
KCM (Tunnel): 41, 74, 101, 102, 150, 255

510	254
511	255
512	510
513	65
522	613
545	1,093
550	1,718
554	257
577	299
578	371
590	197
592	79
594	232
595	21
Link	11,465
Total	17,429

③ University Street
KCM (Tunnel): 41, 74, 101, 102, 150, 255

550	984
Link	5,663
Total	6,647

④ Pioneer Square
KCM (Tunnel): 41, 74, 101, 102, 150, 255

550	608
Link	4,323
Total	4,931

⑤ King St/Int'l Dist Hub
KCM (Tunnel): 41, 74, 101, 102, 150, 255

510	128
511	115
512	465
513	28
522	377
545	591
550	1,145
554	618
577	61
578	145
590	217
592	22
594	136
595	23
Link	5,799
North	795
South	6,751
Total	17,415

⑥ Stadium
KCM: 101, 102, 150, 177, 178, 190

522	55
545	91
590	55
594	111
595	6
Link	2,353
Total	2,671

⑦ Rainier Fwy Station
KCM (Fwy Level): 111, 114, 212, 214, 216, 217, 218, 219, 630
KCM (Street Level): 7, 9, 106

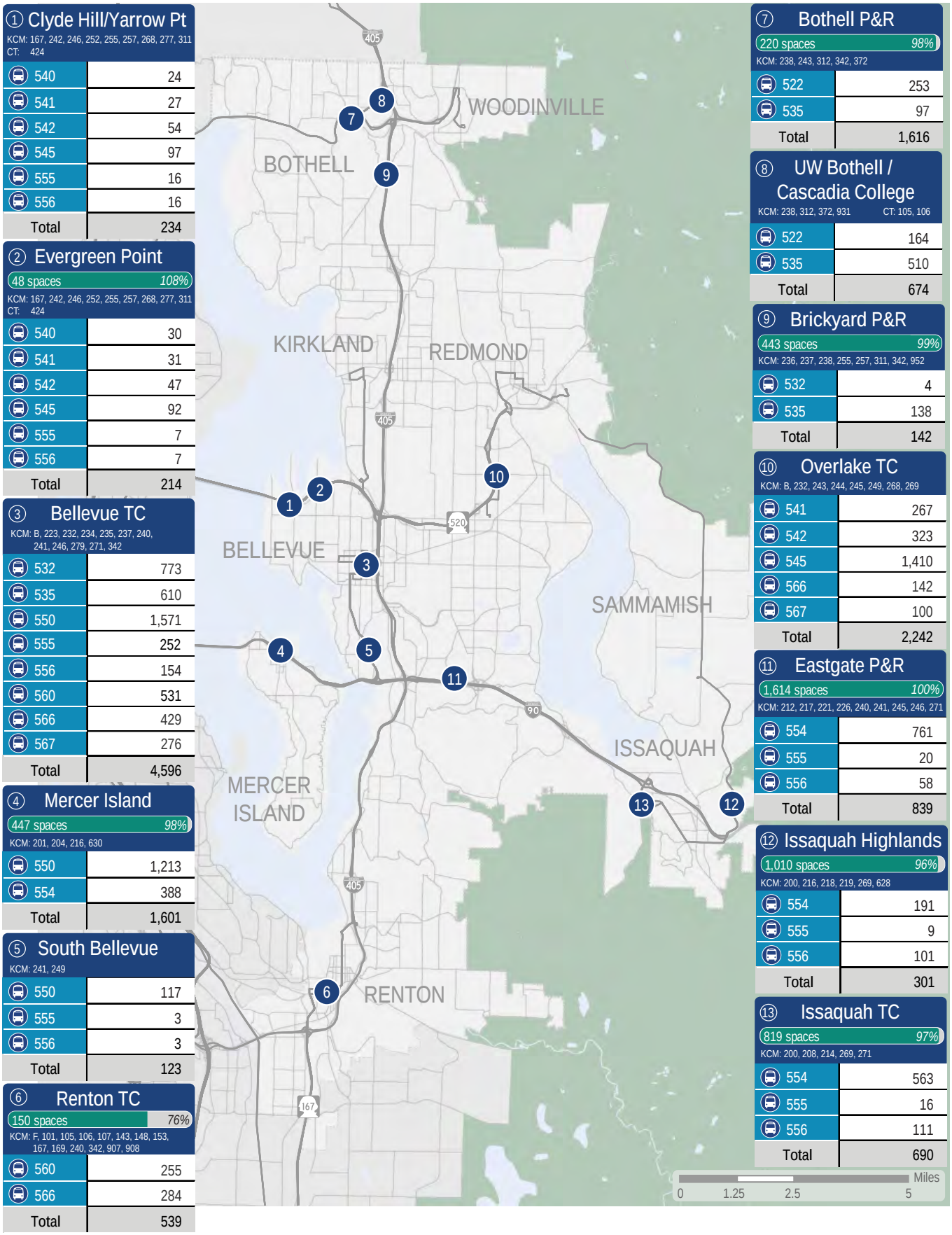
550	298
554	108
Total	406

Figure 43: Boardings in Downtown Seattle

Boardings at Snohomish County Facilities

Figure 44: Boardings at Snohomish County Facilities

Boardings at East King County Facilities



① Clyde Hill/Yarrow Pt
KCM: 167, 242, 246, 252, 255, 257, 268, 277, 311
CT: 424

540	24
541	27
542	54
545	97
555	16
556	16
Total	234

② Evergreen Point
48 spaces 108%
KCM: 167, 242, 246, 252, 255, 257, 268, 277, 311
CT: 424

540	30
541	31
542	47
545	92
555	7
556	7
Total	214

③ Bellevue TC
KCM: B, 223, 232, 234, 235, 237, 240, 241, 246, 279, 271, 342

532	773
535	610
550	1,571
555	252
556	154
560	531
566	429
567	276
Total	4,596

④ Mercer Island
447 spaces 98%
KCM: 201, 204, 216, 630

550	1,213
554	388
Total	1,601

⑤ South Bellevue
KCM: 241, 249

550	117
555	3
556	3
Total	123

⑥ Renton TC
150 spaces 76%
KCM: F, 101, 105, 106, 107, 143, 148, 153, 167, 169, 240, 342, 907, 908

560	255
566	284
Total	539

⑦ Bothell P&R
220 spaces 98%
KCM: 238, 243, 312, 342, 372

522	253
535	97
Total	1,616

⑧ UW Bothell / Cascadia College
KCM: 238, 312, 372, 931 CT: 105, 106

522	164
535	510
Total	674

⑨ Brickyard P&R
443 spaces 99%
KCM: 236, 237, 238, 255, 257, 311, 342, 952

532	4
535	138
Total	142

⑩ Overlake TC
KCM: B, 232, 243, 244, 245, 249, 268, 269

541	267
542	323
545	1,410
566	142
567	100
Total	2,242

⑪ Eastgate P&R
1,614 spaces 100%
KCM: 212, 217, 221, 226, 240, 241, 245, 246, 271

554	761
555	20
556	58
Total	839

⑫ Issaquah Highlands
1,010 spaces 96%
KCM: 200, 216, 218, 219, 269, 628

554	191
555	9
556	101
Total	301

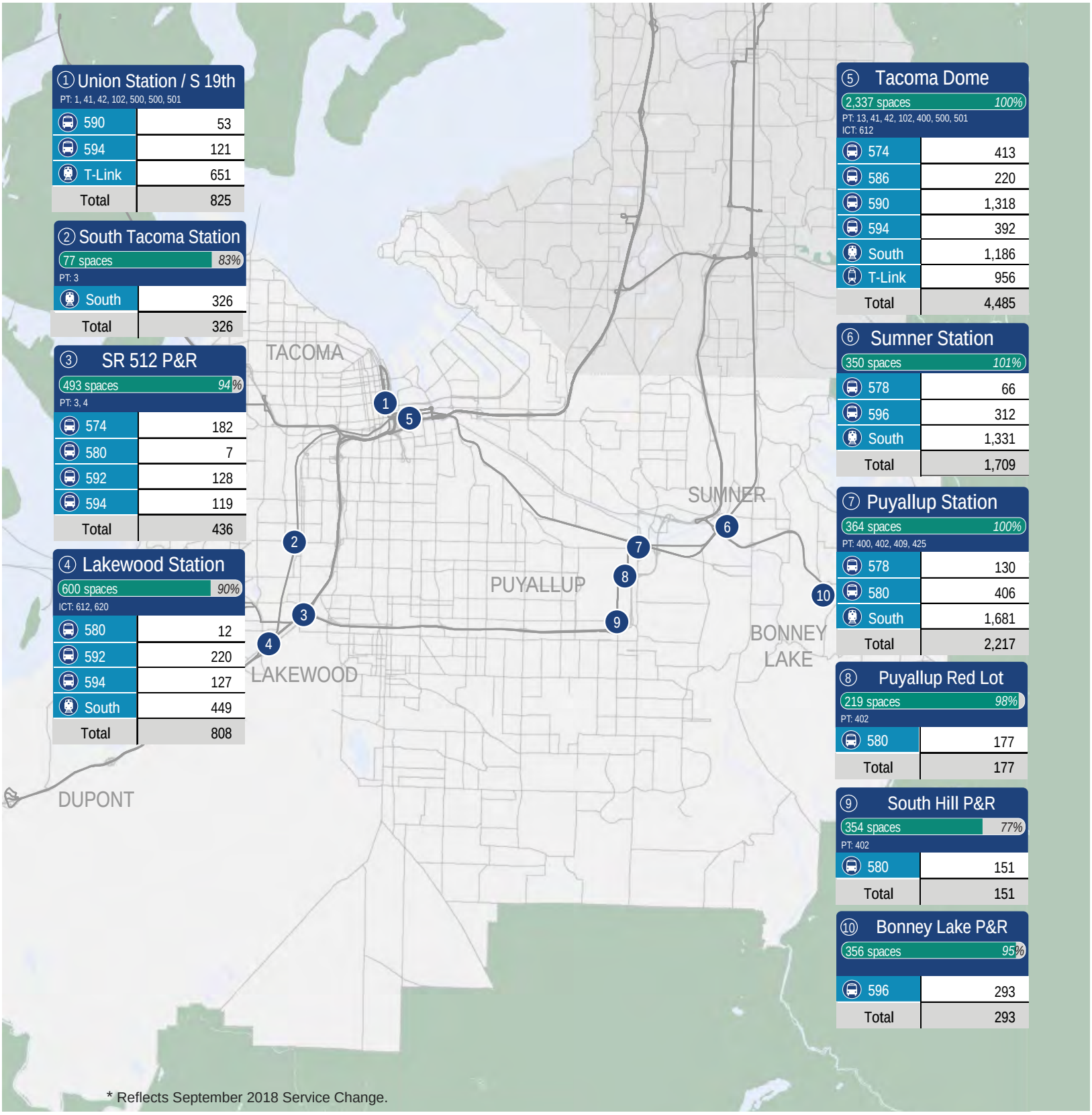
⑬ Issaquah TC
819 spaces 97%
KCM: 200, 208, 214, 269, 271

554	563
555	16
556	111
Total	690

Figure 45: Boardings at East King County Facilities

DRAFT

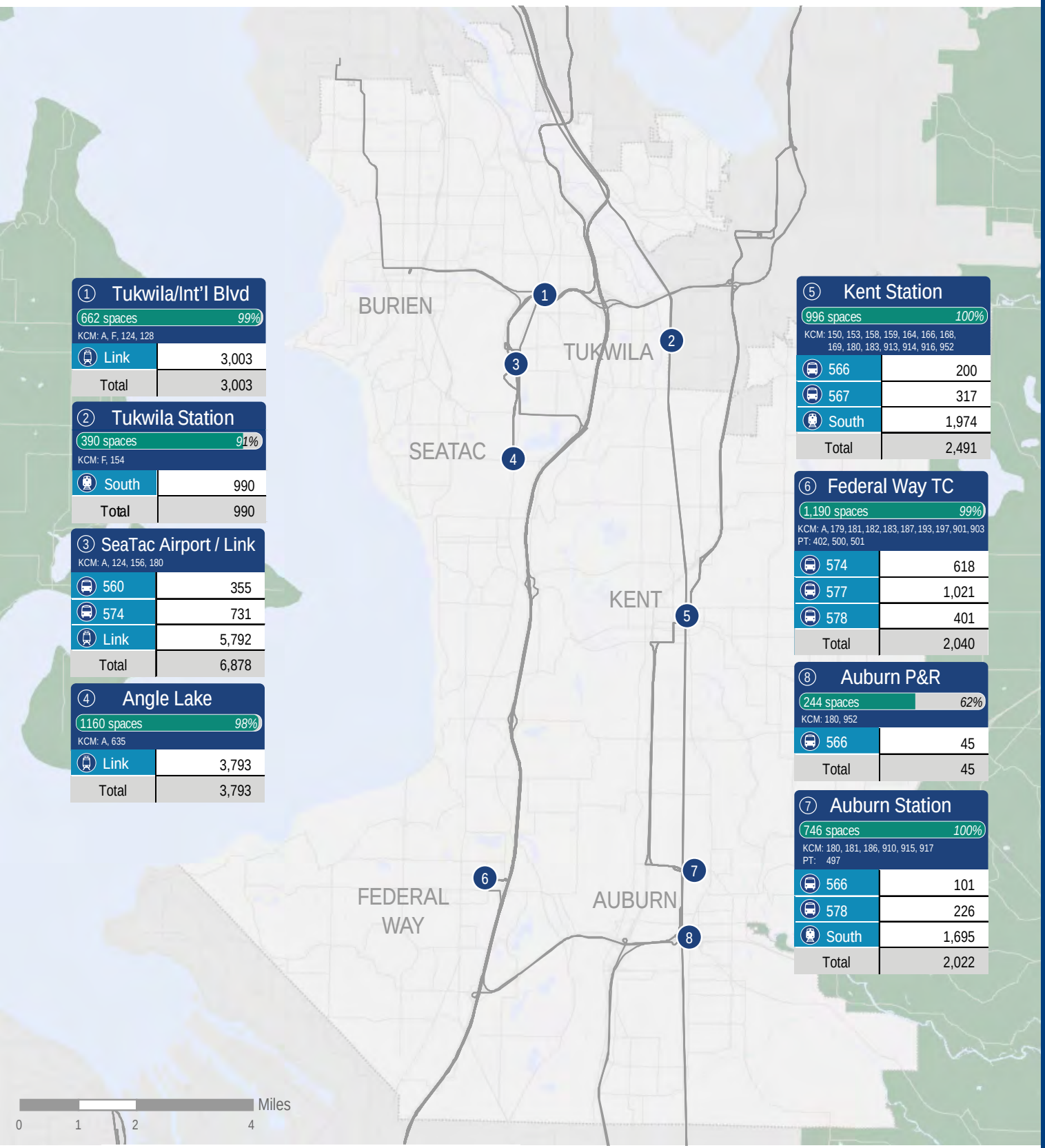
Boardings at Pierce County Facilities



* Reflects September 2018 Service Change.

Figure 47: Boardings at Pierce County Facilities

Boardings at South King County Facilities



① Tukwila/Int'l Blvd
662 spaces 99%
KCM: A, F, 124, 128

Link	3,003
Total	3,003

② Tukwila Station
390 spaces 91%
KCM: F, 154

South	990
Total	990

③ SeaTac Airport / Link
KCM: A, 124, 156, 180

560	355
574	731
Link	5,792
Total	6,878

④ Angle Lake
1160 spaces 98%
KCM: A, 635

Link	3,793
Total	3,793

⑤ Kent Station
996 spaces 100%
KCM: 150, 153, 158, 159, 164, 166, 168, 169, 180, 183, 913, 914, 916, 952

566	200
567	317
South	1,974
Total	2,491

⑥ Federal Way TC
1,190 spaces 99%
KCM: A, 179, 181, 182, 183, 187, 193, 197, 901, 903
PT: 402, 500, 501

574	618
577	1,021
578	401
Total	2,040

⑧ Auburn P&R
244 spaces 62%
KCM: 180, 952

566	45
Total	45

⑦ Auburn Station
746 spaces 100%
KCM: 180, 181, 186, 910, 915, 917
PT: 497

566	101
578	226
South	1,695
Total	2,022

Figure 46: Boardings at South King County Facilities

Ridership Outlook 2019-2024

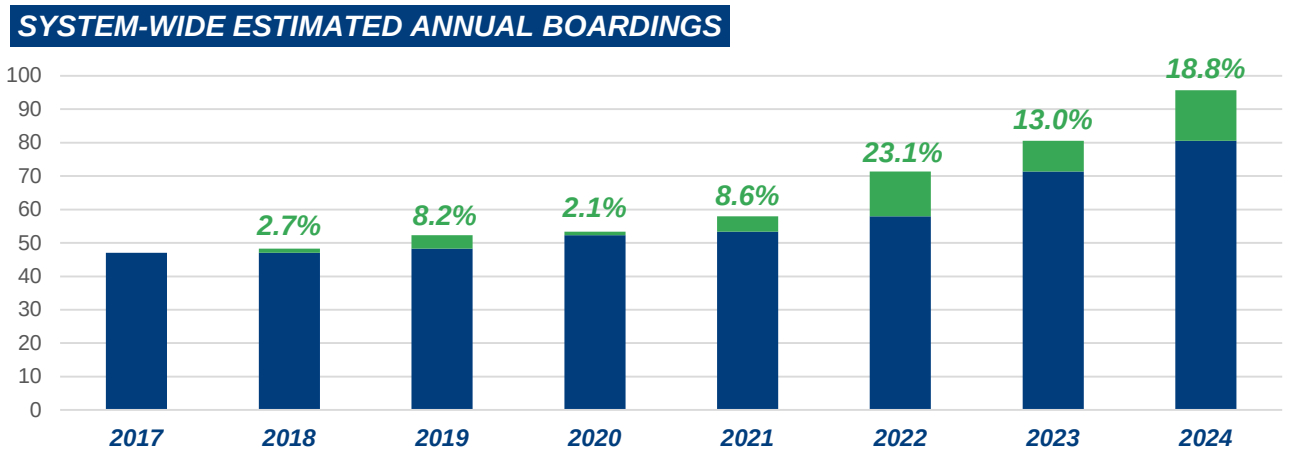


Figure 48: Estimated Sound Transit System-Wide Ridership 2017-2024

Ridership Expected to Increase to 95 Million

Sound Transit estimates ridership for all its modes on an annual basis for inclusion in the Service Implementation Plan and the annual agency budget. Estimates are based on including historical ridership data, fuel prices, employment and other inputs developed by Sound Transit or the Puget Sound Regional Council (PSRC). Figure 48 and Table 15 show the system-wide annual ridership as well as the year-over-year ridership growth.

By 2024, Sound Transit expects to carry over 95 million passengers on an annual basis, which is double 2017 ridership. On the average weekday over 256,000 passengers will board trains and express buses. Below are some highlights at the modal level:

- With the conversion of ST Express routes to light rail as well as worsening regional congestion, ST Express ridership is projected to decrease by 18 percent through 2024.
- Tacoma Link ridership is projected to double as a result of the opening of the Hilltop Extension.
- Sounder is anticipated to continue growing at the current ridership growth rate as new parking garages along the north and south lines open.
- Link ridership growth will drive most of Sound Transit's ridership growth with the opening of extensions to Northgate, Bellevue, Overlake, Federal Way and Downtown Redmond. Ridership is expected to more than triple between 2017 and 2024.

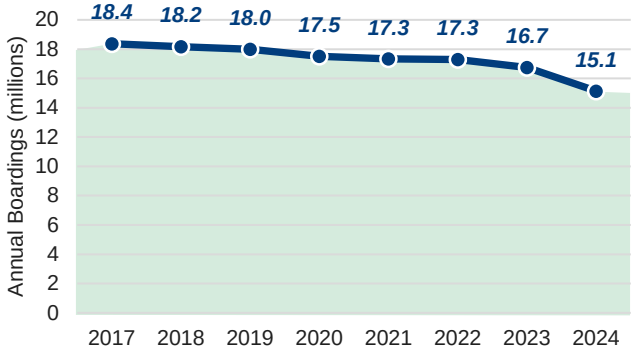
Why Ridership is Growing

Ridership in the upcoming years will occur primarily on Link. In 2019, with the conversion of the Downtown Seattle Transit Tunnel to a rail-only operation, passengers who normally used the first transit option available will now likely choose Link. Link extensions in the future north, south and east will continue to drive ridership growth on Sound Transit trains.

YEAR		ANNUAL	AVERAGE WEEKDAY
2017	Actual	46,885,799	156,002
2018	Estimated	48,280,000	157,000
2019	Estimated	52,260,000	160,000
2020	Estimated	53,350,000	171,000
2021	Estimated	57,960,000	176,000
2022	Estimated	71,330,000	191,000
2023	Estimated	80,570,000	231,000
2024	Estimated	95,690,000	256,000

Table 16: Sound Transit System-Wide Ridership 2017-2024

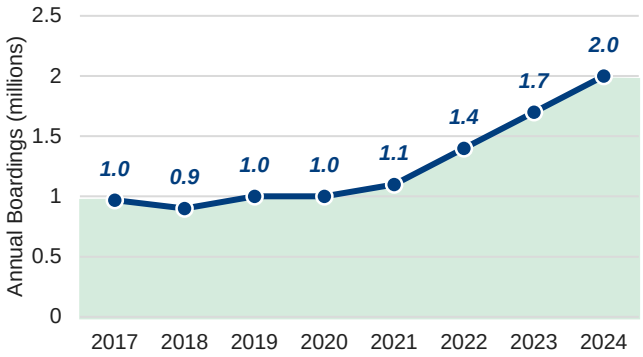
ST EXPRESS



YEAR		ANNUAL	AVERAGE WEEKDAY
2017	Actual	18,374,834	63,963
2018	Estimated	18,170,000	63,700
2019	Estimated	17,980,000	62,900
2020	Estimated	17,510,000	61,000
2021	Estimated	17,330,000	60,000
2022	Estimated	17,300,000	59,700
2023	Estimated	16,740,000	57,600
2024	Estimated	15,140,000	52,200

Table 17: ST Express Boardings 2017-2024

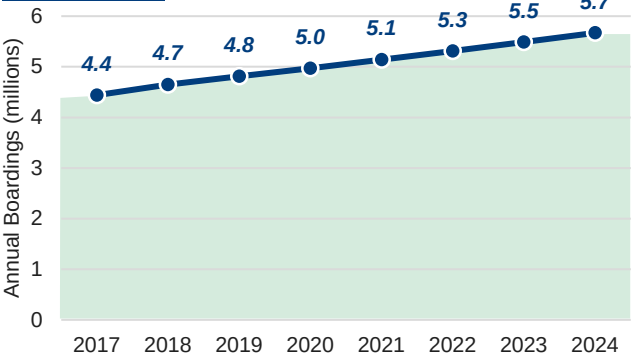
TACOMA LINK



YEAR		ANNUAL	AVERAGE WEEKDAY
2017	Actual	972,998	3,239
2018	Estimated	900,000	3,200
2019	Estimated	1,000,000	3,400
2020	Estimated	1,000,000	3,500
2021	Estimated	1,100,000	3,600
2022	Estimated	1,400,000	4,900
2023	Estimated	1,700,000	5,800
2024	Estimated	2,000,000	6,700

Table 18: Tacoma Link Boardings 2017-2024

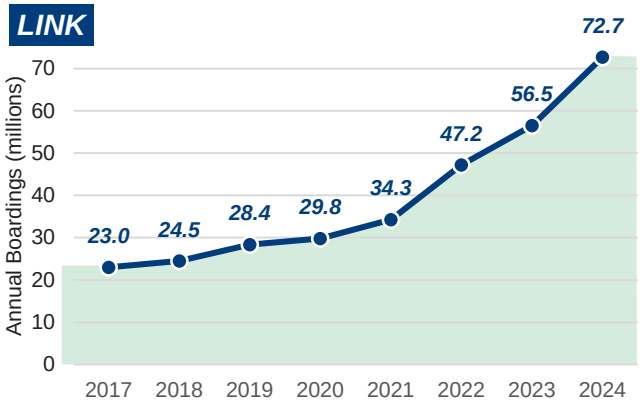
SOUNDER



YEAR		ANNUAL	AVERAGE WEEKDAY
2017	Actual	4.445.568	17,217
2018	Estimated	4,650,000	17,600
2019	Estimated	4,810,000	18,200
2020	Estimated	4,970,000	18,800
2021	Estimated	5,140,000	19,400
2022	Estimated	5,310,000	20,100
2023	Estimated	5,490,000	20,700
2024	Estimated	5,670,000	21,400

Table 19: Sounder Boardings 2017-2024

LINK



YEAR		ANNUAL	AVERAGE WEEKDAY
2017	Actual	23,002,263	71,583
2018	Estimated	24,500,000	76,000
2019	Estimated	28,400,000	88,000
2020	Estimated	29,800,000	93,000
2021	Estimated	34,300,000	107,000
2022	Estimated	47,200,000	147,000
2023	Estimated	56,500,000	176,000
2024	Estimated	72,700,000	227,000

Table 20: Link Boardings 2017-2024

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SYSTEM PERFORMANCE

Measuring productivity and customer experience

Measuring System Performance

Sound Transit monitors service performance and productivity on an on-going basis according to published service standards. The detailed mode and route-level results are published in each year's Service Implementation Plan. The results of performance monitoring help inform how and why we propose specific service changes in the SIP.

Service Standards and Performance Measures

Sound Transit manages and measures service performance using the *Service Standards and Performance Measures* document. Service standards are guidelines that are used to ensure design consistency and establish performance targets, as well as manage transit service and the customer experience. Think of them like a toolbox for managing transit service, rather than strict rules.

Service performance measures provide the framework for evaluating service. Sound Transit evaluates service based on productivity and service quality. Each of these areas is analyzed on a system, corridor, and/or route level each year.

What are Service Standards?

Service standards are guidelines to design, measure, and manage service.

- **Ensure design consistency**
- **Establish performance targets**
- **Manage the customer experience**
- **Define process to change service**

Productivity

Productivity measures the efficiency and effectiveness of service using these metrics:

- Boardings per trip
- Boardings per revenue hour
- Subsidy per boarding
- Passenger miles per platform mile

	Productivity			
	Boardings per Trip	Boardings per Revenue Hour	Subsidy per Boarding	Passenger Miles per Platform Mile
ST Express	▪ Monitored regularly and reported annually with a comparative analysis of each route's performance and a peer comparison analysis ▪ Annual targets are adjusted accordingly			
Sounder	▪ Monitored regularly and reported annually with a peer comparison analysis ▪ Annual targets are adjusted accordingly			
Tacoma Link	▪ Monitored regularly and reported annually with a comparative analysis by time of day and a peer comparison analysis ▪ Annual targets are adjusted accordingly			
Link	▪ Monitored regularly and reported annually with a comparative analysis by time of day and a peer comparison analysis ▪ Annual targets are adjusted accordingly			

Productivity measures are compared year over year to identify trends. They are also compared to peer services to identify areas for growth.

Service Quality

Service Quality measures the passenger experience based on:

- Passenger load
- On-time performance
- Customer complaints per 100,000 boardings
- Percentage of trips operated as scheduled

	Service Quality			
	Passenger Load	On-Time Performance	Customer Complaints	Operated as Scheduled
ST Express	Standing passengers not to exceed 1.23 - 1.5 times total seats and limit standing time to 30 minutes	85% of trips arrive within five minutes of schedule, never early	Less than 15 complaints per 100,000 boardings	99.8% of scheduled trips operated
Sounder	Most riders have a seat, otherwise limit standing time to 30 minutes	95% of trips arrive at route terminals within seven minutes of schedule	Less than 15 complaints per 100,000 boardings	99.5% of scheduled trips operated
Tacoma Link	Standing passengers permitted up to 1.86 times number of seats	98.5% of trips depart/arrive route terminals within three minutes of schedule	Less than 15 complaints per 100,000 boardings	98.5% of scheduled trips operated
Link	Standing passengers not to exceed two times number of seats and limit standing time to 30 minutes	90% of headways within two minutes of schedule	Less than 15 complaints per 100,000 boardings	98.5% of scheduled trips operated

Key Findings

- ST Express has declined for three of the four productivity metrics in the past year, which is likely a reflection of declining ridership.
- ST Express will need to evolve to improve reliability as well as loading concerns
- Sounder loads have decreased with the addition of new train cars, an improvement from overcrowding.
- Link loads continue to be high, even with the additon of cars during peak periods.

DRAFT

System Performance Monitoring by Mode overview

PRODUCTIVITY

Boardings per Trip

Boardings per Trip is the number of passenger boardings for each scheduled one-way trip. The decreased Sounder boardings per trip may be partially attributed to new trips added in 2017, which reduced overcrowding. ST Express boardings reflect decreases in ridership due to Link construction impacts. Ridership on Link continues to grow.

YEAR	2016	2017	EFFECT
LINK	186.9	225.0	+
SOUNDER	586.4	561.8	-
TACOMA LINK	19.0	19.7	+
ST EXPRESS	39.2	37.7	-

Table 21: Boardings per Trip by Mode, 2016 vs 2017

Boardings per Revenue Hour

Boardings per revenue hour is the number of passengers boarding a vehicle during one hour of scheduled revenue service, not including vehicle deadhead or layover time.

YEAR	2016	2017	EFFECT
LINK	212	239.1	+
SOUNDER	388	395	+
TACOMA LINK	95.1	99.1	+
ST EXPRESS	30.3	28.7	-

Table 22: Boardings per Rev. Hour by Mode, 2016 vs 2017

Subsidy per Boarding

Subsidy per Boarding is calculated by dividing the net cost of the service (cost minus fare revenue) by the number of passenger boardings in a full year. Lower costs reflect more efficient service as a result of more boardings, while the cost increase on ST Express points to a need to evaluate inefficient service.

YEAR	2016	2017	EFFECT
LINK	$2.78	$2.50	+
SOUNDER	$7.61	$6.84	+
TACOMA LINK	$4.10	$3.97	+
ST EXPRESS	$4.30	$4.45	-

Table 23: Subsidy per Boarding by Mode, 2016 vs 2017

Passenger Miles per Platform Mile

The passenger miles per platform vehicle mile metric divides the miles traveled by all passengers on that mode by the number of vehicle platform miles (including deadhead and layover) travelled for a full year. Note that for trains, this metric is based on a train consist rather than individual train cars. While these metrics generally reflect ridership trends, the increase for ST Express may be due to more riders moving further away from Seattle and riding a longer distance.

YEAR	2016	2017	EFFECT
LINK	63.7	72.2	+
SOUNDER	338.0	325.9	-
TACOMA LINK	10.8	10.9	+
ST EXPRESS	14.9	15.4	+

Table 24: Passenger Miles per Platform Mile by Mode, 2016 vs 2017

SERVICE QUALITY

Passenger Load

Passenger load measures the number of total passengers on the bus or train in relation to the number of seats. It generally correlates with ridership, unless trips are added or removed. Link loads have increased with ridership, while Sounder loads decreased when two new round trips were added in 2017. See individual mode sections for further details on passenger loads.

On-Time Performance

On-time performance (OTP) reports the percentage of arrivals or departures at the first stop, last stop and mid-point stop that are on schedule. From 2016-17, OTP declined slightly on all modes except ST Express.

YEAR	2016	2017	EFFECT
LINK	90.7%	89.2%	-
SOUNDER	92.8%	91.2%	-
TACOMA LINK	99.9%	99.8%	-
ST EXPRESS	82.8%	83.1%	+

Table 25: On-time Performance by Mode, 2016 vs 2017

Customer Complaints

The target for customer complaint rates is less than 15 complaints per 100,000 boardings. Complaint rates have increased on Sounder, likely due to reliability issues, and have seen a slight uptick on Link as it grows more crowded. Rates decreased slightly on Tacoma Link and ST Express, but rates on ST Express still hover above the target range.

YEAR	2016	2017	EFFECT
LINK	1.9	2.0	-
SOUNDER	11.2	13.4	-
TACOMA LINK	0.5	0.0	+
ST EXPRESS	17.6	17.2	+

Table 26: Customer Complaints by Mode, 2016 vs 2017

Operated as Scheduled

Operated as scheduled measures the proportion of trips that are completed, regardless of delay. Trips that do not operate as scheduled are usually due to issues such as mechanical problems or coach or operator shortages. Link and Tacoma Link both met their targets in 2017 while ST Express and Sounder were slightly below.

YEAR	2016	2017	EFFECT
LINK	98.4%	98.6%	+
SOUNDER	98.7%	98.7%	
TACOMA LINK	99.9%	99.8%	-
ST EXPRESS	99.8%	99.6%	-

Table 27: Percent of Trips Operated by Mode, 2016 vs 2017

ST Express Performance Monitoring: Productivity

APPROACH

Productivity metrics help to identify inefficient segments that will be prioritized for restructures or routes that carry significant budget impacts.

WHAT CHANGED IN 2017/18?

Boardings

2017 presented new challenges to riders which ultimately had an impact on ridership and performance metrics. Closures of popular park-and-ride lots resulted in immediate drops in ridership on Routes 550 and 545, as ample comparable alternatives were not available to meet demand.

Meanwhile, new Sounder trips in fall 2017 increased demand from new riders in Pierce County, many of whom took advantage of Sounder connectors and increased ridership on Routes 580 and 596.

Revenue Hours and Subsidies

In downtown Bellevue, both Route 555 and 556 were significantly impacted by road closures and congestion from East Link construction, which will be discussed in the service quality section. These impacts slowed buses and increased operating expenses, leading to a routing change in June 2018.

On I-405 South, Routes 566 and 567 continued to suffer from congestion. The lack of reliability likely impacted ridership and resulted in higher operating costs, driving down productivity.

RESPONDING TO PRODUCTIVITY ISSUES WITH 2019 CHANGES

The seven lowest-performing routes were evaluated to see what changes could be made to improve service performance. In six of the seven cases, these routes suffer from poor performance in part because of the long out-of-service time it takes to start a trip from the Pierce Transit garage in Lakewood. This long trip results in higher costs without increasing ridership. The need to improve efficiency drove the change to Route 580, where resources were being spent on trips with very few riders.

Restructuring Route 513 will provide an opportunity to increase ridership by connecting with other regional service at the new Seaway Transit Center and providing a better customer experience at the beginning of the line.

Minor changes are being analyzed on other routes for September 2019, and will be announced in an amendment to the SIP in early 2019.

PRODUCTIVITY METRICS

Table 1 lists key productivity metrics for each ST Express route. These metrics inform the graphs on subsequent pages that help to visualize trends among routes.

			Boardings per Revenue Hour		Boardings per Passenger Trip		Subsidy per Boarding		Passenger Miles per Platform Mile	
			2016	2017	2016	2017	2016	2017	2016	2017
1st Quartile	550	Bellevue-Seattle	62.6	58.8	56.2	53.5	$3.03	$3.23	25.1	29.5
	511	Lynnwood-Seattle	51.7	52.8	54.9	56	$1.94	$1.77	18.5	18.6
	510	Everett-Seattle	37.1	37.6	45.7	47.4	$2.39	$2.10	23.8	25.2
	532	Everett-Bellevue	38.4	37.4	50.8	50.1	$2.16	$1.75	18.1	19.2
	545	Redmond-Seattle	39.4	36.5	50.2	47.4	$3.01	$3.27	21.5	23.7
	522	Woodinville-Seattle	33.5	32.2	46.9	46.1	$4.10	$4.20	13.8	16.4
	554	Issaquah-Seattle	33.3	33.7	39.6	39.8	$3.90	$3.82	15.4	18.2
2nd Quartile	512	Everett-Seattle	28.5	28.1	38.3	38.2	$3.36	$3.28	17.1	17
	596	Bonney Lake-Sumner	62.7	60.2	28.8	26.6	$2.59	$2.80	6.4	6.1
	555	Northgate-Issaquah	34.2	30.3	47.6	42.4	$3.73	$4.45	16.6	14.8
	577	Federal Way-Seattle	38.1	37.5	36.8	36.4	$4.08	$4.07	13.5	13.6
	556	Issaquah-Northgate	31.9	28.7	47	43.7	$4.56	$5.19	14.9	13.7
	542	Redmond-U. District	31	30.1	30.6	29.9	$4.82	$4.76	15.2	14.6
	594	Lakewood-Seattle	17.1	16.8	32.6	31.9	$6.04	$5.63	17.5	19.1
3rd Quartile	590	Tacoma-Seattle	22	21.6	33.5	34.1	$6.53	$5.99	14.3	15.2
	578	Puyallup-Seattle	18.9	19	33.2	33.7	$6.07	$5.66	14.2	14.5
	535	Lynnwood-Bellevue	24.6	24.3	28.3	28.6	$4.07	$4.13	10.9	10.4
	513	Evergreen/79th-Seattle	27.4	25.6	32.7	30.3	$5.38	$5.70	11.9	11.5
	574	Lakewood-SeaTac	19.9	18.9	29.3	28.3	$5.44	$5.40	13.1	12.9
	595	Gig Harbor-Seattle	17.4	17.1	34.7	35.3	$8.90	$7.95	14.1	15.3
	580	Lakewood-Puyallup	28.7	31.9	23.8	26.9	$5.15	$4.15	2.1	2.5
4th Quartile	567	Kent-Overlake	29.3	27.1	35.9	33.7	$8.07	$8.41	7.1	7.2
	592	DuPont-Seattle	15	14.9	31.3	33.3	$10.62	$10.07	11.7	12.9
	541	Overlake-U. District	20.2	22.5	15.5	17.7	$8.61	$7.41	11.3	9.5
	586	Tacoma-U. District	18.8	18.7	27.9	28.6	$10.76	$9.73	9.4	9.4
	540	Kirkland-U. District	23.2	21.9	17.6	16.6	$6.87	$7.36	7.7	7.7
	560	Westwood Village-Bellevue	15.6	15.8	25.1	24.9	$8.01	$7.85	6.1	6.5
	566	Auburn-Overlake	18.3	16.4	28.2	26	$8.73	$9.83	5.7	5.4
	Average		30.3	28.7	39.2	37.7	$4.30	$4.45	14.9	15.4

Table 28: Productivity Metrics by Route

ST Express Performance Monitoring: Service Quality

APPROACH

ST Express service quality measures help identify impacts to the customer experience and how they change over time. Metrics are often grouped by corridor to pinpoint share characteristics and opportunities for improvement.

WHAT CHANGED IN 2017/18?

On-Time Performance

The I-405 North corridor had the best on-time performance, as it benefits from the High-Occupancy Toll lanes with reduced congestion. The I-5 South – King and Pierce corridors suffer from the worst on time performance due to heavy congestion in both Downtown Seattle and on I-5. Sounder Connectors also suffer, but these measurements are not reliable as other routes because being late to ensure a connection with a late-arriving Sounder train is better than an on-time departure that carries no passengers.

Overcrowding

Overcrowding is most prevalent on the all-day, all week routes between Seattle and the Eastside, Routes 545 and 550. These routes have constantly high demand, but overcrowding rates have decreased as customers shifted away from the South Bellevue Park-and-Ride and Overlake Transit Center due to closures for East Link construction.

Operated as Scheduled

All routes had at least 99.6% of trips operated, meaning some were below the service standard of 99.8%. Some routes have decreased in this metric slightly over time, while others have increased, but no significant patterns exist.

Customer Complaints

Customer complaints were highest for Route 555, which suffered from worsening reliability due to East Link construction in Bellevue beginning in 2017. Route 567 also saw a doubling of complaint rates, which primarily consisted of late departures and overcrowding. Due to an occasional Sounder connection delay, certain buses may have been late, leading to higher than normal loads. Complaints on Route 592 are primarily a result of crowding and late trips as well as the discontinuation of WSDOT-funded pilot service to Olympia.

RESPONDING TO SERVICE QUALITY ISSUES WITH 2019 CHANGES

Sound Transit has looked to improve on-time performance as well as overcrowding on many routes.

In September 2018, running time was added on Route 574 to improve the on-time performance. Route 555 was rerouted in Bellevue to avoid the worst construction impacts. ST Express has also reallocated resources to devote additional trips to Route 580 where ridership warranted service.

For this year's SIP, the downward trend of reliability on many routes indicated a strong need to preserve service even in the face of construction impacts. When planning for the conversion of the DSTT to rail-only, Sound Transit plans to add resources to Route 550 in order to ensure that reliability does not suffer even as travel times increase.

Changes to Route 580 will reallocate resources in Pierce County to where they can be most effective in reducing crowding and improving OTP.

Montlake Freeway Station closure mitigation will seek to reduce customer impacts and complaints by conducting a robust outreach process and providing customers knowledge of their alternative travel options, including expanded Route 542 service.

SERVICE QUALITY METRICS

Table 2 depicts key service quality indicators for 2016-2018. As 2018 was not yet complete at the time of writing, this data is subject to change. Shading depicts more desirable performance outcomes (green) and less desirable (red).

Route	Description	OTP			Trips Operated			Customer Complaints per 100,000 boardings			Passenger Overcrowd Rate		
		2016	2017	2018	2016	2017	2018	2016	2017	2018	2016	2017	2018
Target		85%	85%	85%	99.8%	99.8%	99.8%	15.0	15.0	15.0	0.0%	0.0%	0.0%
510	Everett-Seattle	85%	87%	87%	99.9%	99.9%	99.8%	10.4	11.3	10.5	0.7%	0.5%	1.3%
511	Lynnwood-Seattle	82%	84%	86%	99.9%	99.9%	99.9%	1.9	2.3	2.3	2.1%	2.5%	1.7%
512	Everett-Seattle	89%	91%	92%	99.9%	99.9%	99.9%	4.5	3.0	4.5	0.8%	0.4%	1.4%
513	Evergreen/79th-Seattle	81%	84%	86%	99.9%	99.7%	99.8%	5.8	6.8	3.5	0.1%	0.2%	0.8%
522	Woodinville-Seattle	85%	85%	89%	99.6%	99.8%	99.8%	1.1	6.4	2.8	3.4%	3.8%	3.8%
532	Everett-Bellevue	95%	95%	94%	99.8%	99.9%	99.9%	16.0	4.0	13.3	2.7%	2.1%	2.8%
535	Lynnwood-Bellevue	97%	97%	98%	99.9%	100.0%	99.9%	4.3	7.3	9.4	0.3%	0.3%	1.1%
540	Kirkland-U. District	75%	70%	72%	99.7%	99.9%	99.9%	9.9	10.5	6.6	0.0%	0.1%	0.0%
541	Overlake-U. District	82%	83%	89%	99.7%	99.8%	99.8%	4.5	8.6	4.8	0.0%	0.2%	0.0%
542	Redmond-U. District	88%	86%	87%	99.8%	99.9%	99.8%	5.7	5.2	2.1	0.3%	0.2%	0.1%
545	Redmond-Seattle	86%	85%	90%	99.7%	99.7%	99.7%	4.6	3.8	3.6	6.7%	4.7%	3.0%
550	Bellevue-Seattle	86%	89%	90%	99.6%	99.7%	99.7%	1.6	1.6	3.0	6.8%	5.4%	4.2%
554	Issaquah-Seattle	87%	83%	89%	99.7%	99.6%	99.7%	5.1	6.4	5.6	1.7%	1.6%	1.1%
555	Northgate-Issaquah	70%	75%	80%	100.0%	100.0%	100.0%	17.4	23.5	45.5	0.8%	0.1%	0.0%
556	Issaquah-Northgate	70%	74%	76%	99.6%	99.9%	99.7%	16.2	12.4	13.0	0.3%	0.2%	0.0%
560	Westwood Village-Bellevue	79%	81%	85%	99.8%	99.9%	99.8%	5.0	7.3	7.8	0.1%	0.4%	0.5%
566	Auburn-Overlake	80%	77%	78%	99.7%	99.8%	99.7%	12.7	8.7	6.1	0.2%	0.1%	0.2%
567	Kent-Overlake	87%	87%	85%	99.9%	99.9%	99.9%	16.5	12.6	24.1	0.8%	0.5%	0.4%
574	Lakewood-SeaTac	75%	70%	74%	99.8%	99.8%	99.7%	6.3	7.2	3.6	0.2%	0.0%	0.0%
577	Federal Way-Seattle	65%	74%	75%	99.9%	99.9%	99.9%	7.6	5.8	8.6	1.1%	1.1%	0.7%
578	Puyallup-Seattle	71%	73%	76%	99.8%	99.7%	99.7%	5.7	7.8	4.3	0.8%	0.7%	1.2%
580	Lakewood-Puyallup	70%	72%	78%	99.8%	100.0%	99.9%	5.6	7.0	5.1	2.5%	6.0%	4.4%
586	Tacoma-U. District	83%	79%	77%	100.0%	100.0%	99.9%	18.4	18.9	3.3	0.0%	0.0%	0.0%
590	Tacoma-Seattle	74%	73%	76%	99.6%	99.6%	99.7%	12.4	6.9	6.0	0.9%	1.2%	0.1%
592	Olympia/DuPont-Seattle	71%	70%	71%	99.9%	99.8%	99.8%	8.5	14.7	18.5	0.0%	0.0%	0.0%
594	Lakewood-Seattle	80%	78%	77%	99.8%	99.7%	99.8%	7.1	10.2	8.5	0.9%	0.4%	0.4%
595	Gig Harbor-Seattle	79%	74%	77%	99.8%	99.8%	99.7%	27.2	32.4	11.7	0.1%	0.0%	0.0%
596	Bonney Lake-Sumner	82%	82%	84%	100.0%	100.0%	99.9%	4.1	20.0	11.8	0.1%	0.1%	0.4%
	System Total	*81%*	*81%*	*83%*	*99.8%*	*99.8%*	*99.8%*	*8.8*	*9.7*	*8.9*	*1.2%*	*1.2%*	*1.1%*

Table 29: Service Quality Metrics by Route

CUSTOMER INPUT

Customer input is a valuable source of information about service quality and often, though not always, confirms trends suggested by other key performance indicators. Customers are the eyes and ears of our system and provide qualitative feedback to supplement data that planners see. Service planners read customer comments regularly and comments are then categorized so they can be analyzed in aggregate as well.

Customers Submitted Various Types of Input

From June 2013 to June 2018, Sound Transit customer service received over 9100 comments, complaints, and suggestions from customers on all topics, from service to facilities to taxing. The majority were complaints.

Late Departures Led Service-Related Complaints

Of all complaints, 23% related to three topics of interest to service planning for ST Express: early departures, late departures, and overcrowding. (Some complaints counted for multiple categories). Late departures were the most common complaint of these three.

Figure 49: Categories of Customer Input and Complaints

DRAFT

Corridors Varied Widely in Types of Complaints Received

Early departure, late departure, and overcrowding complaints gave insight into sources of delay. Input was also tabulated by topic, route and corridor. Some general trends were:

- **Many corridors with high levels of early complaints** also have high levels of late complaints, which may indicate that a perceived early bus is actually the trip before it running late, or may indicate high variability in running times.
- **Less frequent and longer routes** tend to receive more complaints, likely because customers have fewer alternate options.

What Influences Complaint Rates

Customer complaint rates are often, though not necessarily, proportional to the number of service quality issues on that route. Figures may hint at how sensitive a customer base is to poor service quality due to unique aspects of that route. More details on complaints by route can be found in the Appendix.

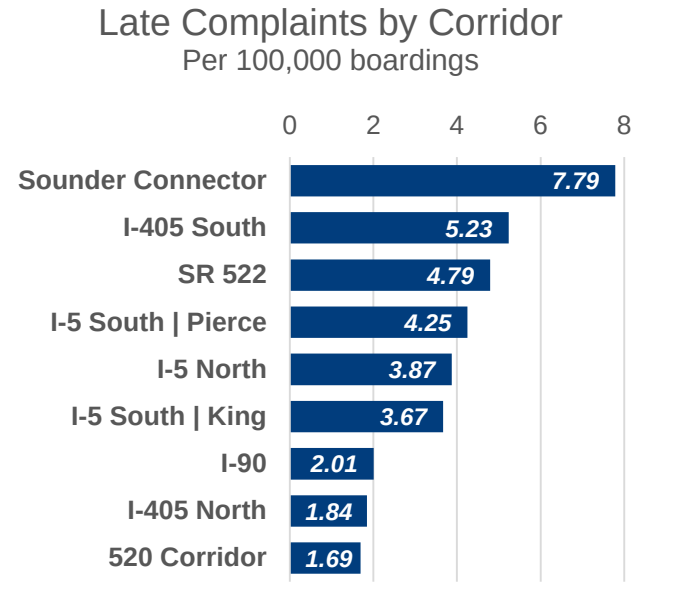


Figure 50: Frequency of Late Complaints by Corridor

Sounder connector riders complain the most about late arrivals, which result in missed trains and extend already long trips. I-405 South routes are also long and some connect to Sounder.

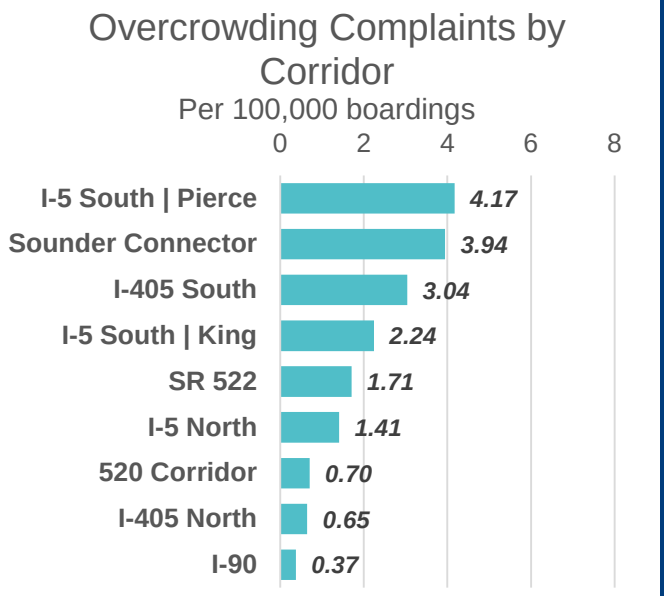


Figure 51: Frequency of Overcrowding Complaints by Corridor

Overcrowding appears loosely linked to late complaints, because more customers accumulate at stops when a bus is late. Complaints are less likely on I-90 and 520 routes where frequency is high and trips are shorter than those to Pierce or South King County. Customers on more frequent routes can also wait for the next bus if the first one is too crowded.

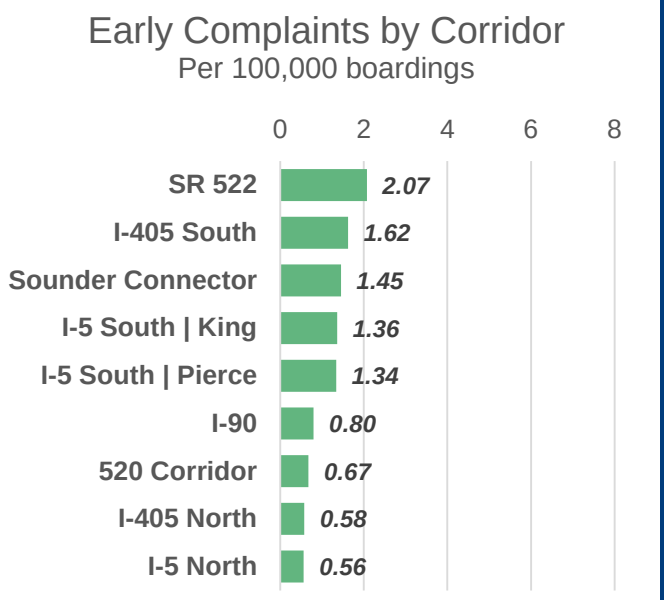


Figure 52: Frequency of Early Complaints by Corridor

The SR 522 and I-405 South corridors struggle with reliability, and a trip missed to an early departure may mean a long and unpredictable wait for the next trip, triggering a complaint.

SERVICE DELIVERY

Service delivery has the goal of delivering trips as close as possible to how they are scheduled. While percentage of trips operated is a useful metric for reporting purposes, Sound Transit conducts further analysis to understand how customers actually experience the service. The graphs on the right show one example of ideal service with even headways, and then one example of service delivered not meeting customer expectations. Trips start off close to schedule, but as time goes on, several buses run bunched with other buses (three departures around 4:30pm), followed by large gaps (with zero buses between 5 and 6pm). On this day, 90 percent of the service was operated as scheduled during the afternoon commute, but from a customer perspective about 60 percent of the service was actually delivered due to the large gaps. Four trips operated over 10 minutes after the last scheduled departure trip.

To improve the service delivery model of ST Express, routes were evaluated for their on-time performance and identify areas in need of schedule changes.

ON-TIME PERFORMANCE

On-time performance (OTP) on ST Express measures the percentage of time when a bus leaves a fixed time point no more than 5 minutes late and not early. Fixed time points are generally those that occur before the bus enters the freeway, and are where most boardings occur. Subsequent stops are generally considered estimated time points, where the bus may leave early, because people are more likely to alight there than board. These time points are not counted towards on-time performance.

Therefore, tracking only fixed time points gauges the likelihood that a customer will board a bus on time but does not accurately gauge the likelihood of reaching their final destination on time. Figure 1 compares system-wide OTP by month to the target goal of 85%.

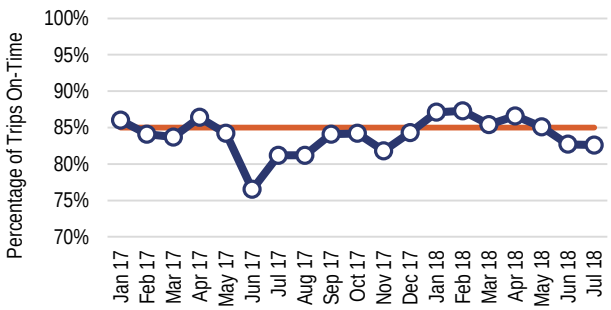


Figure 53: ST Express On-time Performance, 2017-2018

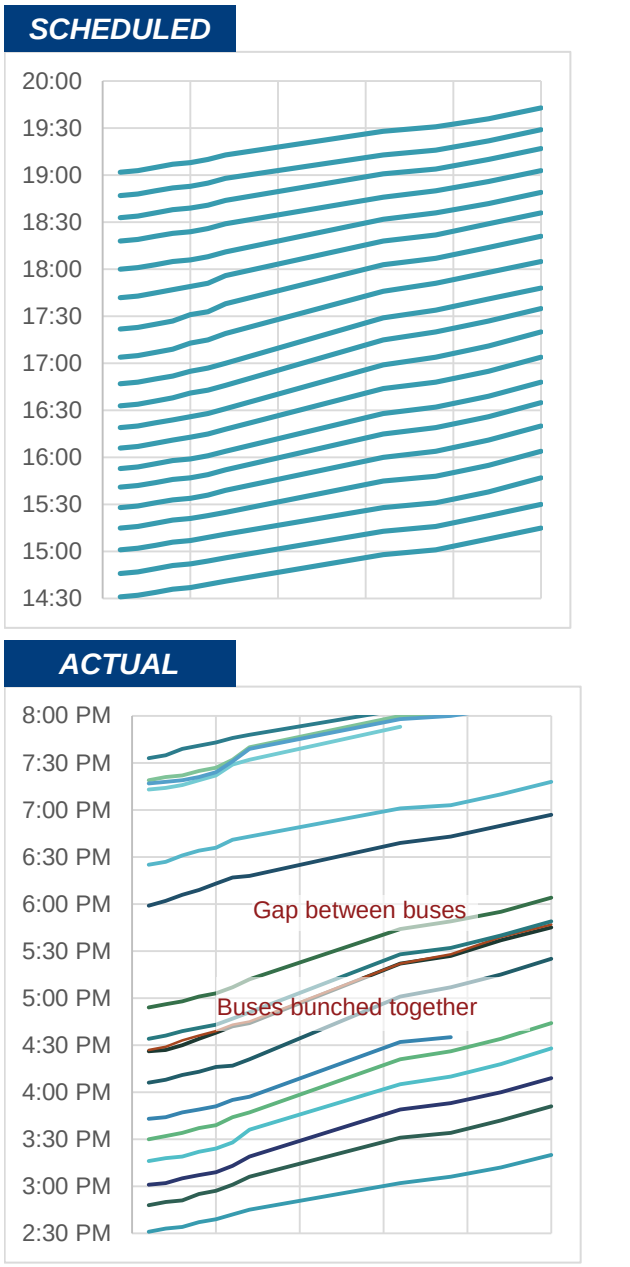


Figure 54: Example of Actual ST Express Service Levels compared to Scheduled Service

Link Performance Monitoring

PERFORMANCE MONITORING

With ridership gains on Link, all four productivity measurements improved in 2017 over 2016. Because no trips were added, improvements to boardings per trip and per train-set revenue hour are a direct result of the higher ridership, likely because 2017 was the first full year with three new stations open. The higher ridership also explains the higher average load experienced on Link.

LINK SERVICE QUALITY

On-time performance is measured in two ways: schedule adherence and headway performance. Because Link operates so frequently, Sound Transit reports on Link on-time performance as the scheduled headway (interval between trains) + 2 minutes rather than adherence to a posted time. This means during the morning and afternoon peaks when trains are every six minutes, if a train arrives within eight minutes of the prior train that is considered on-time.

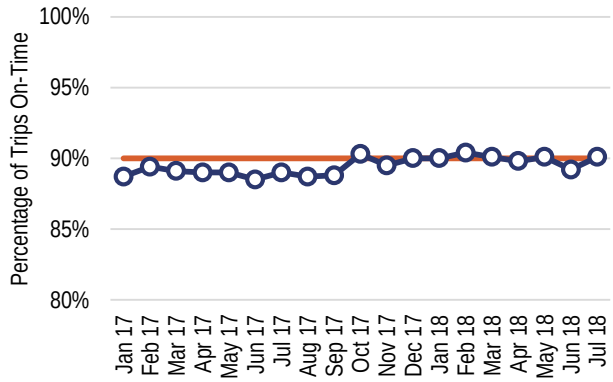


Figure 55: Link On-time Performance, 2017-2018

RELIABILITY IMPACTS

While Link is the most reliable of all modes other than Tacoma Link, and OTP has improved, its OTP still hovers around 90%. Much of the reliability issues can be traced to the Downtown Seattle Transit Tunnel, where Link shares right-of-way with buses, and the Rainier Valley, where Link runs at grade. Although Link has priority, it can still be delayed waiting to enter the tunnel or advance to the next station because buses in the tunnel take longer to load. Link reliability is expected to improve in March 2019 when the DSTT converts to rail-only and buses move to surface streets.

LINK LOADS

Link loads continue to be high, with several trips sometimes exceeding the Link light rail loading standard of 2.0. However, only one trip consistently exceeds the loading standard three days a week, as defined in our service standards. This is currently a two-car train leaving University of Washington Station around 5pm. This trip is heavily loaded due to the two car train configuration as well as passengers traveling through the Downtown Seattle Transit Tunnel to connect to the 5:20 pm Sounder south line train. Sound Transit continues to monitor this trip and may make changes in 2019 to better accommodate passengers, especially after the conversion of the DSTT to a rail-only configuration.

Figure 2 and Figure 3 give a picture of Link loads by hour of day. Each dot represents an actual trip that occurred and the maximum load on each car during that trip. Train car loads are highest at peak hours, but the load of any given trip can vary substantially day by day.

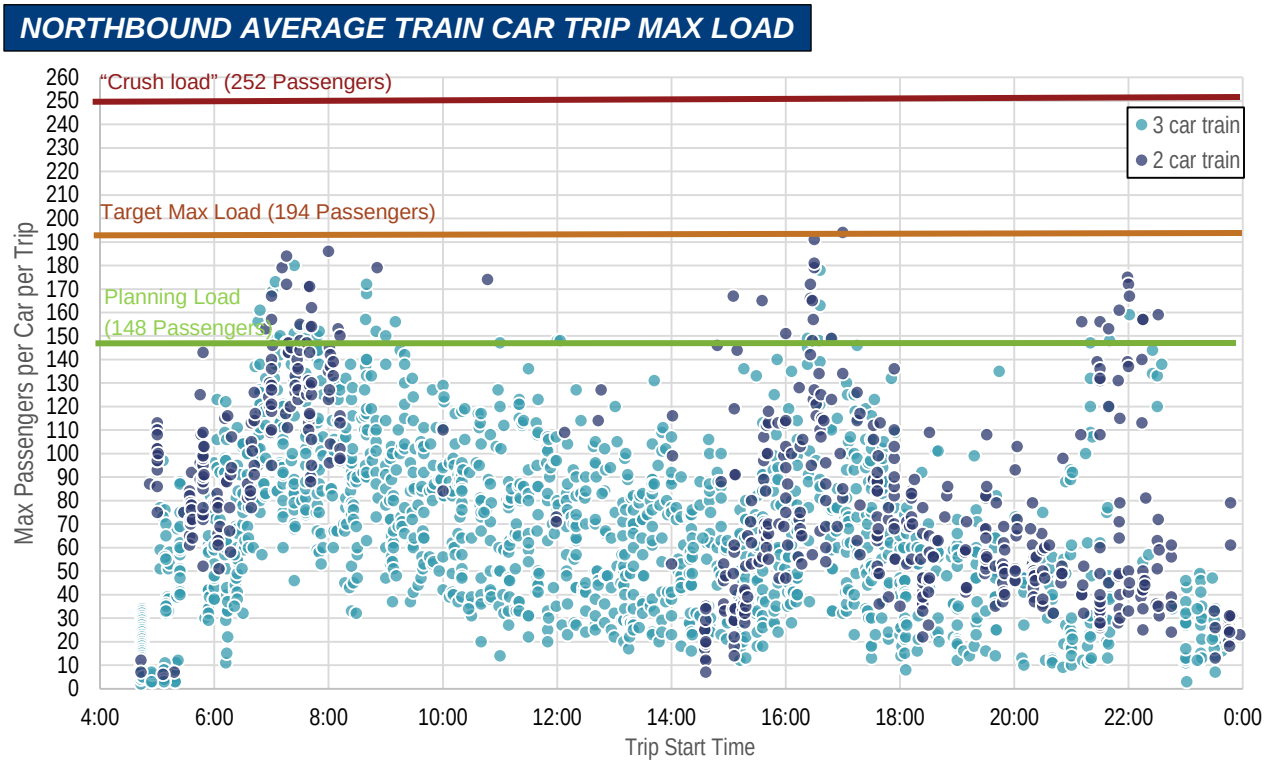


Figure 56: Maximum Car Loads on Individual Link Trips by Hour of Day, Northbound (July 2018)

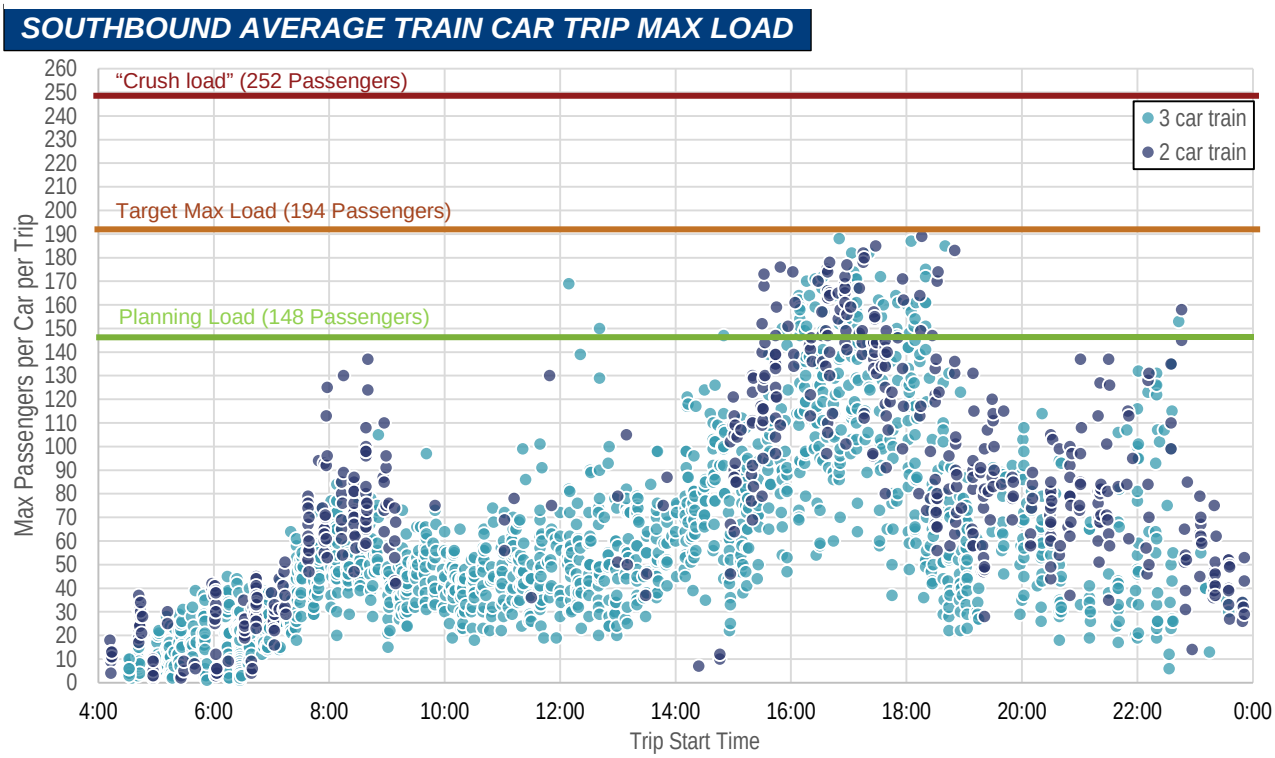


Figure 57: Maximum Car Loads on Individual Link Trips by Hour of Day, Southbound (July 2018)

Sounder *Performance Monitoring: Service Quality*

KEY FINDINGS

On-Time Performance

Sounder on-time performance increased dramatically in spring and summer 2017 after the end of construction that had caused delays.

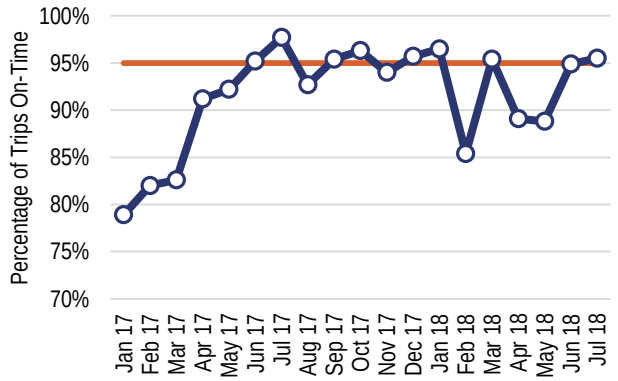


Figure 58: Sounder On-time Performance, 2017-2018

Passenger Load

The addition of two new round trips on the Sounder south line provided much-needed capacity to address overcrowding issues while also inducing higher ridership.

Max loads on all Sounder trips average below the number of seats. However, loads are often not distributed evenly among cars, with those nearest stairwells at King Street Station averaging higher loads, even on inbound morning trains. The front car has the highest average load. When customers complain of overcrowding, a potential solution could be to increase awareness that seats are often available elsewhere in the car.

Operated as Scheduled

Mudslides continued to cause occasional trip cancellations on Sounder north line in the winter months. Quick responses have been key to helping customers transition seamlessly to bus bridges when no train service is available, and reducing complaints.

South Line Train Loading: Northbound

Average Loading on Northbound Trains

The figure below shows the average portion of seats occupied on each train car of each train.

Average Loading on AM Peak Trains

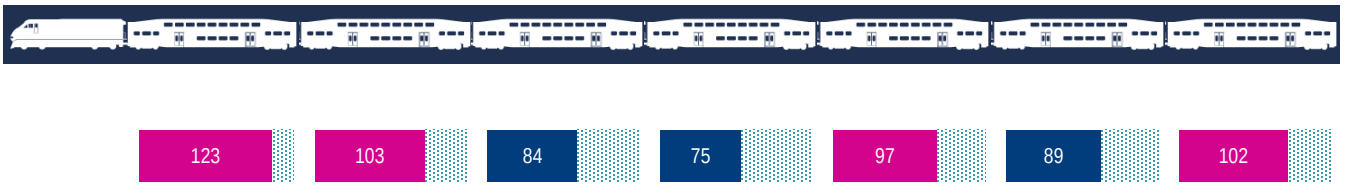


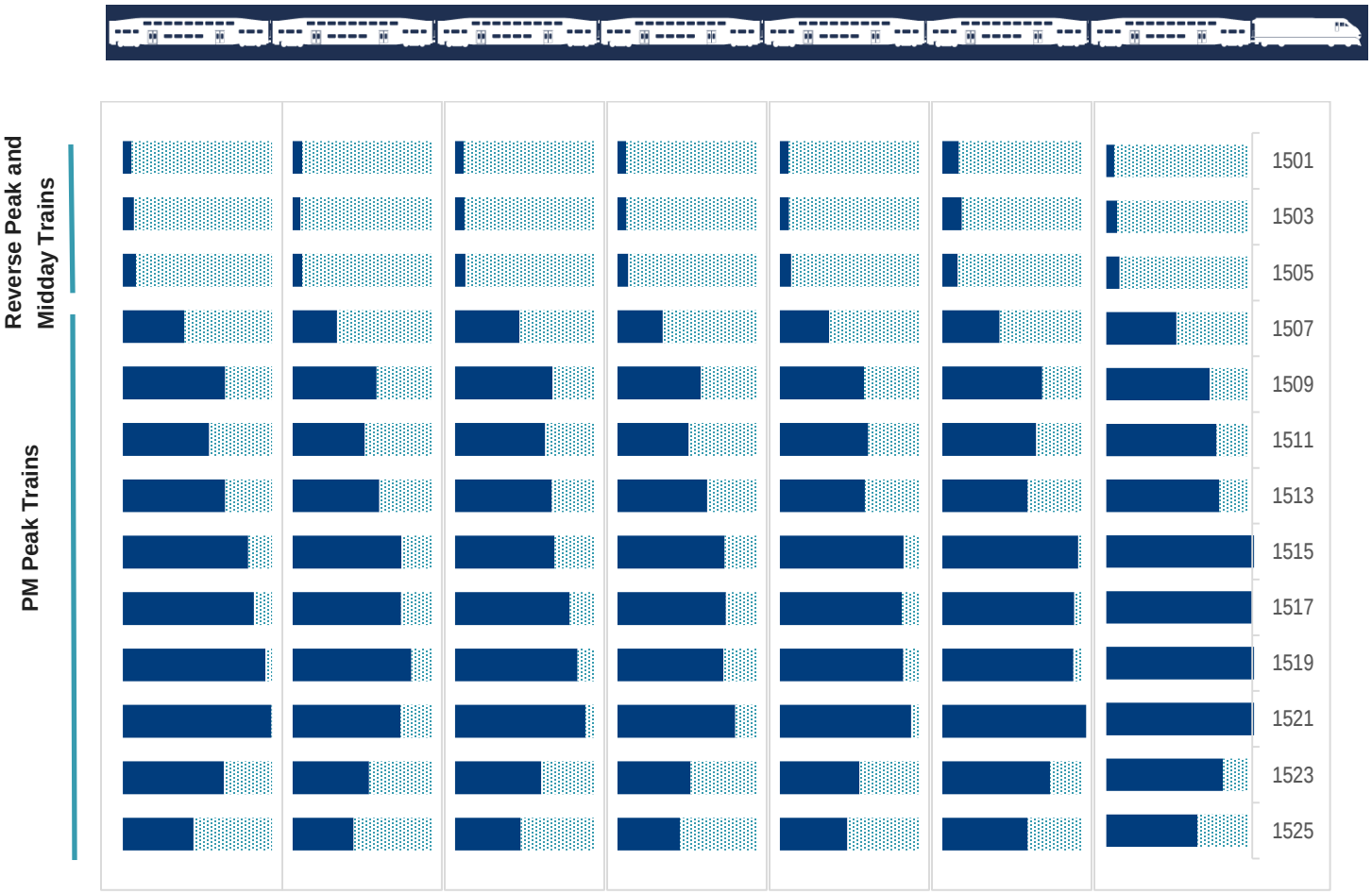
Figure 59: Average Northbound Maximum Car Loads on Individual Sounder South Cars by Trip (Spring 2018)

- Customers are most likely to get a seat cars further back.
- No AM trains are at their full capacity, although some customers in the front car may perceive it this way.

South Line Train Loading: Southbound

Average Loading on Southbound Trains

The figure below shows the average portion of seats occupied on each train car of each train.



Average Loading on PM Peak Trains

Figure 60: Average Southbound Maximum Car Loads on Individual Sounder South Cars by Trip (Spring 2018)

- Southbound PM peak trains are more crowded overall than trains in the AM peak due to higher ridership.
- However, the overall distribution of loading is virtually the same as northbound AM peak trains – passengers tend to board the cars that are readily accessible to the stairwells at King Street Station.

DRAFT

Tacoma Link *Performance Monitoring*

PERFORMANCE MONITORING

All statistics on Tacoma Link improved from 2017 to 2018.

SERVICE QUALITY

Tacoma Link includes a single-track portion between Union Station and Tacoma Dome, which limits headways. Because a late incoming train could interfere with an outgoing train, any trip that is more than five minutes late would result in a trip cancellation Therefore, the percentage of trips operated is equal to on-time performance.

OTP and percentage of trips operated consistently approach 100%, well above the goal of 98.5% of trips departing within three minutes of the schedule.

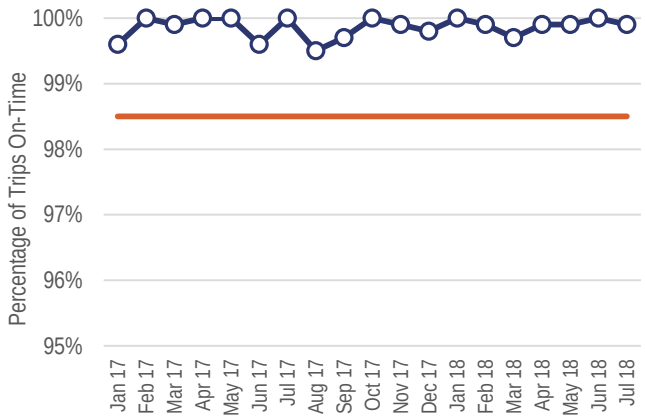


Figure 61: Tacoma Link On-time Performance, 2017-2018

TRIP LOADS

All trips are within the load standard, as seen in Figure 62. Several trips have standing loads, but based on the scheduled 10 minute trip, no action will need to be taken in the upcoming year.

CUSTOMER COMMENTS

Two comments were received in Tacoma Link in 2017. Neither comment was a direct complaint of existing Tacoma Link service. High customer satisfaction may be partly because no fares are currently collected on Tacoma Link and service is generally reliable.

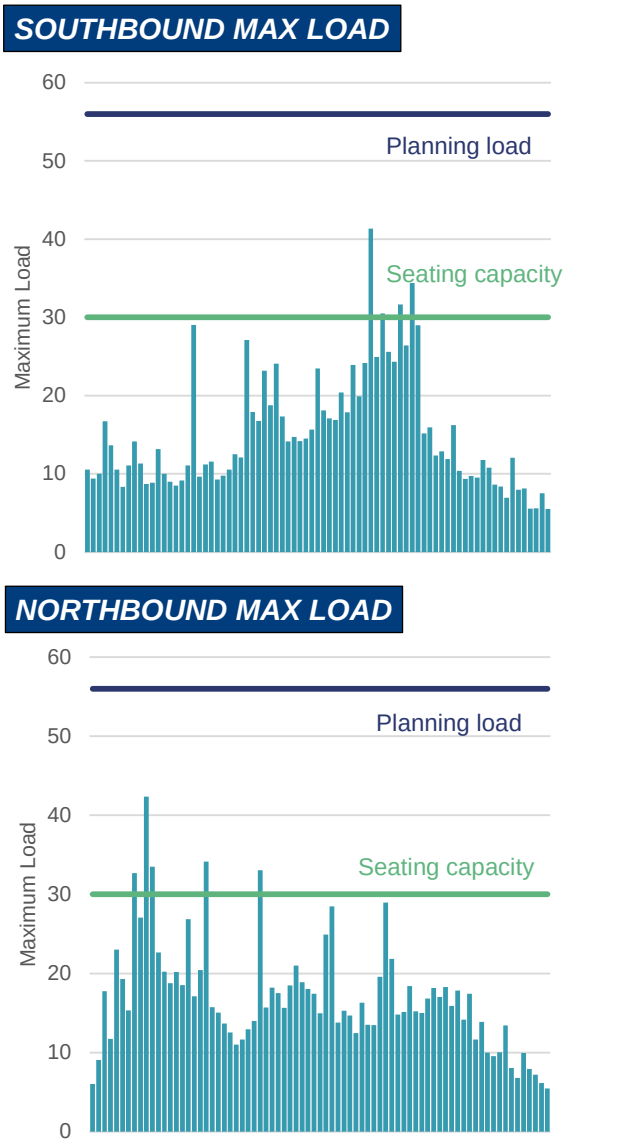


Figure 62: Tacoma Link Average Loads, Spring 2018

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FIVE-YEAR SERVICE OUTLOOK & PLAN

Preliminary service plans & system expansion 2020-2024

System Expansion

Sound Transit will have major system expansion over the next several years as a result of the Sound Move, ST2 and ST3 voter-approved measures. The opening of new high-capacity transit investments presents significant opportunities to adjust the regional transit network to connect more people to more places. The assumptions listed in this section are preliminary and are intended to present one concept of what the regional transit network will look like as Link extensions open. The adoption of this document does not approve changes listed in this section, and changes listed here are subject to a full public engagement period and Board adoption process in the upcoming years.

PLANNING THEMES (KEY THEMES FOR CHANGE)

Link Extensions

- Link will become the regional backbone of the Puget Sound Region linking Downtown Seattle north, east, and south. As congestion grows throughout the region, Link has the opportunity to provide frequent and reliable service that is separated from freeway congestion.

ST Express Evolution

- ST Express will evolve significantly over the next several years as Link extensions open. Most ST Express routes which currently serve downtown Seattle will be converted to regional express routes feeding the Link network, while some routes will be converted to expand service to underserved areas such as South Lake Union. This evolution of ST Express will reduce the total number of hours, but combined with Link will provide more regional mobility to the Central Puget Sound region.

New Mode of Service

- Bus Rapid Transit will replace all-day, all-week ST Express service on I-405 as well as SR 522.
- In both BRT corridors, some peak ST Express bus service would be maintained to provide additional capacity and to serve commuter markets in the corridor not served by the BRT routes.

Service Assumptions: A Preliminary Look

All elements in the following section are preliminary and subject to revision and refinement in future planning efforts. Any major service change requires a full public engagement and Board adoption process.

BUILDING A CONNECTED NETWORK

As Sound Transit continues building-out ST2 and ST3 projects, coordination and transit integration will play an important role in shaping transit service for Puget Sound residents. Transit integration offers opportunities to maximize the efficient use of transit resources in the region, while also improving customer experience. Sound Transit recognizes that coordination with partner agencies provides an effective regional system that customers can utilize any time of the day and week.

Sound Transit's partner agencies, including Community Transit, King County Metro, Pierce Transit, Washington State Department of Transportation (WSDOT) Ferries System, and the City of Seattle, have all adopted updated Long Range Plans (LRPs) that include commitments to future transit integration as more light rail extensions open. As showcased with the U Link Bus-Rail integration process, King County Metro and Sound Transit worked together with key stakeholders in the region to improve reliability and provide new connections to customers with the opening of the Link extension to the University of Washington. Bus-rail transit integration will continue to be an important element of future Link light rail extension openings.

Equally important in the coming years will be transit integration of Sounder, Tacoma Link, and ST Express services with partner agency plans. For Sounder commuter rail, integration with partner agency bus services at each of the Sounder stations, on both the south and north lines, will be critical in the coming years. Coordination continues to be necessary to ensure customers are able to have a

smooth experience transferring to and from Sounder to the connecting systems. Continued coordination with the WSDOT Ferries System at the Edmonds and Mukilteo Sounder stations will be needed, as the Ferry System provides a critical connection for customers traveling across the Puget Sound. For Tacoma Link, Sound Transit will work with Pierce Transit to better utilize capacity on the Tacoma Link system and ensure the system complements Pierce Transit service in downtown Tacoma, and vice versa. For ST Express, as partner agencies implement additional service and strategies identified in their respective LRPs, and as ST2 and ST3 projects come online, coordination of bus service improvements will be key to providing seamless connections across modes. This effort will also ensure redundancies in service throughout the region are minimized.

SERVICE AND FARE EQUITY (SAFE) ANALYSIS

Service changes associated with major capital projects will have Service and Fare Equity Analyses conducted to assess impacts to protected groups. This equity analysis assesses the impacts of service and/or fare changes, positive or negative, on minority, low income, and limited English proficiency (LEP) customers. Each SAFE analysis includes a public outreach period to ensure that customers can comment on the impacts and results of the proposed changes.

Network Outlook 2020-2025

This plan only assumes potential changes that may happen over the next several years as high capacity transit is built out. Changes in this section are conceptual and at a high level, and is still subject to adoption as part of future annual service planning processes.

Modal Hours and Miles Estimates

Based on the Five-Year Service Outlook, planners worked closely with finance staff to estimate four key service statistics which drive operating costs included in the finance plan:

- **Platform hour:** Any hour a transit vehicle is operating, which includes in-service hours, deadhead hours and layover hours. Typically, this is the total amount of time the transit vehicle is away from the operating base.
- **Revenue hour:** An hour in which a transit vehicle is in revenue service, i.e., picking up, dropping off, and/or carrying passengers. Vehicles are not in revenue service between base and their first stop, between their last stop and base, or when traveling between the last stop on one trip and the first stop on the next trip.
- **Platform Mile:** Any mile a transit vehicle operates, which includes in-service miles and deadhead miles. Typically, this is the total distance the transit vehicle travels while away from the operating base.
- **Revenue Mile:** The distance a transit vehicle operates in revenue service, i.e., picking up, dropping off, and/or carrying passengers. Vehicles are not in revenue service between base and their first stop, between their last stop and base, or when traveling between the last stop on one trip and the first stop on the next trip.

ST EXPRESS

ST Express will remain constant over the next several years in terms of service hours provided, although increasing congestion may result in reductions in service delivered due to lower speed. As Link extensions open, most service hours currently allocated to ST Express will be converted over to Link Light Rail service hours. Some hours will be reinvested into the corridor to provide improved connections to the regional network.

LINK

Link will expand significantly over the next five years. With extensions north, south and east, resources will be needed to operate these extensions. Additionally, additional cars will be used to operate four-car trains in the entire system.

TACOMA LINK

Tacoma Link will continue to operate its current service levels until the Hilltop Tacoma Link Extension opens in 2022. After that, frequency will increase to have service every 10 minutes along the corridor.

SOUNDER

No changes to Sounder service are anticipated over the next five years. ST Express service may feed additional passengers into the Sounder network, however.

Transit Service Levels (Thousands of Platform Hours) by Mode							
	2018	2019	2020	2021	2022	2023	2024
Bus							
ST Express	795	803	807	807	807	791	727
Bus Rapid Transit	-	-	-	-	-	-	TBD
Light Rail							
Link	102	101	101	101	107	133	262
Tacoma Link	10	10	10	10	14	26	26
Commuter Rail							
Sounder	13	13	13	13	13	13	13

Table 30: Projected Transit Service Levels by Mode

CONCEPTUAL 2025 NETWORK

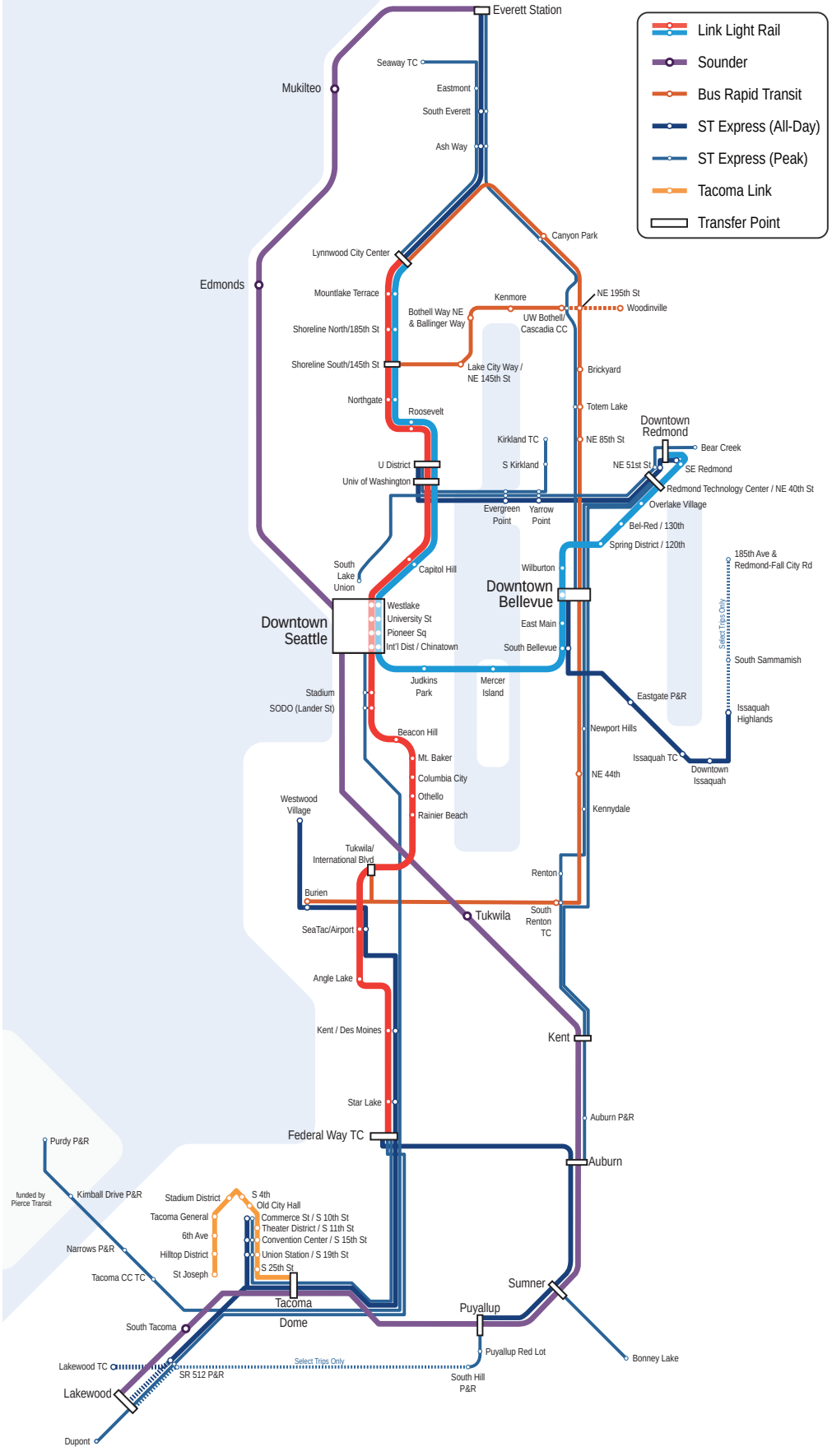


Figure 63: Conceptual 2025 Sound Transit Service Network

Link planning outlook

With the ST2 plan, voters approved approximately 36 miles of new light rail. The ST3 plan expands the system by another 50 miles of light rail. By 2024, the system would extend north from the University of Washington to Northgate and Lynnwood, south from Angle Lake in SeaTac to the Federal Way Transit Center, and east from Seattle to Bellevue and Redmond. In addition, the ST2 Plan includes funding to locate, design, and construct an additional operations and maintenance facility to accommodate future Link light rail fleet requirements. Below are brief descriptions of the light rail extensions and the new operations & maintenance facility funded as part of the ST2 plan and initial projects funded by ST3. Impacts to existing ST Express services are currently being analyzed as part of ongoing studies for specific construction impacts, while the 2025 Network Plan will analyze long term changes to the network as a result of Link extension openings.

Northgate Link Extension

Scheduled for completion in late 2021, Northgate Link extends Link light rail 4.3 miles north from the University of Washington Station to the Northgate Station, adding three stations: U District, Roosevelt and the Northgate Station. Northgate Link, along with the stations, are currently under construction, with the tunnels connecting Northgate and the University of Washington Stations now complete in both directions. With the extension to Northgate, the Link system is expected to operate four-car trains at all times.

East Link

Scheduled for completion in late 2023, East Link extends Link light rail 14 miles east from the International District/Chinatown Station to the Overlake Transit Center via downtown Bellevue, adding ten stations and preliminary engineering for a future extension to downtown Redmond. The stations include Judkins Park (Rainier Ave), Mercer Island, South Bellevue, East Main, Bellevue Downtown, Wilburton, Spring District/120th, Bel-Red/130th, Overlake Village, and Redmond Technology (Overlake Transit Center). East Link, along with some of the stations, are currently in the initial phases of construction. With the extension to Bellevue and Overlake, Link will operate as the Blue Line between Overlake and Northgate in 2023, with four-car trains at all times. With the opening of East Link the capacity between Downtown Seattle and Northgate will double.

Downtown Redmond Link Extension

The Downtown Redmond Link Extension builds 3.7 miles of new light rail from the Redmond Technology Station, opening in 2023, to downtown Redmond by 2024. Light rail will travel along SR 520 with two new stations in southeast Redmond at Marymoor Park and Downtown Redmond. This extension is being built concurrently with the East Link project and was funded by the passage of ST3.

Lynnwood Link Extension

Scheduled for completion in mid-2024, Lynnwood Link extends Link light rail 8.5 miles north from the Northgate Station to the Lynnwood Transit Center, adding four stations and infrastructure for two potential future stations. The stations include Shoreline South/145th, Shoreline North/185th, Mountlake Terrace, and Lynnwood City Center. Lynnwood Link, along with the stations, are currently in final design. With the extension to Lynnwood, Link will operate as the Red and Blue Lines to Lynnwood with four-car trains at all times.

Federal Way Link Extension

Scheduled for completion in 2024, Federal Way Link extends Link light rail 7.8 miles south from the Angle Lake Station to the Federal Way Transit Center, with stops at Kent/Des Moines and South 272nd Street. The Federal Way Link Extension is currently in final design. With the extension to Federal Way, the Link line between Lynnwood and Federal Way is expected to operate as the Red Line with four-car trains at all times.

Link Estimated Hours and Miles

Link includes both train and vehicle statistics to reflect operation of multiple cars within an individual train.

In 2018 Link service statistics will remain constant compared to 2017 service statistics, as operations post University of Washington and Angle Lake extensions have stabilized. However, vehicle statistics will increase in 2018 compared to 2017 due to the change to run 3-car trains all day in June 2017. Link service statistics are consistent in 2019 and 2020 before increasing in 2021 and 2022 with the opening of Northgate Link in late 2021. In 2023 and 2024, Link service statistics increase significantly with the opening of the East Link, Federal Way, Lynnwood, and Redmond Link extensions. Table 31 provides details on Link train and vehicle level service statistics through 2024.

YEAR		REVENUE HOURS	PLATFORM HOURS	REVENUE MILES	PLATFORM MILES	REVENUE HOURS	PLATFORM HOURS	REVENUE MILES	PLATFORM MILES
		Train Statistics				Vehicle Statistics			
2017	Actual	96,191	101,846	1,974,346	2,096,492	251,376	265,554	5,153,872	5,466,531
2018	Estimated	95,972	101,614	1,969,850	2,091,717	266,166	281,813	5,463,120	5,801,103
2019	Estimated	95,600	101,200	1,962,400	2,083,800	266,200	281,800	5,463,100	5,801,100
2020	Estimated	95,600	101,200	1,962,400	2,083,800	266,200	281,800	5,463,100	5,801,100
2021	Estimated	97,700	103,400	2,054,300	2,181,400	303,500	321,300	6,427,300	6,824,900
2022	Estimated	103,800	109,900	2,329,900	2,474,000	415,200	445,500	9,319,600	9,896,100
2023	Estimated	125,800	133,100	2,776,100	3,055,800	503,000	532,600	11,104,500	12,223,100
2024	Estimated	247,000	261,500	6,045,800	6,002,200	988,000	1,046,100	24,183,000	24,008,800

Table 31: Link Service Hours and Miles 2017-2024

ST Express planning outlook

Sound Transit's express bus network is structured around key regional travel corridors, typically on freeways or major highways to support the express, limited-stop characteristics of the service. Sound Transit will continue to coordinate with its partner agencies, key stakeholders, and the public, to analyze the best ways to serve the current ST Express markets and provide improved connections to Link light rail and other projects described in this section.

Congestion

As the Puget Sound Region continues to grow, congestion on major highways and arterials is expected to increase. Over the past several years, traffic and travel times along key corridors served by ST Express have increased significantly. Since September 2015, Sound Transit has invested over 47,000 annual service hours throughout the ST Express system to provide new connections, provide new capacity to meet growing demand, and address congestion. Most recently, another 15,000 annualized service hours were invested in September 2017 system-wide to address on-time performance and reliability.

As congestion continues to increase, Sound Transit will continue to monitor the impacts on ST Express on-time performance and schedule reliability. As funding becomes available, Sound Transit will implement strategies to minimize the impacts of congestion on ST Express service.

ST Express Connects and Evolves

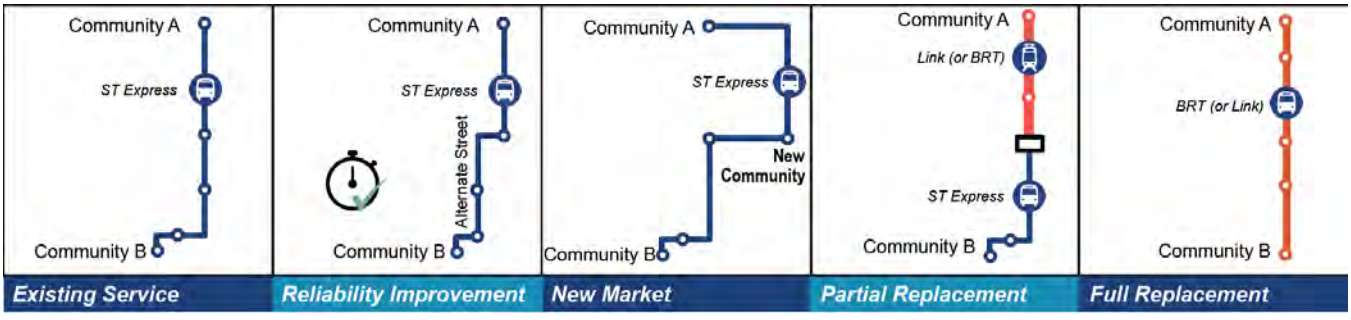
The introduction of new Link extensions gives an opportunity to revisit the role and responsibility of ST Express. With these high capacity corridors coming online, in certain cases ST Express routes which currently serve downtown Seattle will be converted to regional express routes feeding the Link network. Other routes will be converted to expand service levels to future Link markets such as South Lake Union or the Boeing Everett Plant. The truncation of many of these routes, while reducing the total number of hours, will result in increased service levels on the remaining ST Express corridors and provide more regional mobility to the Central Puget Sound region.

ST Express Estimated Hours and Miles

In 2018, ST Express service statistics are expected to increase over 2017 levels, primarily due to a full year of operation of new trips added to the Sounder Connector routes in 2017 to meet the new Sounder South Line round trips. In 2019, the increase in service statistics are a reflection of the added night and weekend service to Rt. 542 to mitigate the closure of the Montlake Freeway Station. Between 2020 and 2022 service statistics for ST Express are expected to remain constant. In 2023 and 2024, ST Express service is expected to decrease and be scaled back, as service is directly replaced by Link and BRT services in various corridors. By 2025, ST Express is expected to scale back to 600,000 annual platform hours and to remain at that level indefinitely. Table 32 provides details on ST Express service statistics through 2024.

YEAR		REVENUE HOURS	PLATFORM HOURS	REVENUE MILES	PLATFORM MILES
2017	Actual	626,347	784,741	11,985,162	16,344,866
2018	Estimated	617,125	795,272	11,844,230	16,522,531
2019	Estimated	638,013	819,722	12,140,043	16,883,534
2020	Estimated	643,900	827,805	12,248,000	17,033,200
2021	Estimated	643,900	827,805	12,248,000	17,033,200
2022	Estimated	643,900	827,805	12,248,000	17,033,200
2023	Estimated	628,300	809,905	12,044,500	16,785,400
2024	Estimated	558,700	740,380	11,188,800	15,722,200

Table 32: ST Express Service Hours and Miles 2017-2024



Sounder planning outlook

The year 2017 saw the addition of the last ST2-funded service improvements to Sounder service, including additional cars, new round trips, and infrastructure improvements. Sound Transit will continue to coordinate internally and externally with partner agencies to minimize the impacts of Sounder projects, including minimizing delay impacts to customers during a project's construction period.

Sounder Maintenance Base

Sound Transit plans to build an operations and maintenance facility to service Sounder commuter trains to accommodate existing and future ridership growth on the Sounder commuter rail system. The new Sounder maintenance facility would be constructed between Steilacoom Boulevard SW and 100th Street SW in the City of Lakewood, adjacent to the Sound Yard Expansion project identified above. The project completed its environmental review in May 2016 and is proposed to be completed by 2023.

Sounder Estimated Hours and Miles

Sounder includes both train and vehicle statistics to reflect operation of multiple cars within an individual train.

In 2018, Sounder service statistics will increase as a result of a full year of operation of the new round trips added in late 2017. Sounder service statistics are expected to remain constant through 2024, as no new service investments are planned. Table 33 provides details on Sounder train and vehicle level service statistics through 2024 for both the North and South lines.

YEAR		REVENUE HOURS	PLATFORM HOURS	REVENUE MILES	PLATFORM MILES	REVENUE HOURS	PLATFORM HOURS	REVENUE MILES	PLATFORM MILES
		Train Statistics				Vehicle Statistics			
North Line									
2017	Actual	2,702	2,885	69,185	71,050	6,941	7,401	177,909	182,665
2018	Estimated	2,674	2,844	69,464	71,089	6,686	7,109	173,661	177,723
2019	Estimated	2,700	2,900	69,500	71,100	6,700	7,200	173,700	177,800
2020	Estimated	2,700	2,900	69,500	71,100	6,700	7,200	173,700	177,800
2021	Estimated	2,700	2,900	69,500	71,100	6,700	7,200	173,700	177,800
2022	Estimated	2,700	2,900	69,500	71,100	6,700	7,200	173,700	177,800
2023	Estimated	2,700	2,900	69,500	71,100	6,700	7,200	173,700	177,800
2024	Estimated	2,700	2,900	69,500	71,100	6,700	7,200	173,700	177,800
South Line									
2017	Actual	8,538	9,190	261,434	269,453	56,994	61,247	1,741,751	1,794,380
2018	Estimated	9,687	10,290	294,706	301,132	67,807	72,032	2,062,940	2,107,926
2019	Estimated	9,700	10,300	294,800	301,200	67,900	72,100	2,063,000	2,108,000
2020	Estimated	9,700	10,300	294,800	301,200	67,900	72,100	2,063,000	2,108,000
2021	Estimated	9,700	10,300	294,800	301,200	67,900	72,100	2,063,000	2,108,000
2022	Estimated	9,700	10,300	294,800	301,200	67,900	72,100	2,063,000	2,108,000
2023	Estimated	9,700	10,300	294,800	301,200	67,900	72,100	2,063,000	2,108,000
2024	Estimated	9,700	10,300	294,800	301,200	67,900	72,100	2,063,000	2,108,000
Sounder Total									
2017	Actual	11,240	12,075	330,619	340,503	63,935	68,648	1,919,660	1,977,045
2018	Estimated	12,361	13,134	364,170	372,222	74,492	79,140	2,236,601	2,285,649
2019	Estimated	12,400	13,200	364,300	372,300	74,600	79,300	2,236,700	2,285,800
2020	Estimated	12,400	13,200	364,300	372,300	74,600	79,300	2,236,700	2,285,800
2021	Estimated	12,400	13,200	364,300	372,300	74,600	79,300	2,236,700	2,285,800
2022	Estimated	12,400	13,200	364,300	372,300	74,600	79,300	2,236,700	2,285,800
2023	Estimated	12,400	13,200	364,300	372,300	74,600	79,300	2,236,700	2,285,800
2024	Estimated	12,400	13,200	364,300	372,300	74,600	79,300	2,236,700	2,285,800

Table 33: Sounder Service Hours and Miles 2017-2024

Tacoma Link planning outlook

System Expansion

The ST2 Plan included funding for a project to expand the current Tacoma Link service. In 2013, after extensive community outreach, a preferred alternative for the extension and station locations was selected. The 2.4-mile expansion will extend Tacoma Link service to the Hilltop neighborhood via the Stadium District and Martin Luther King, Jr. Way. The extension will add six additional stations and relocate the current Theater District station one block north. The expansion will also increase frequencies from every 12 minutes to every 10 minutes. In late 2015, the Sound Transit Board of Directors approved the project to be built. The Tacoma Link Expansion is funded through a partnership between Sound Transit and the City of Tacoma, in addition to grants from the U.S. Department of Transportation and the WSDOT. The project is currently in final design, with construction expected to begin in 2019, and scheduled to open in 2022. Tacoma Link will also begin fare collection upon the opening of the extension.

Sound Transit will continue to coordinate with partner agencies, key stakeholders, and the public, to minimize the impacts of construction of the Tacoma Link expansion project on the adjacent neighborhoods and the connecting bus services. In addition, Sound Transit expects to conduct a service and fare equity analysis (SAFE) analysis for the project starting in early 2021 through early 2022. The analysis will include the impacts of changes to Pierce Transit or Sound Transit bus services, if any, to Title VI communities as a result of the extension.

Fleet Operations & Maintenance Facility Expansion

With the extension of Tacoma Link service approved in 2015, the fleet requirements for operating service will increase, from the current three vehicles to eight vehicles with the extension. The light rail vehicles are expected to begin being delivered in 2020 through 2021. Sound Transit will be working with the vendor, Brookeville Equipment Corporation, in the coming years to design the new vehicles and ensure the needs of all transit riders are incorporated.

The current operations and maintenance facility in downtown Tacoma, which can store and maintain four light rail vehicles, will reach full capacity by 2020. This facility will be expanded to the east to store, maintain, and deploy the additional vehicles needed for the Tacoma Link Extension.

Sound Transit will continue to coordinate with partner agencies, key stakeholders, and the public, to minimize the impacts of construction of the Tacoma Link OMF Expansion project on the adjacent neighborhoods. In addition, Sound Transit expects to conduct a SAFE analysis for the project in 2020. Table 25 provides details on existing and planned Tacoma Link fleet through 2023.

Tacoma Link Estimated Hours and Miles

Since Tacoma Link operates as one-car train, train and vehicle statistics are identical.

Tacoma Link service statistics are expected to remain constant between 2018 and 2021. In 2022, with the opening of the Hilltop Extension and the increase in service to 10-minute frequencies, Tacoma Link service statistics start to increase. Service statistics in 2023 and 2024 reflect full years of operations of the extension and service frequency improvements. Table 34 provides details on Link train and vehicle level service statistics through 2024.

YEAR		REVENUE HOURS	PLATFORM HOURS	REVENUE MILES	PLATFORM MILES
		Train & Vehicle Statistics			
2017	Actual	9,868	9,905	75,983	76,262
2018	Estimated	9,800	9,800	75,500	75,800
2019	Estimated	9,800	9,800	75,500	75,800
2020	Estimated	9,800	9,800	75,500	75,800
2021	Estimated	9,800	9,800	75,500	75,800
2022	Estimated	13,800	13,900	105,900	106,300
2023	Estimated	25,600	25,700	238,600	239,500
2024	Estimated	25,600	25,700	238,600	239,500

Table 34: Tacoma Link Service Hours and Miles 2017-2024

***BRT** planning outlook*

The voter approved ST3 plan included two new high-capacity transit routes utilizing the bus rapid transit (BRT) technology. In 2018, the concepts, routing and service plan for these two BRT routes are being refined to reflect improved assumptions and updated knowledge about operating plans. Assumptions around station locations have not changed, but operating considerations and station location refinements will revise service planning estimates. As a result, hours and miles assumptions will be included as part of next year's service implementation plan.

SR 522/NE 145th BRT

SR 522/NE 145th BRT will operate between the new Shoreline South/145th St Station on the Lynnwood Link Extension and communities along the north shore. The eastern terminus, as currently envisioned, will alternate between ending at UW Bothell or in Woodinville. This line is anticipated to open at the same time or soon after the Lynnwood Link extension open in 2024.

I-405 BRT

I-405 BRT will operate as two distinct lines – one operating from Lynnwood to Bellevue and the other from Bellevue to Burien. These BRT lines are anticipated to open in 2024.

Northgate Link Extension (2021)

Scheduled for completion in late 2021, Northgate Link extends Link light rail 4 miles north from the University of Washington Station to the Northgate Transit Center, adding two stations (U District and Roosevelt) along the way.

ST Express leverages Northgate Link

ST Express service will have an opportunity for change the opening of Northgate Link. These concepts reduce duplication of service along the corridor to potentially fund reliability improvements on the distinct segments of those routes. No changes to service hours are proposed as part of the Northgate Link Extension.

Key changes in service by route include:

- **Route 522 truncated at Roosevelt or Northgate Station,** operating all-day all-week service from the Link station. Saved resources reinvested back into Route 522.
- **Route 542 truncated at U. District;** service between U. District and Green Lake P&R would be discontinued. Saved resources reinvested back into Route 542.
- **Route 586 U. District service discontinued** and service hours reinvested into service in the I-5 South corridor.

Other opportunities for changes that may be explored include:

- **I-5 North corridor restructure,** some of the corridor's route (Rt. 510, 511, 512, and/or 513), operating along the I-5 corridor between Snohomish County and Downtown Seattle, could be restructured to connect with Link at Northgate.
- **Routes 555 and 556,** operating between Issaquah and Northgate, may be restructured on the segment between U-District and Northgate.

ROUTE	2019 PLATFORM HOURS	2021 PLATFORM HOURS
522	59,099	59,099
542	30,180	30,180
586	11,178	-
Other I-5 South Routes	236,694	247,872
Total	337,151	337,151

Table 35: ST Express Platform Hours Changes with Northgate

Service Assumptions: A Preliminary Look

All elements in these sections are preliminary and subject to revision and refinement in future planning efforts. Any major service change requires a full public engagement and Board adoption process.

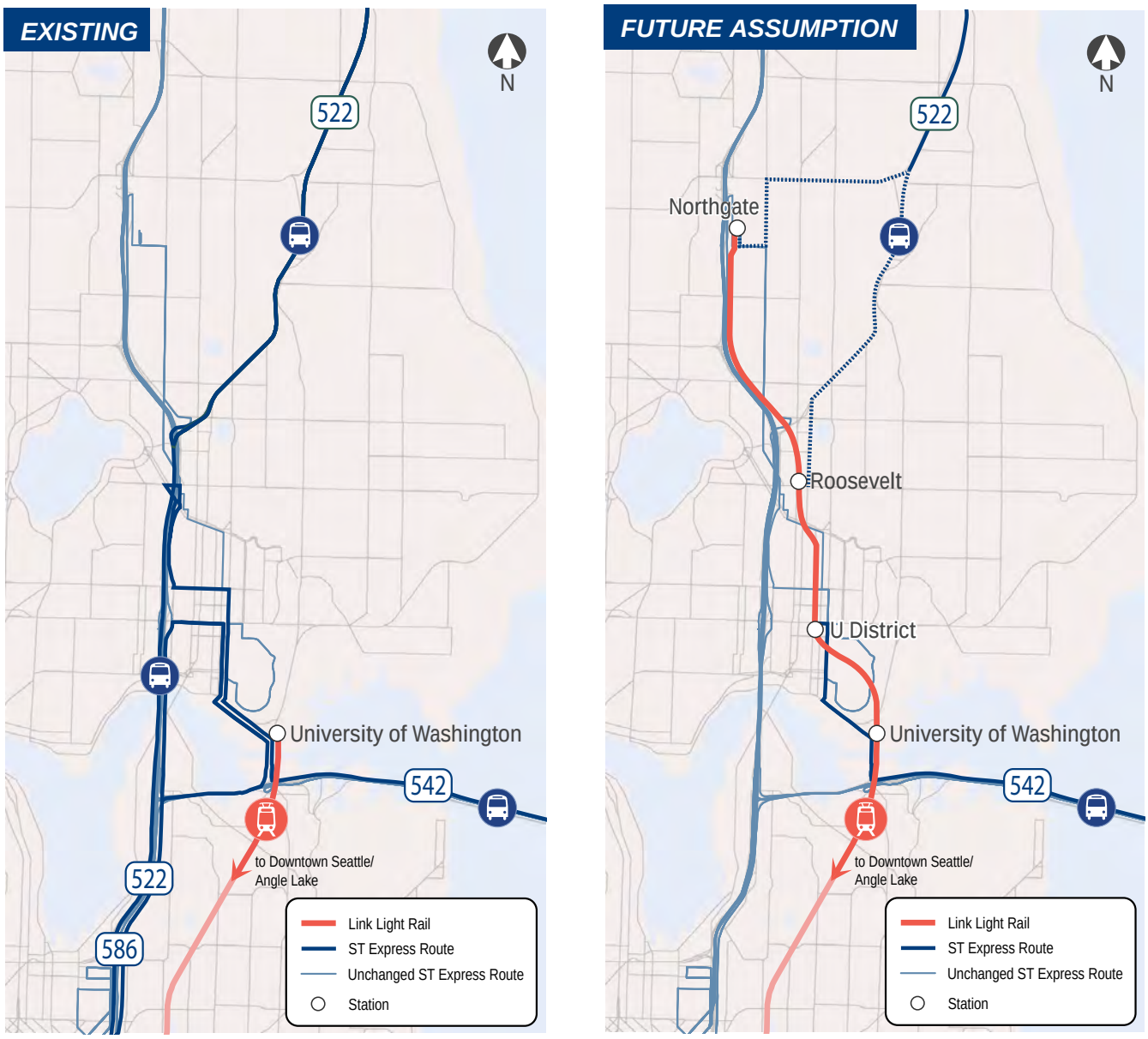


Figure 64: Conceptual ST Express Service Changes with Northgate Link Extension

East Link Extension (2023)

Scheduled for completion in late 2023, East Link extends Link light rail 14 miles east, from the International District/Chinatown Station to the Overlake Transit Center via downtown Bellevue, adding ten stations along the way.

ST Express leverages East Link capacity

The completion of East Link will bring significant changes to ST Express service network to/from the Eastside, both on the SR-520 and I-90 corridors. Table 36 provides a snapshot by route of the current assumed changes in platform hours between now and 2025.

Key changes in service by route include:

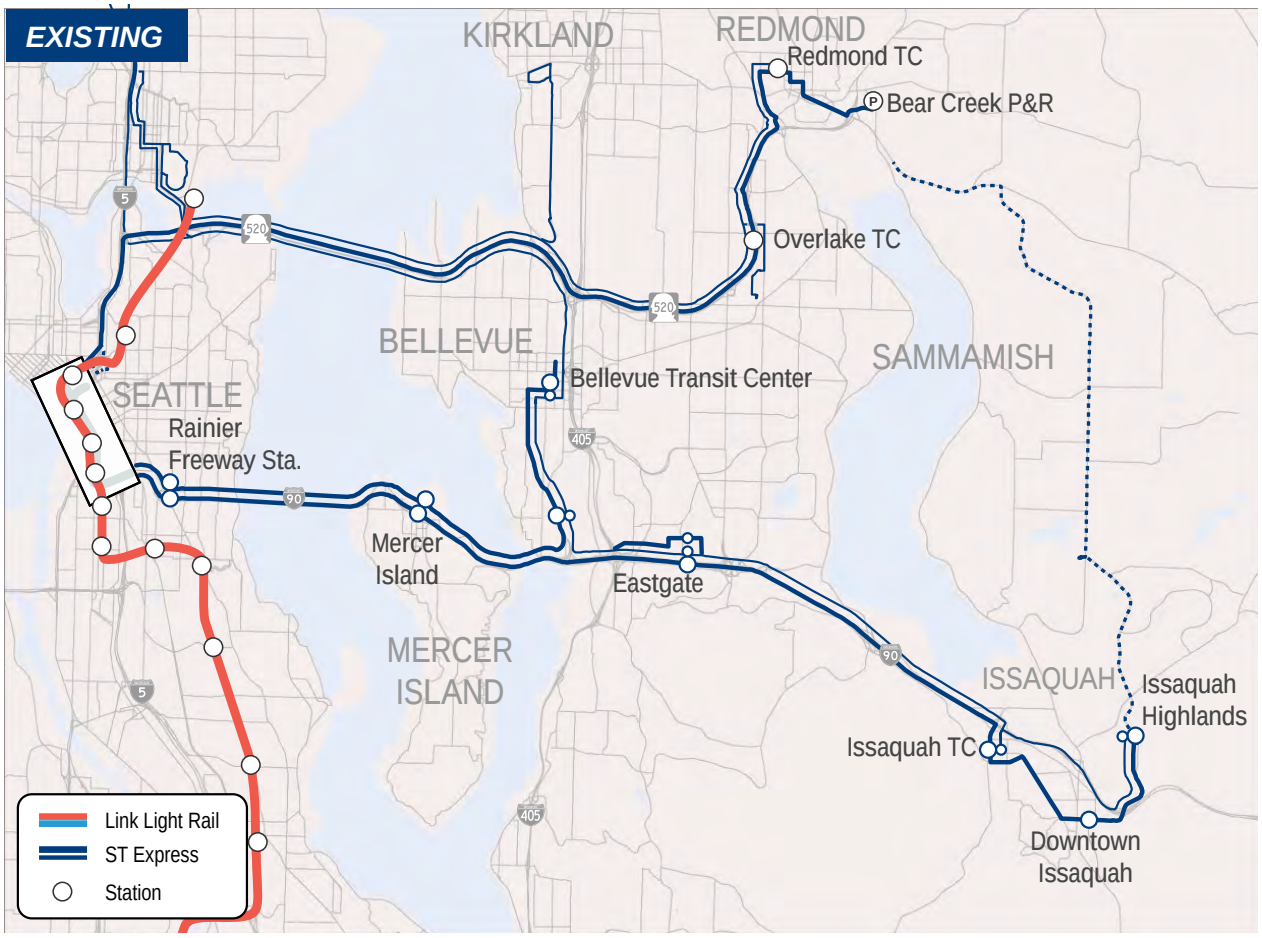
- **Route 540 remains the same** as today.
- **Route 541 eliminated,** replaced by East Link.
- **Route 542 operates frequent all-day all-week** between U. District and Downtown Redmond.
- **Route 545 operates frequent peak-only** service between Bear Creek P&R and South Lake Union, the route would longer deviate to Capitol Hill or Overlake Transit Center.
- **Route 550 eliminated**, replaced by East Link.
- **Routes 554, 555 and 556 restructured and resources merged,** to provide a frequent all-day all-week connection between Downtown Bellevue and Issaquah. I-90 Seattle bound customers transfer at South Bellevue Station. Downtown Bellevue to U. District & Northgate segment eliminated and replaced by East Link. Alternate service across SR-520 would continue to be available on King County Metro Route 271.

ROUTE	2019 PLATFORM HOURS	2023 PLATFORM HOURS
540	11,352	9,000
541	12,539	-
542	30,180	62,000
545	80,781	49,000
550	69,717	-
554	44,115	
555	7,692	83,000
556	10,098	
Total	266,474	203,000

Table 36: ST Express Platform Hours Changes with East Link

Service Assumptions: A Preliminary Look

All elements in these sections are preliminary and subject to revision and refinement in future planning efforts. Any major service change requires a full public engagement and Board adoption process.



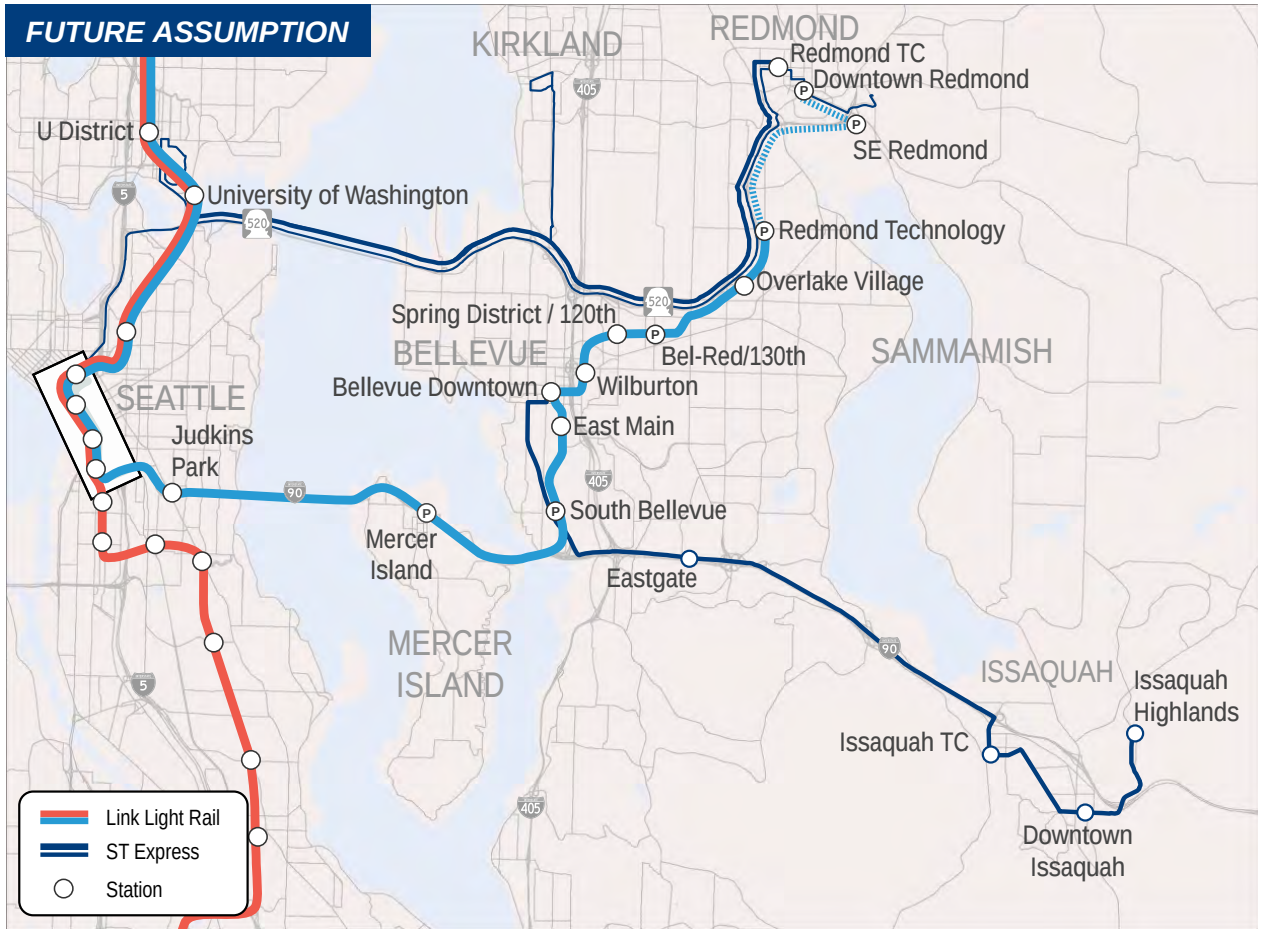


Figure 65: Conceptual ST Express Service Changes with East Link Extension

Downtown Redmond Link Extension (2024)

Scheduled for completion in late 2024, a year after East Link, the Downtown Redmond Link extension extends Link light rail 3 miles east, from the Redmond Technology Center to Downtown Redmond, adding two stations along the way.

ST Express changes Redmond terminals

The completion of Downtown Redmond Link Extension will bring some minor changes to ST Express service network in Redmond, although no changes in service levels is anticipated with the opening of the Downtown Redmond Link Extension. Table 37 provides a snapshot by route of the current assumed changes in platform hours between now and 2025.

ROUTE	2019 PLATFORM HOURS	2024 PLATFORM HOURS
542	30,180	62,000
545	80,781	49,000
Total	110,961	111,000

Table 37: ST Express Platform Hours Changes with Redmond Link

Key changes in service by route include:

- **Route 542 changes terminals in Redmond,** starting at the new SE Redmond Station and operating to/from U. District. No change in service levels from 2023.
- **Route 545 remains the same as with East Link,** operating between Bear Creek P&R and South Lake Union.

Service Assumptions: A Preliminary Look

All elements in these sections are preliminary and subject to revision and refinement in future planning efforts. Any major service change requires a full public engagement and Board adoption process.

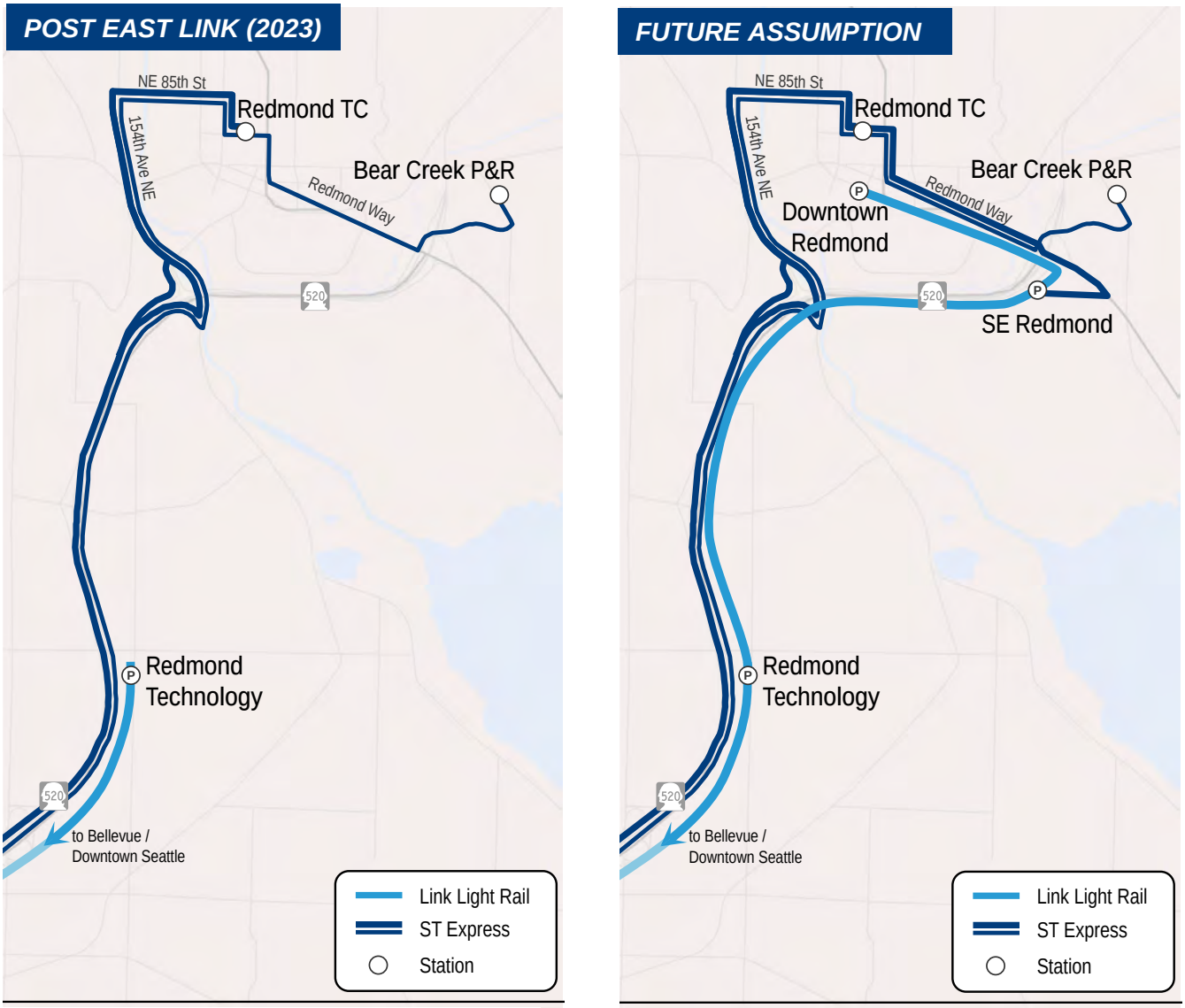


Figure 66: Conceptual ST Express Service Changes with Downtown Redmond Link Extension

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Lynnwood Link Extension (2024)

Scheduled for completion in mid-2024, Lynnwood Link extends Link light rail 8.5 miles north, from the Northgate Station to the Lynnwood Transit Center, adding four stations along the way.

ST Express leverages Lynnwood Link reliability

The completion of Lynnwood Link will bring significant changes to ST Express service network to/from the Snohomish County along the I-5 North corridor. The extension will also provide significant reliability benefits for customers in that corridor. Table 38 provides a snapshot by route of the current assumed changes in platform hours between now and 2025.

ROUTE	2019 PLATFORM HOURS	2024 PLATFORM HOURS
510	18,912	56,000
511	19,027	16,000
512	56,873	-
513	9,635	-
Total	104,448	72,000

Table 38: ST Express Platform Hours Changes with Lynnwood Link

Key changes in service by route include:

- **ST Express customers will transfer to Link in Lynnwood,** if traveling to Downtown Seattle or other stations South of Lynnwood
- **Routes 510 and 512 resources merged,** to provide a frequent all-day all-week connection between Downtown Everett and Lynnwood Transit Center, via South Everett.
- **Routes 511 and 513 resources merged,** to provide a frequent peak-only bidirectional connection between Seaway Transit Center and Lynnwood Transit Center, via Eastmont P&R and Ash Way P&R.

Service Assumptions: A Preliminary Look

All elements in these sections are preliminary and subject to revision and refinement in future planning efforts. Any major service change requires a full public engagement and Board adoption process.

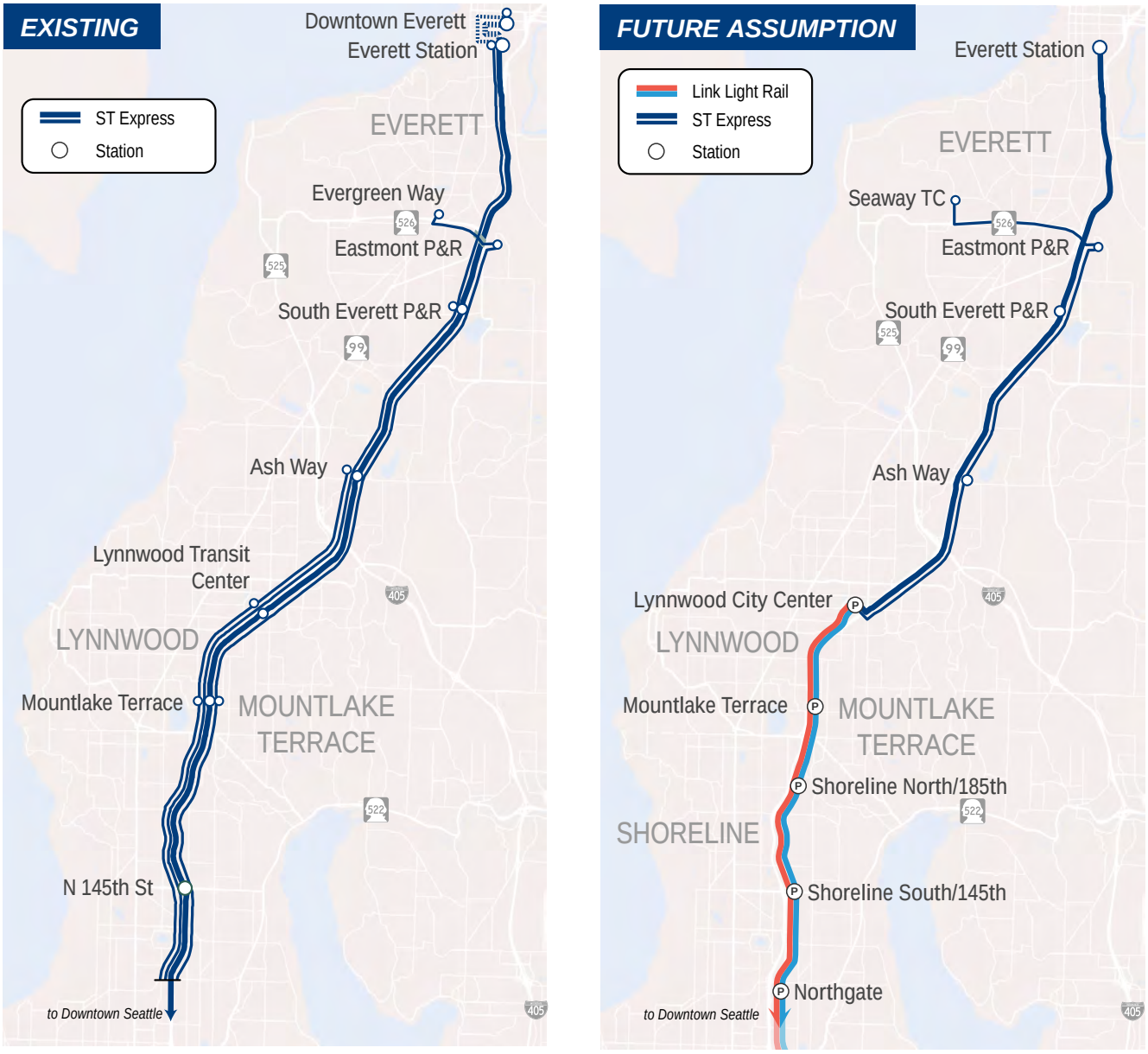

Figure 67: Conceptual ST Express Service Changes with Lynnwood Link Extension

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Federal Way Link Extension (2024)

Scheduled for completion in late 2024, Federal Way Link extends Link light rail 7.8 miles south, from the Angle Lake Station to the Federal Way Transit Center, adding three stations along the way.

ST Express leverages Federal Way Link reliability

The completion of Federal Way Link will bring significant changes to ST Express service network to/from the South King County and Pierce County, The extension will also provide significant reliability benefits for customers in that corridor. Table 39 provides a snapshot by route of the current assumed changes in platform hours between now and 2025.

Key changes in service by route include:

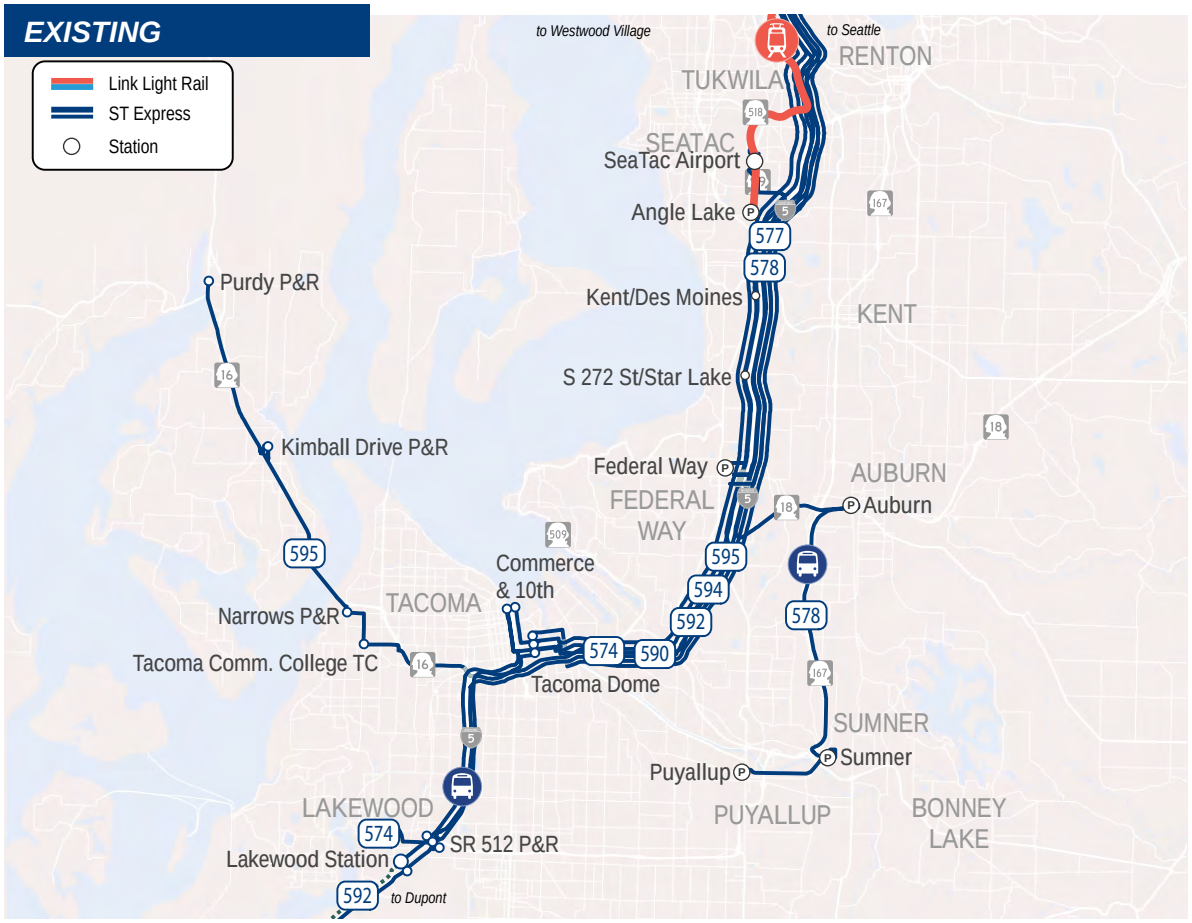
- **ST Express customers will transfer to Link in Federal Way**, if traveling to Downtown Seattle or other stations north of Federal Way.
- **Route 574 extended to Burien and Westwood Village,** continuing to provide connections to SeaTac Airport.
- **Route 577 eliminated**, replaced by Federal Way Link.
- **Route 578 terminates at Federal Way,** providing off-peak connections between the SR-167 corridor and Federal Way.
- **Route 590 terminates at Federal Way,** providing frequent peak-direction service between Downtown Tacoma and Federal Way Transit Center.
- **Route 592 terminates at Federal Way,** continuing to provide peak-only service to/from DuPont P&R and Lakewood
- **Route 594 terminates at Federal Way,** providing a frequent all-day all-week connection between Lakewood Station and Federal Way Transit Center, via Downtown Tacoma.
- **Route 595 remains the same,** providing peak-only service between Gig Harbor and Downtown Seattle.

ROUTE	2019 PLATFORM HOURS	2024 PLATFORM HOURS
574	44,358	69,000
577	24,960	-
578	36,293	37,000
590	52,300	16,000
592	20,693	24,000
594	50,083	63,000
595	8,007	8,000
Total	236,694	217,000

Table 39: ST Express Platform Hours Changes with Federal Way

Service Assumptions: A Preliminary Look

All elements in these sections are preliminary and subject to revision and refinement in future planning efforts. Any major service change requires a full public engagement and Board adoption process.



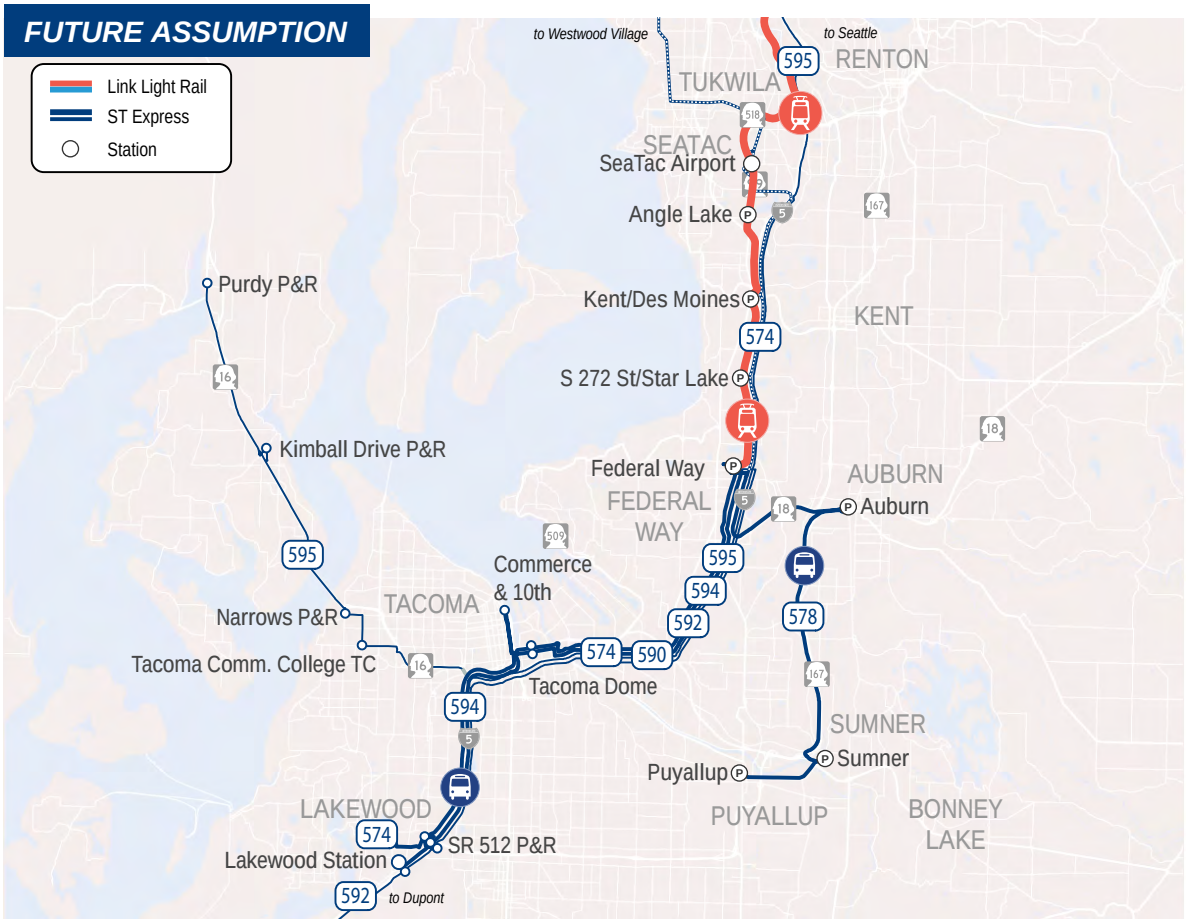


Figure 68: Conceptual ST Express Service Changes with Federal Way Link Extension

SR 522/NE 145th BRT (2024)

Scheduled for completion in late 2024, SR-522/NE 145th BRT will connect communities along the SR-522 corridor to Link light rail at the Shoreline South Station.

ST Express sets the stage for BRT

The completion of the SR-522 BRT will bring changes to the ST Express service network in the corridor. This new mode will also provide significant reliability benefits for customers in that corridor. Table 40 provides a snapshot by route of the current assumed changes in platform hours between now and 2025.

ROUTE	2019 PLATFORM HOURS	2024 PLATFORM HOURS
522	59,099	17,000
Total	59,099	17,000

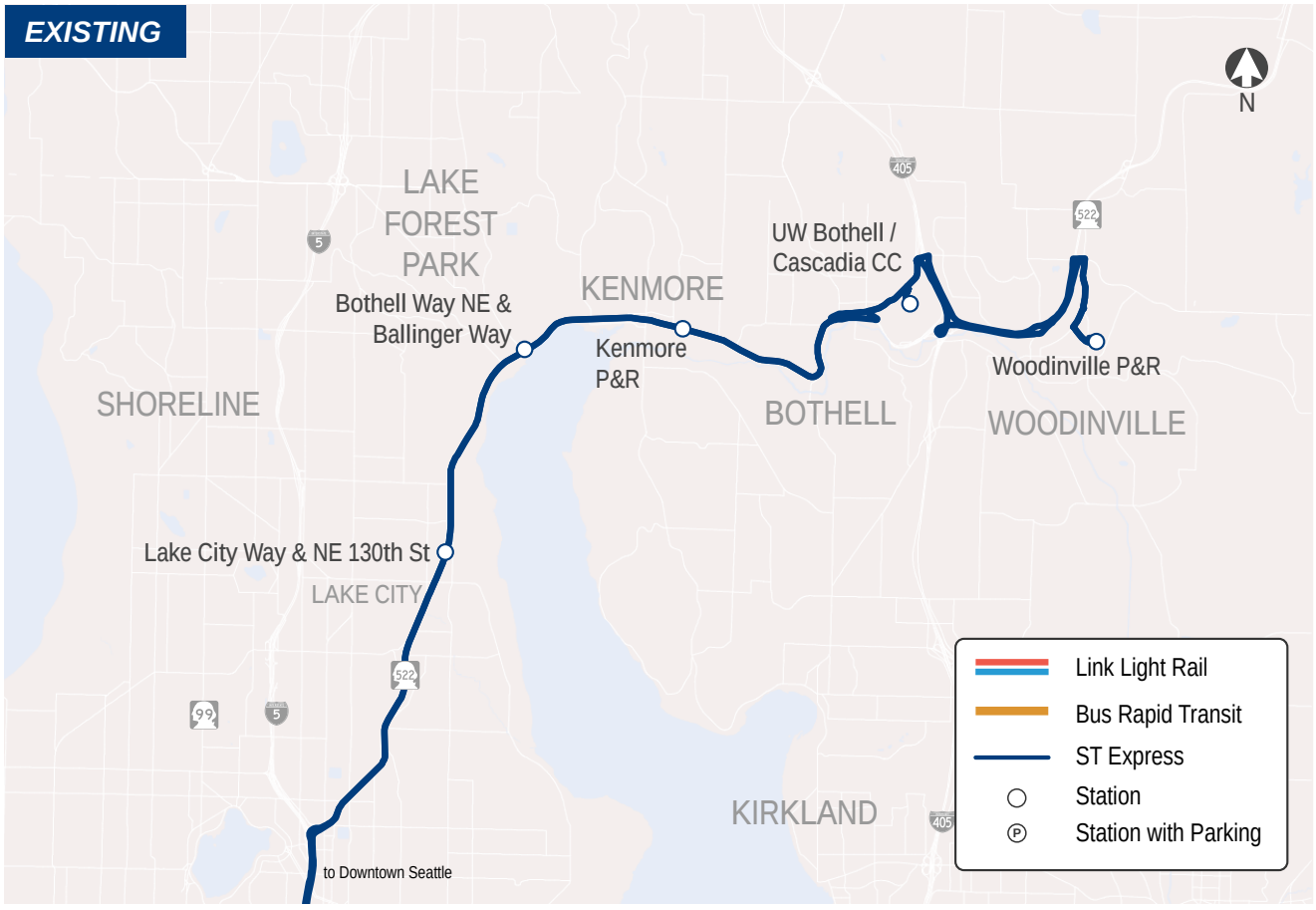
Table 40: ST Express Platform Hours Changes with SR-522

Key changes in service by route include:

- **Rt. 522 operates peak-only service and truncates at Northgate or Roosevelt Station**, continuing to provide connections along the SR-522 corridor. Note that the all-day, all-week truncation to Northgate or Roosevelt would occur as part of the Northgate Link extension in 2021. At that time, Route 522 performance will be evaluated to determine if service to Woodinville will still be warranted once the SR-522 BRT begins service.

Service Assumptions: A Preliminary Look

All elements in these sections are preliminary and subject to revision and refinement in future planning efforts. Any major service change requires a full public engagement and Board adoption process.



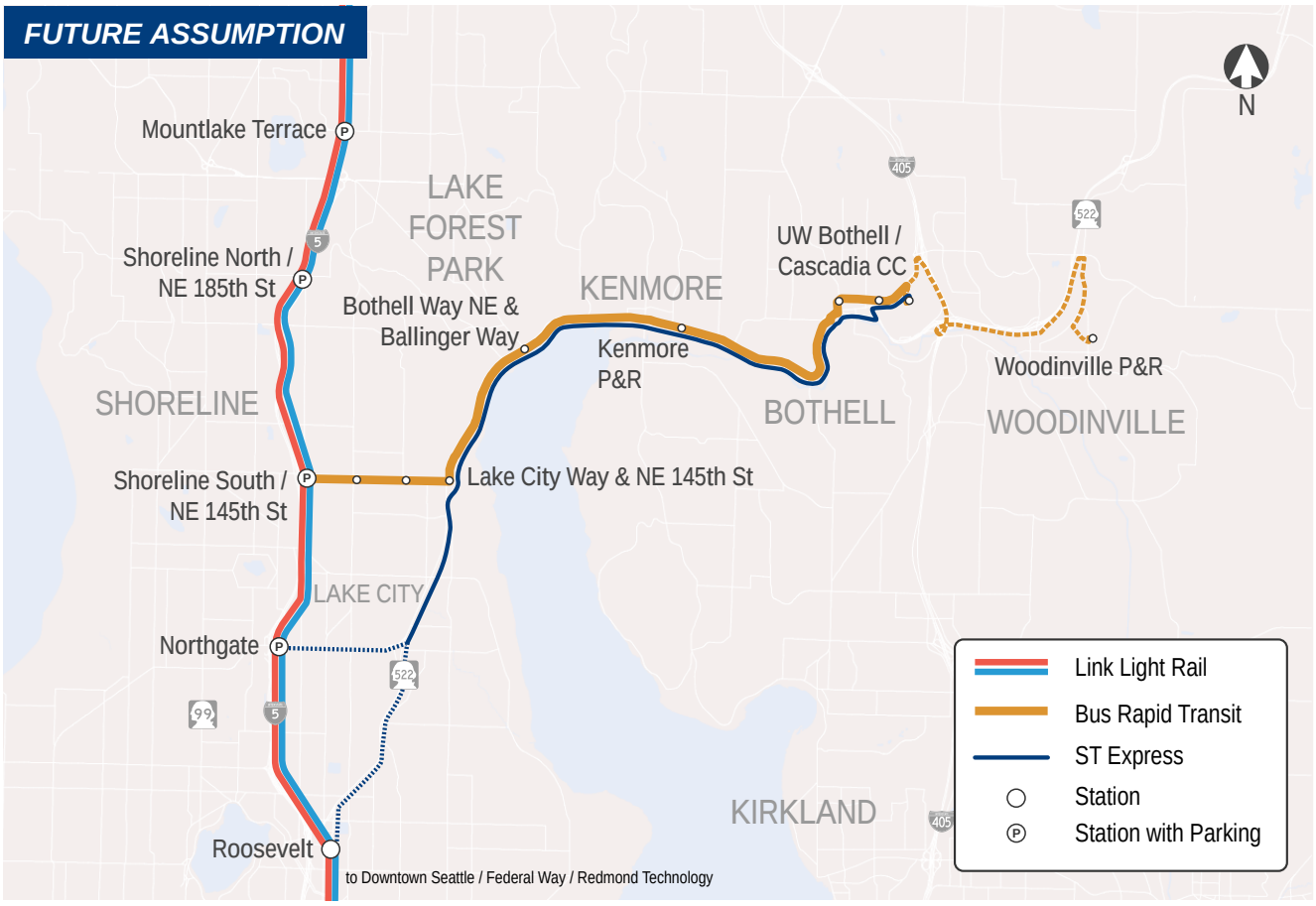


Figure 69: Conceptual ST Express Service Changes with SR 522 / NE 145th BRT

DRAFT

I-405 BRT (2024)

Scheduled for completion in late 2024, the I-405 BRT will connect communities along Interstate 405 between Lynnwood and Burien via Downtown Bellevue.

ST Express sets the stage for BRT

The completion of the I-405 BRT will bring changes to ST Express service network in the corridor. This new mode will also provide reliability benefits for customers in that corridor. Table 41 provides a snapshot by route of the current assumed changes in platform hours between now and 2025.

Key changes in service by route include:

- **Rt. 532 now serves UW Bothell/Cascadia College Campus**, continuing to provide peak-only connections between Bellevue and Everett.
- **Rt. 535 is eliminated**, replaced by I-405 BRT.
- **Rt. 560 is eliminated**, replaced by I-405 BRT.
- **Rt. 566 remains the same**, continuing to provide weekday connections between South King County, Bellevue, and Overlake.
- **Rt. 567 remains the same**, continuing to provide peak-only connections between South King County, Bellevue, and Overlake.
- **Route 574 extended to Burien and Westwood Village,** continuing to provide connections to SeaTac Airport as part of the Federal Way Link Extension project.

ROUTE	2019 PLATFORM HOURS	2024 PLATFORM HOURS
532	18,364	30,000
535	24,421	-
560	38,499	-
566	31,051	34,000
567	13,077	12,000
Total	125,412	76,000

Table 41: ST Express Platform Hours Changes with I-405 BRT

Service Assumptions: A Preliminary Look

All elements in these sections are preliminary and subject to revision and refinement in future planning efforts. Any major service change requires a full public engagement and Board adoption process.

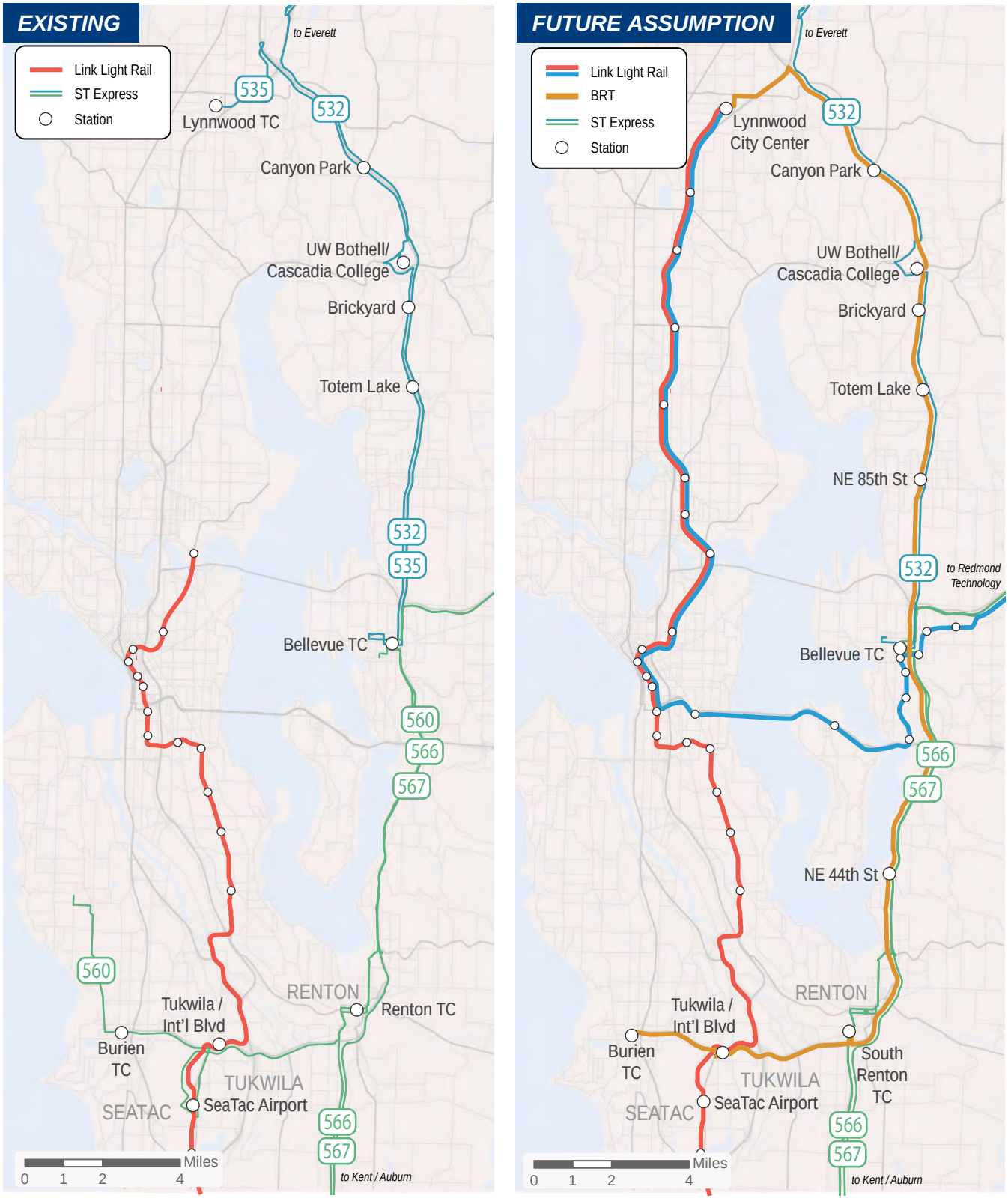


Figure 70: Conceptual ST Express Service Changes with I-405 BRT

Service and Fare Equity *SAFE analysis timelines*

Per Federal Transit Administration (FTA) requirement, transit agencies in regions of over 200,000 people and that operate over 50 buses during peak periods are required to conduct a Title VI service and fare equity (SAFE) analysis when implementing a major service change and/or implementing fare changes. An equity analysis assesses the impacts of service and/or fare changes, positive or negative, on minority, low income, and limited English proficiency (LEP) customers. Each SAFE analysis includes a public outreach period to ensure that customers can comment on the impacts and results of the proposed changes.

Sound Transit's adopted policy defines a major service changes as "any single change in service on an individual bus or rail route that would add or eliminate more than 25 percent of the route's weekly platform service hours, and/or move the location of a stop or station by more than a half mile." Sound Transit uses this policy when developing SAFE analysis for a service change. In addition, per FTA Circular 4702.1B, transit agencies that receive FTA funding are required to perform a SAFE analysis for New Starts and Small Starts projects, as well as other New Fixed Guideway and major capital projects. These type of SAFE analyses are required to be conducted six months to a year prior to the project's opening date, whether or not changes to existing service rise to the level of "major service change" as defined by the transit provider.

Table 42 below includes more details on the specific timelines for each of the SAFE analyses that Sound Transit will conduct as part of the Sound Transit 2 (ST2) buildout of the system. The analysis will look at the equity impacts of potential changes to transit service in the respective corridor to be served by the light rail extensions or major facility identified in each SAFE. Sound Transit will engage the public and its partner agencies to develop the respective SAFE analysis. Sound Transit will monitor construction and opening date schedules and work with partner agencies if changes impact the respective SAFE analysis schedule.

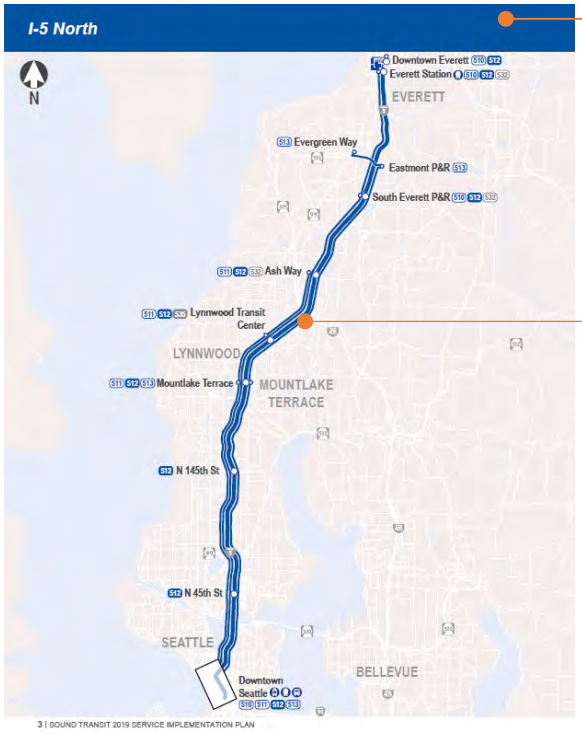
PROJECT	MODE OF SERVICE	PROJECT TYPE	SAFE DEVELOPMENT TIMELINE & PUBLIC ENGAGEMENT	SCHEDULED OPENING DATE
OMF: East	Link Light rail	Capital Facility	Summer 2019 to Summer 2020	December 2020
Northgate Link	Link Light rail	Fixed Guideway	Spring 2020 to Spring 2021	Late 2021
OMF Expansion	Tacoma Link	Capital Facility	Spring 2020 to Spring 2021	2021
Tacoma Link Expansion	Tacoma Link	Fixed Guideway	Spring 2021 to Spring 2022	2022
Maintenance Base	Sounder	Capital Facility	Spring 2021 to Spring 2022	2022
East Link	Link Light rail	Fixed Guideway	Spring 2022 to Spring 2023	Late 2023
Maintenance Base	BRT	Capital Facility	Spring 2022 to Spring 2023	2023
Lynnwood Link	Link Light rail	Fixed Guideway	Spring 2022 to Spring 2023	Mid 2024
Redmond Link Extension	Link Light rail	Fixed Guideway	Spring 2023 to Spring 2024	Late 2024
Federal Way Link Extension	Link Light rail	Fixed Guideway	Spring 2023 to Spring 2024	Late 2024
I-405 BRT	BRT	Fixed Guideway	Spring 2023 to Spring 2024	Late 2024
SR-522 BRT	BRT	Fixed Guideway	Spring 2023 to Spring 2024	Late 2024

Table 42: Service and Fare Equity Timelines

ROUTE PROFILES

HOW TO INTERPRET THE DETAILED DATA

CORRIDOR PROFILES

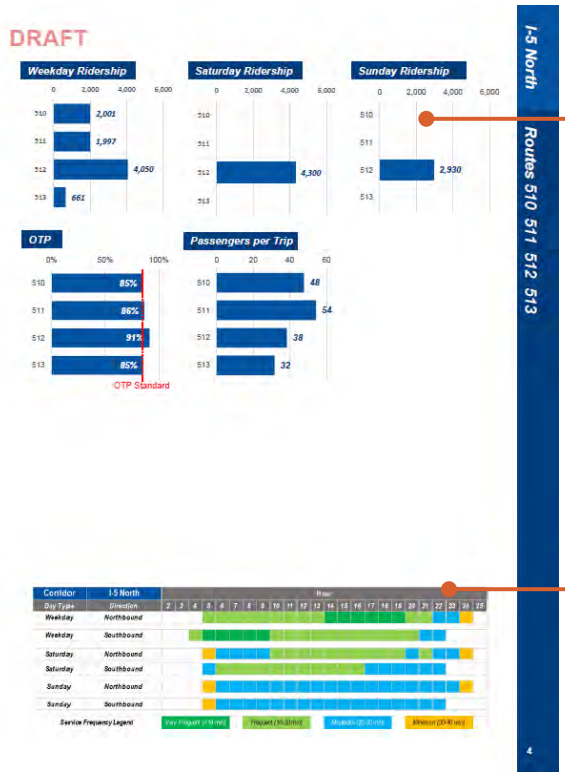


Corridor

Identifies the corridor being profiled.

Corridor Map

Illustrates the primary alignment of each route on the corridor and calls out timepoint stops. Many routes have more stops, although for clarity only timepoints are shown.



Key performance indicators

For each route in the corridor, shows:

- Average total daily boardings for weekdays, Saturdays, and Sundays
- On-time performance, showing the percentage of trips operating on time, as defined by the Service Standards
- Average passengers per trip for weekdays.

Service Levels

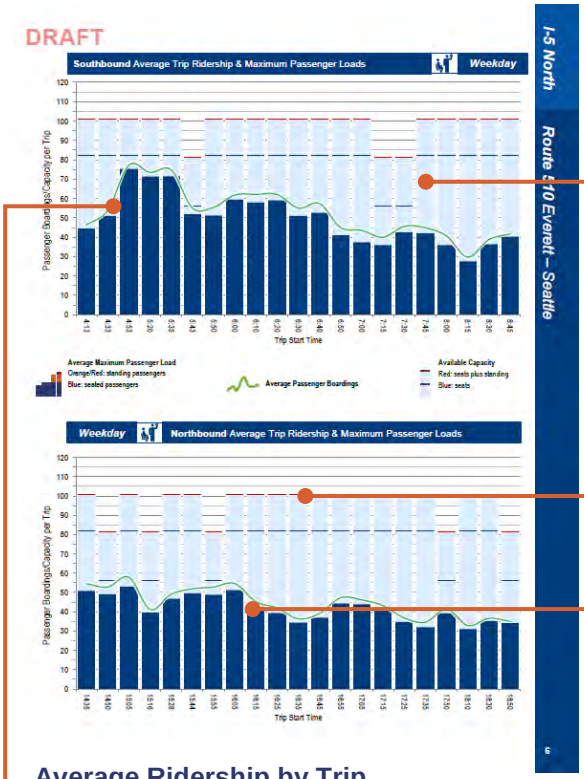
This diagram gives a glimpse of how often buses and trains arrive on the corridor by day of week and direction and how long service runs. It is not route-specific.

Service frequency, how often service arrives, is grouped into four categories define in the table below. Generally, the more often transit arrives the more spontaneously customers will use the service without referencing a schedule. Frequent service also reduces wait times for customers.

SERVICE FREQUENCY
Buses and trains arrive every:

Very Frequent	Less than 10 minutes
Frequent	10 to 20 minutes
Moderate	21 to 30 minutes
Minimum	31 to 60 minutes

ROUTE PROFILES



Three-Year Ridership Trends

Graphs display average boardings on weekdays, Saturdays, and Sundays for each of the past three years. Ridership trends are shaped by service modifications or changes in demand.

Route Map

Illustrates the primary alignment of the route in the context of the greater corridor. Timepoint stops are called out and other stops are marked with white dots though not labelled.

Stop-Level Ridership

Average weekday boardings and alightings are shown for each stop for each direction of the route. Timepoint stops are in bold and correspond with the stops shown on the route map above.

Individual Trip Ridership & Passenger Load Graphs

Each graph illustrates the average ridership and maximum passenger load of the route by individual trip for both directions of the service.

Available Capacity

Available Capacity
Blue: seats
Red: seats plus standing

The light blue bars show total available capacity for each trip, both seated and standing passengers. The capacity shown is based on the vehicle scheduled to operate the individual trip and the number of standing passengers is defined based on the service standards.

Average Maximum Passenger Load

Average Maximum Passenger Load
Blue: seated passengers
Orange/Red: standing passengers

Colored bars show the Average Maximum Passenger Load for each trip that the route operates. This is the point in the trip where the number of passengers on the transit vehicle at a specific point was the highest. Blue are seated passengers, while orange and red show standing passengers.

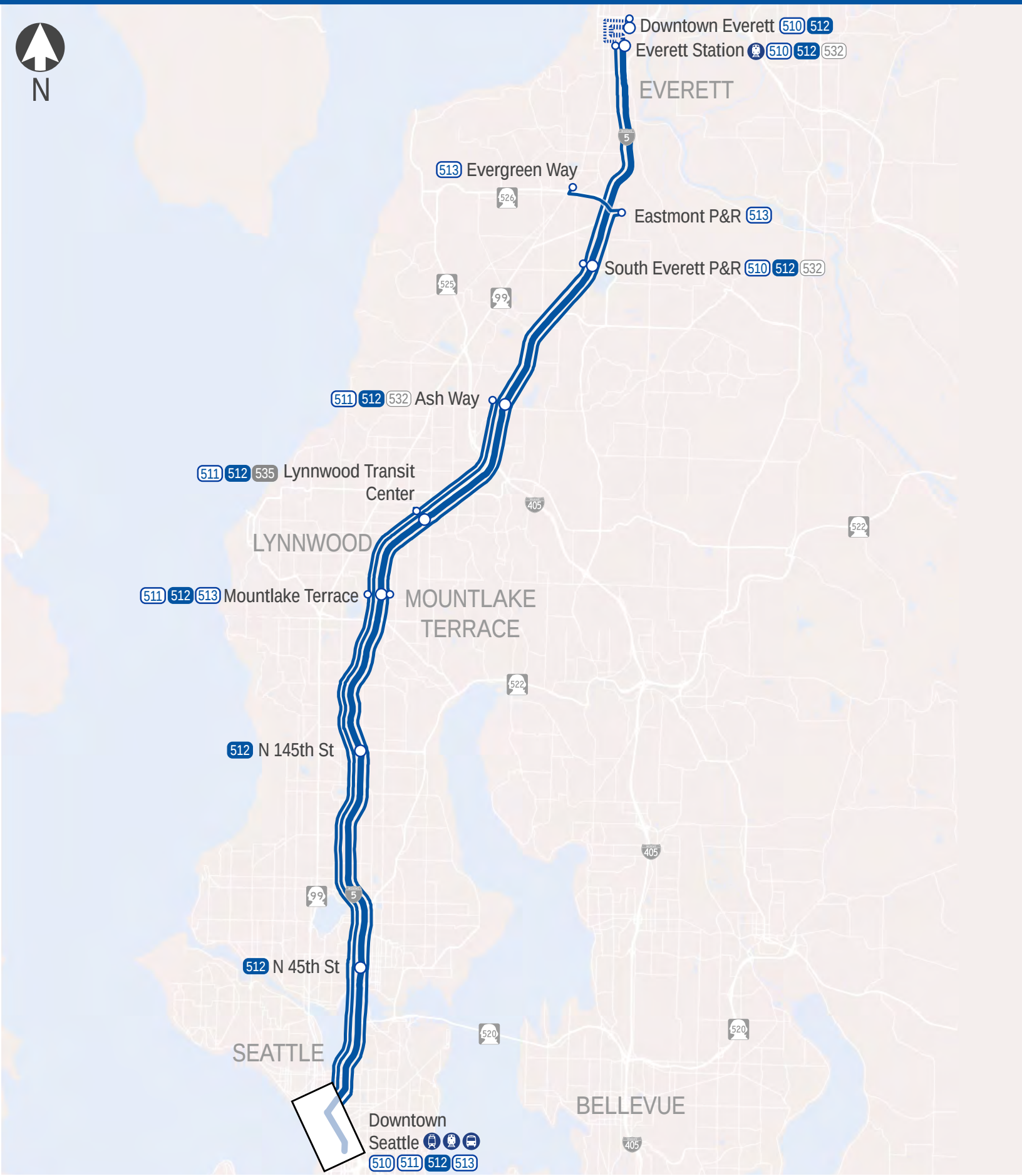
Standing loads are a normal occurrence on a healthy transit system, including Sound Transit, and are not a sole cause for immediate action. Sound Transit continually monitors service and uses the service standards to identify crowding conditions. The agency uses several service management tools to reduce overcrowding as the budget allows, including: schedule adjustments to balance loads, assigning larger buses or longer train consists, and adding additional trips.

Average Ridership by Trip

Average Passenger Boardings

The green line shows the Average Passenger Boardings for each trip. This is the total number of passengers who boarded the bus during the entire trip and may be higher than the maximum passenger load.

I-5 North


N
Downtown Everett 510 512
Everett Station 510 512 532
EVERETT
513 Evergreen Way
Eastmont P&R 513
South Everett P&R 510 512 532
511 512 532 Ash Way
511 512 535 Lynnwood Transit Center
LYNNWOOD
511 512 513 Mountlake Terrace
MOUNTLAKE TERRACE
512 N 145th St
512 N 45th St
SEATTLE
BELLEVUE
Downtown Seattle 510 511 512 513
5
405
522
526
525
99
520

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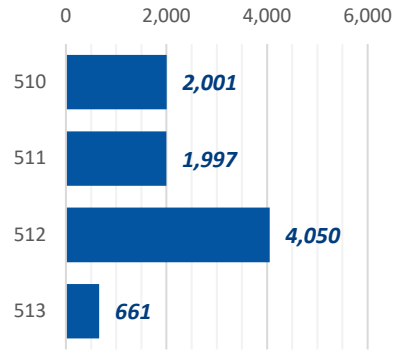
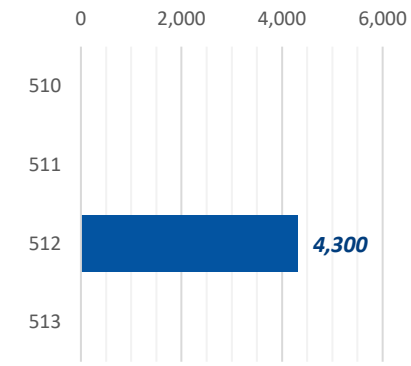
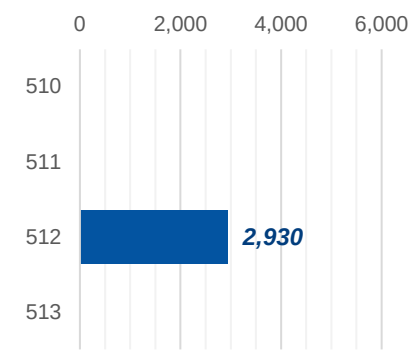
Weekday Ridership



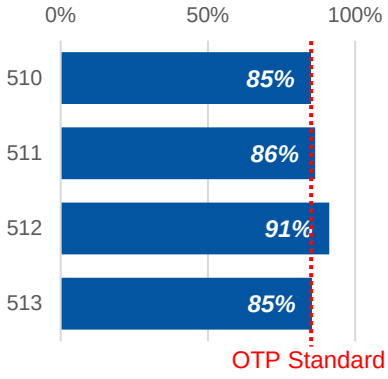
Saturday Ridership



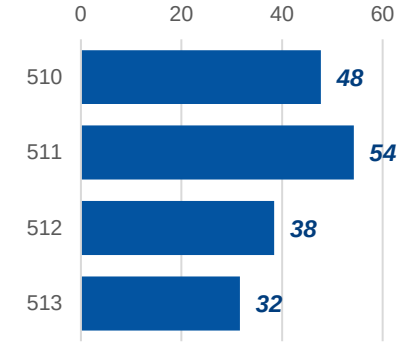
Sunday Ridership



OTP



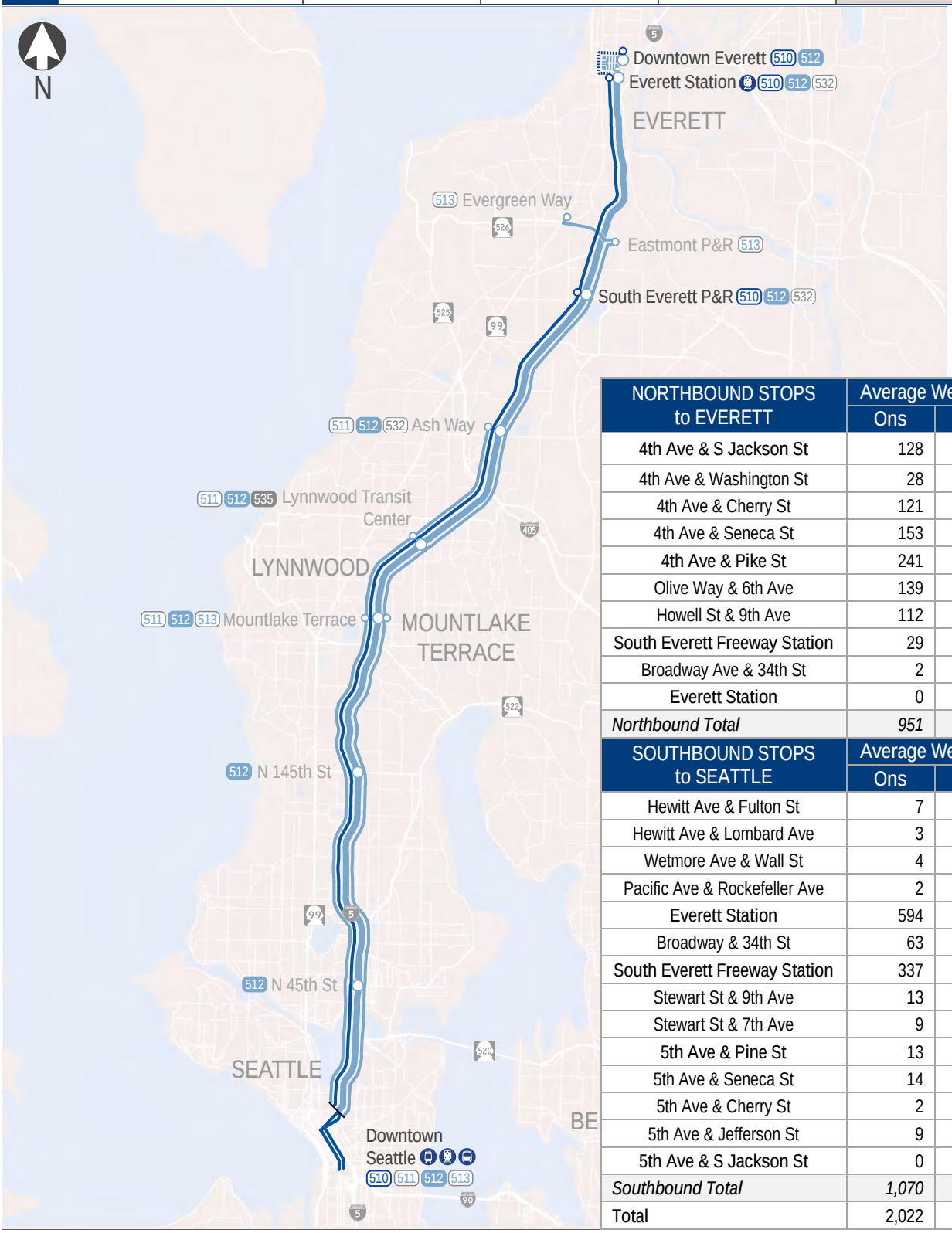
Passengers per Trip



Corridor	I-5 North	Hour																						
Day Type	*Direction*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*
Weekday	*Northbound*																								
Weekday	*Southbound*																								
Saturday	*Northbound*																								
Saturday	*Southbound*																								
Sunday	*Northbound*																								
Sunday	*Southbound*																								
Service Frequency Legend		*Very Frequent (<10 min)*								*Frequent (10-20 min)*										*Moderate (20-30 min)*				*Minimum (30-60 min)*	

I-5 North — Route 510 Everett – Seattle

Ridership	2015	2016	2017	SPRING 2018
Average **Weekday** Boardings	**1,938**	**1,913**	**1,983**	**2,001**
Average **Saturday** Boardings	**N/A**	**N/A**	**N/A**	**N/A**
Average **Sunday** Boardings	**N/A**	**N/A**	**N/A**	**N/A**
Annual Boardings	**494,221**	**488,401**	**503,600**	



NORTHBOUND STOPS to EVERETT	Average Weekday	
	Ons	Offs
4th Ave & S Jackson St	128	0
4th Ave & Washington St	28	1
4th Ave & Cherry St	121	2
4th Ave & Seneca St	153	5
4th Ave & Pike St	241	13
Olive Way & 6th Ave	139	5
Howell St & 9th Ave	112	5
South Everett Freeway Station	29	370
Broadway Ave & 34th St	2	68
Everett Station	0	484
Northbound Total	*951*	*951*

SOUTHBOUND STOPS to SEATTLE	Average Weekday	
	Ons	Offs
Hewitt Ave & Fulton St	7	0
Hewitt Ave & Lombard Ave	3	0
Wetmore Ave & Wall St	4	0
Pacific Ave & Rockefeller Ave	2	0
Everett Station	594	7
Broadway & 34th St	63	0
South Everett Freeway Station	337	6
Stewart St & 9th Ave	13	241
Stewart St & 7th Ave	9	144
5th Ave & Pine St	13	234
5th Ave & Seneca St	14	160
5th Ave & Cherry St	2	98
5th Ave & Jefferson St	9	68
5th Ave & S Jackson St	0	111
Southbound Total	*1,070*	*1,070*
Total	2,022	2,022

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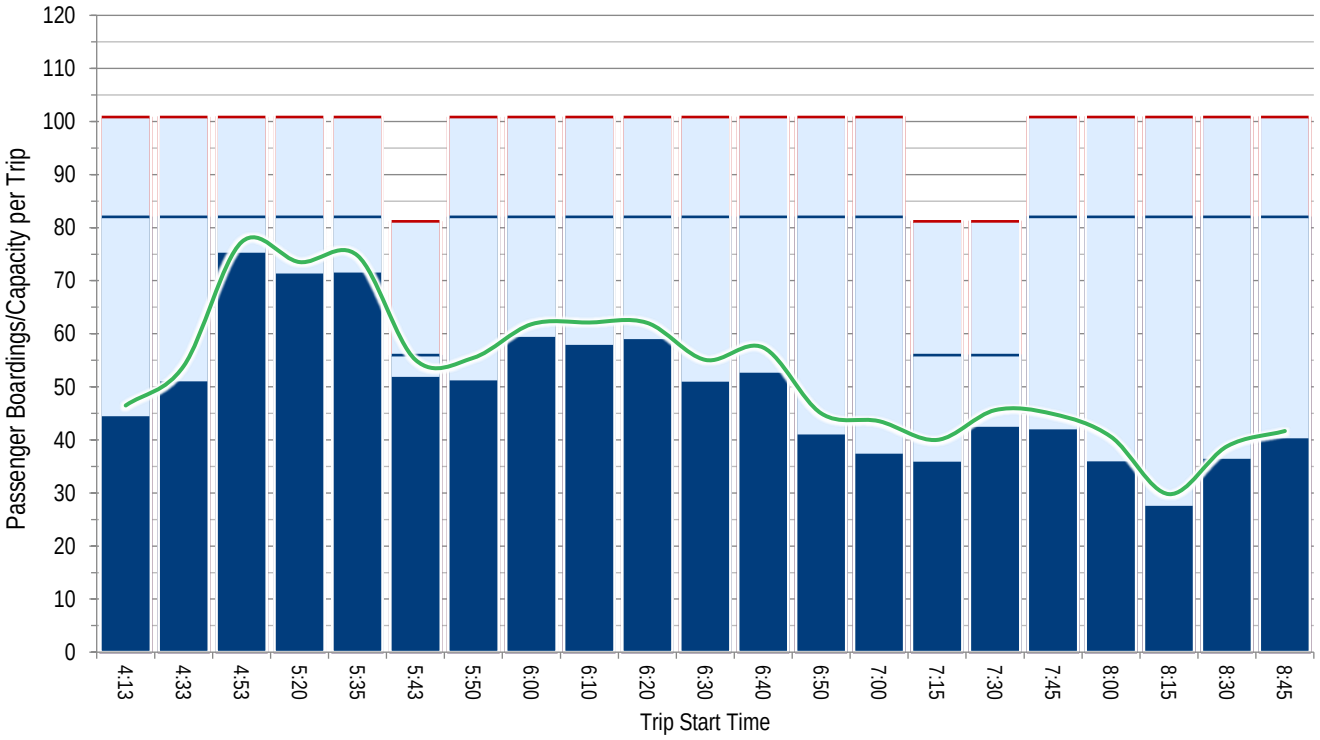
Southbound Average Trip Ridership & Maximum Passenger Loads — *Weekday*

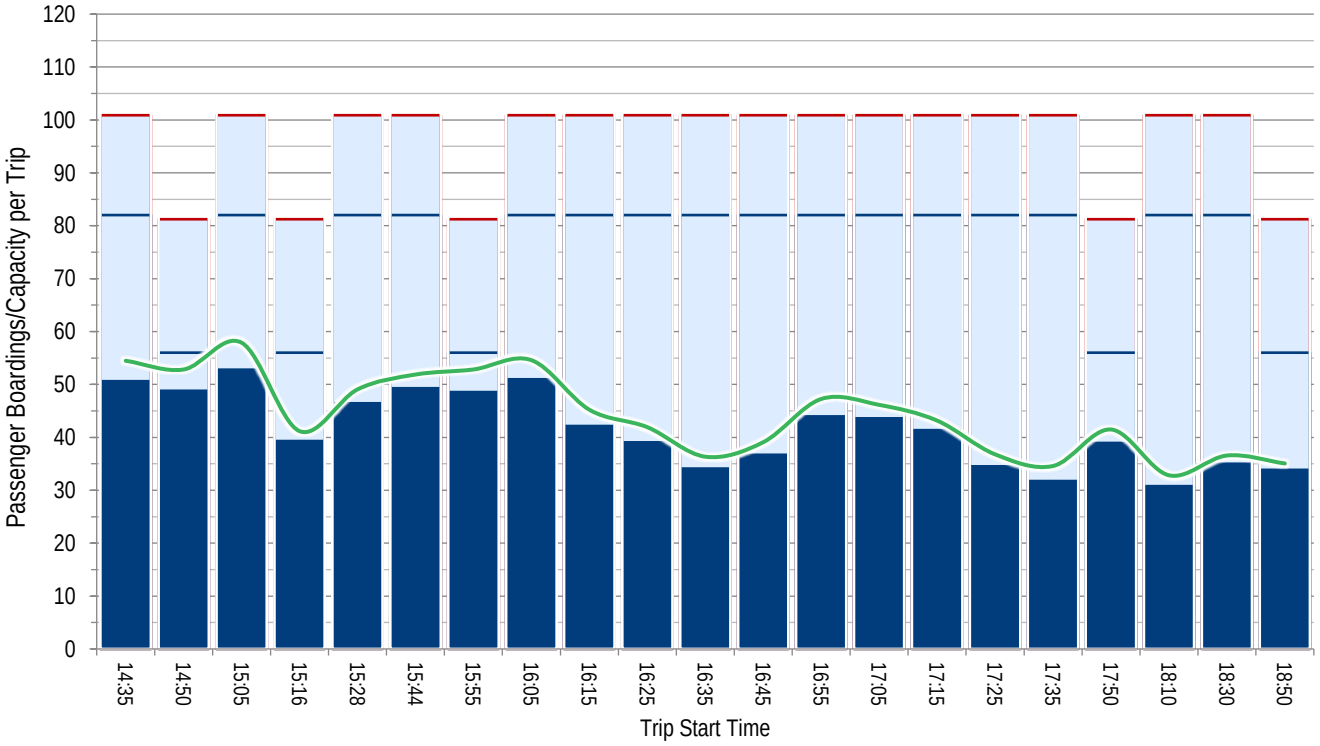


Average Maximum Passenger Load
Orange/Red: standing passengers
Blue: seated passengers

Average Passenger Boardings

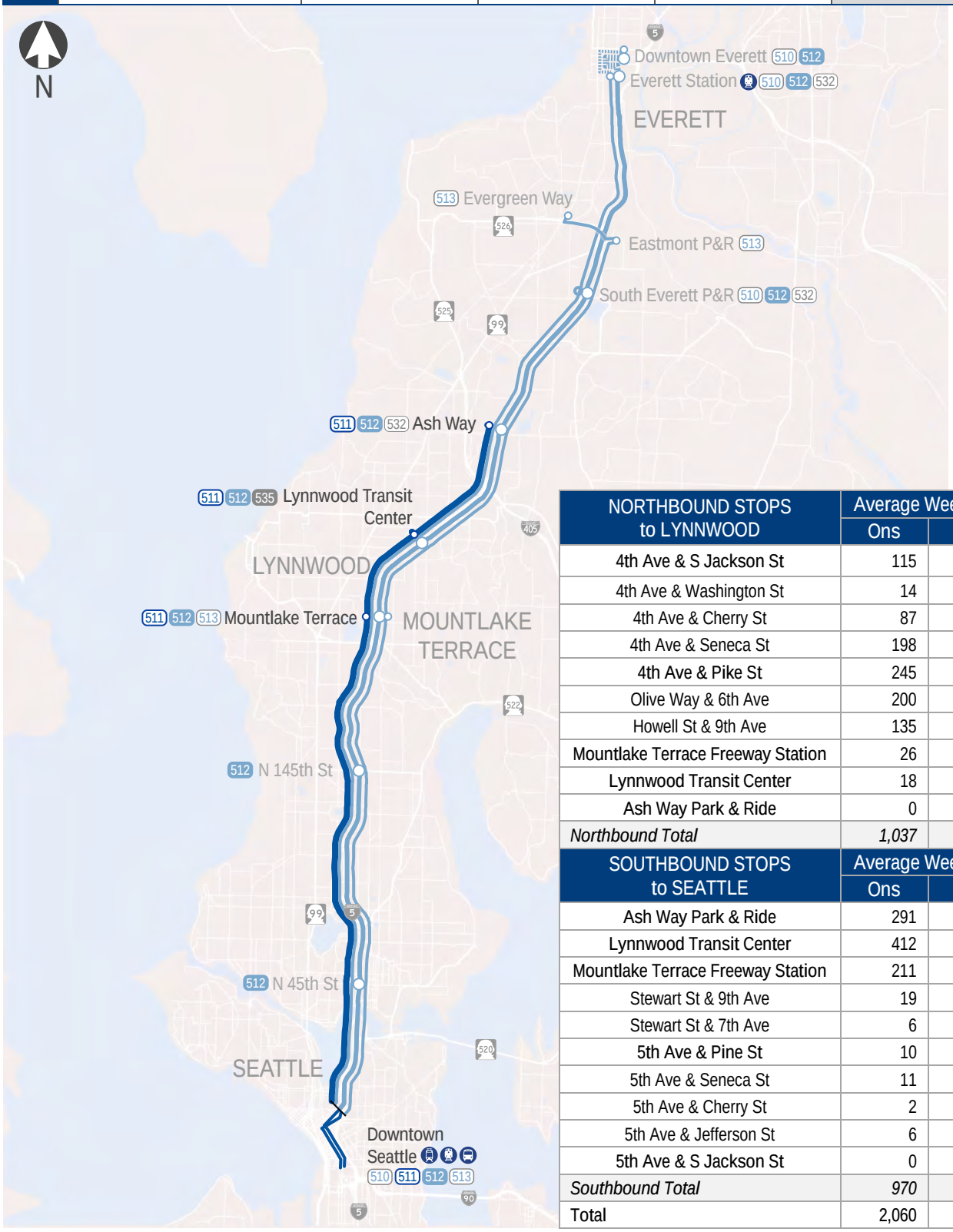
Available Capacity
Red: seats plus standing
Blue: seats

Weekday — **Northbound** Average Trip Ridership & Maximum Passenger Loads



I-5 North — Route 511 Lynnwood – Seattle

Ridership	2015	2016	2017	SPRING 2018
Average **Weekday** Boardings	2,050	2,025	2,062	1,997
Average **Saturday** Boardings	N/A	N/A	N/A	N/A
Average **Sunday** Boardings	N/A	N/A	N/A	N/A
Annual Boardings	522,864	516,248	523,733	



NORTHBOUND STOPS to LYNNWOOD	Average Weekday Ons	Average Weekday Offs
4th Ave & S Jackson St	115	0
4th Ave & Washington St	14	1
4th Ave & Cherry St	87	1
4th Ave & Seneca St	198	3
4th Ave & Pike St	245	10
Olive Way & 6th Ave	200	3
Howell St & 9th Ave	135	3
Mountlake Terrace Freeway Station	26	236
Lynnwood Transit Center	18	501
Ash Way Park & Ride	0	279
Northbound Total	*1,037*	*1,037*
SOUTHBOUND STOPS to SEATTLE	**Average Weekday Ons**	**Average Weekday Offs**
Ash Way Park & Ride	291	0
Lynnwood Transit Center	412	4
Mountlake Terrace Freeway Station	211	6
Stewart St & 9th Ave	19	240
Stewart St & 7th Ave	6	148
5th Ave & Pine St	10	198
5th Ave & Seneca St	11	170
5th Ave & Cherry St	2	79
5th Ave & Jefferson St	6	35
5th Ave & S Jackson St	0	90
Southbound Total	*970*	*970*
Total	2,060	2,060

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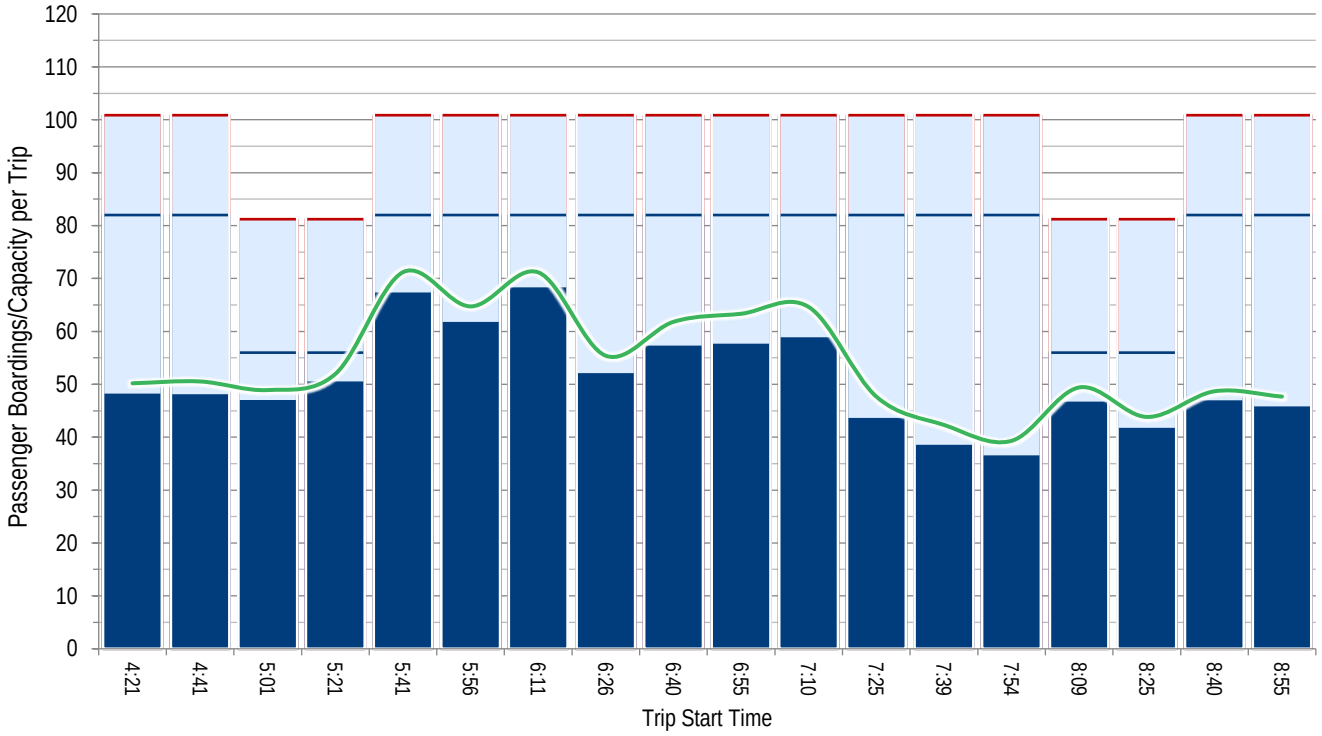
Southbound Average Trip Ridership & Maximum Passenger Loads — *Weekday*

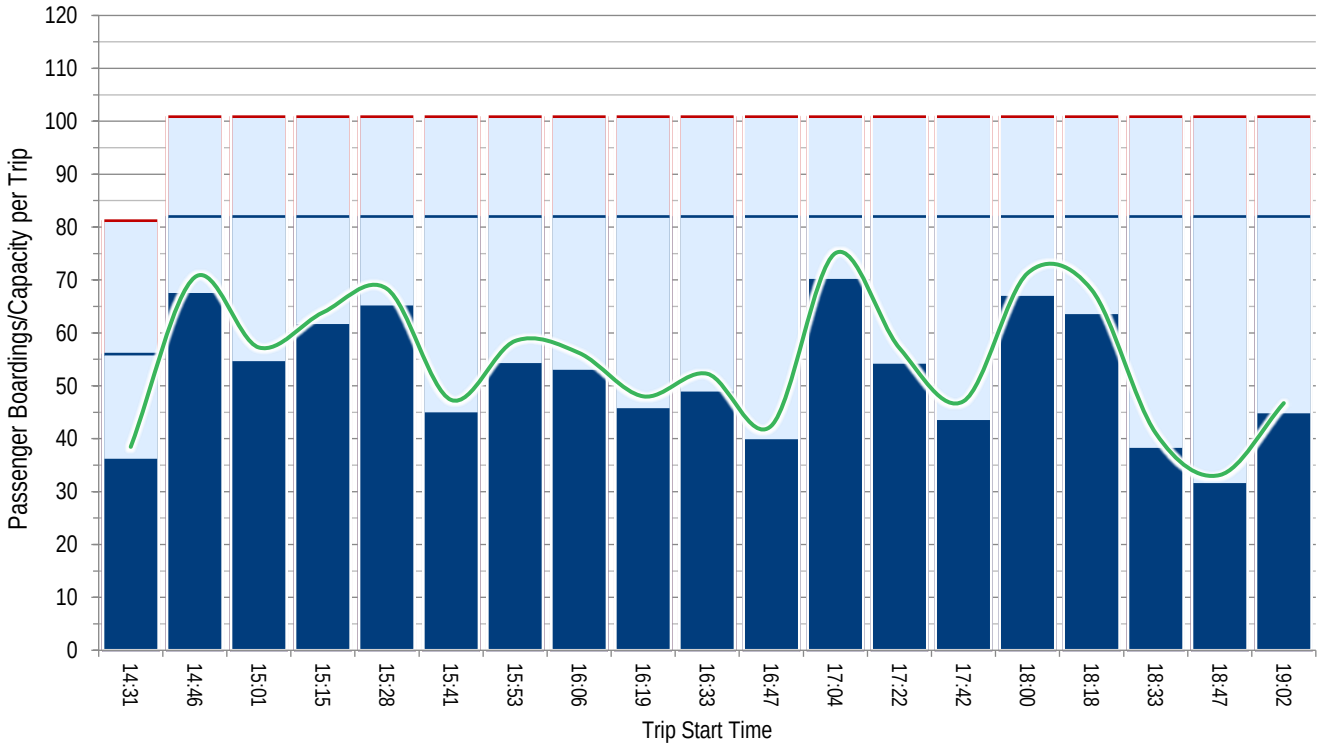


Average Maximum Passenger Load
Orange/Red: standing passengers
Blue: seated passengers

Average Passenger Boardings

Available Capacity
Red: seats plus standing
Blue: seats

Weekday — **Northbound** Average Trip Ridership & Maximum Passenger Loads



I-5 North

Route 512 Everett – Seattle

Ridership	2015	2016	2017	SPRING 2018
Average **Weekday** Boardings	**4,140**	**4,064**	**4,024**	**4,050**
Average **Saturday** Boardings	**4,190**	**4,145**	**4,233**	**4,300**
Average **Sunday** Boardings	**2,717**	**2,847**	**2,903**	**2,930**
Annual Boardings	**1,431,104**	**1,424,904**	**1,421,457**	

NORTHBOUND STOPS to EVERETT	Average Weekday Ons	Offs
4th Ave & S Jackson St	465	0
4th Ave & Washington St	48	2
4th Ave & Cherry St	158	66
4th Ave & Seneca St	218	38
4th Ave & Pike St	469	36
Olive Way & 6th Ave	233	18
Howell St & 9th Ave	184	24
I-5 & NE 45th St Freeway Station	248	191
I-5 & NE 145th St Freeway Station	38	52
Mountlake Terrace Freeway Station	26	200
Lynnwood Transit Center	68	627
Ash Way Park & Ride	30	355
South Everett Freeway Station	16	175
Broadway Ave & 34th St	2	68
Everett Station	4	347
Pacific Ave & Rockefeller Ave	0	1
Wetmore Ave & Wall St	0	4
Hewitt Ave & Lombard Ave	1	1
Hewitt Ave & Virginia Ave	0	2
Northbound Total	*2,207*	*2,207*

SOUTHBOUND STOPS to SEATTLE	Average Weekday Ons	Offs
Everett Station	476	0
Broadway & 34th St	51	3
South Everett Freeway Station	148	21
Ash Way Park & Ride	335	36
Lynnwood Transit Center	570	73
Mountlake Terrace Freeway Station	160	32
I-5 & NE 145th St Freeway Station	43	43
I-5 & NE 45th St Freeway Station	90	256
Stewart St & 9th Ave	26	289
Stewart St & 7th Ave	19	173
5th Ave & Pine St	42	489
5th Ave & Seneca St	30	142
5th Ave & Cherry St	13	75
5th Ave & Jefferson St	32	88
5th Ave & S Jackson St	5	321
Southbound Total	*2,040*	*2,040*
Total	*4,248*	*4,248*

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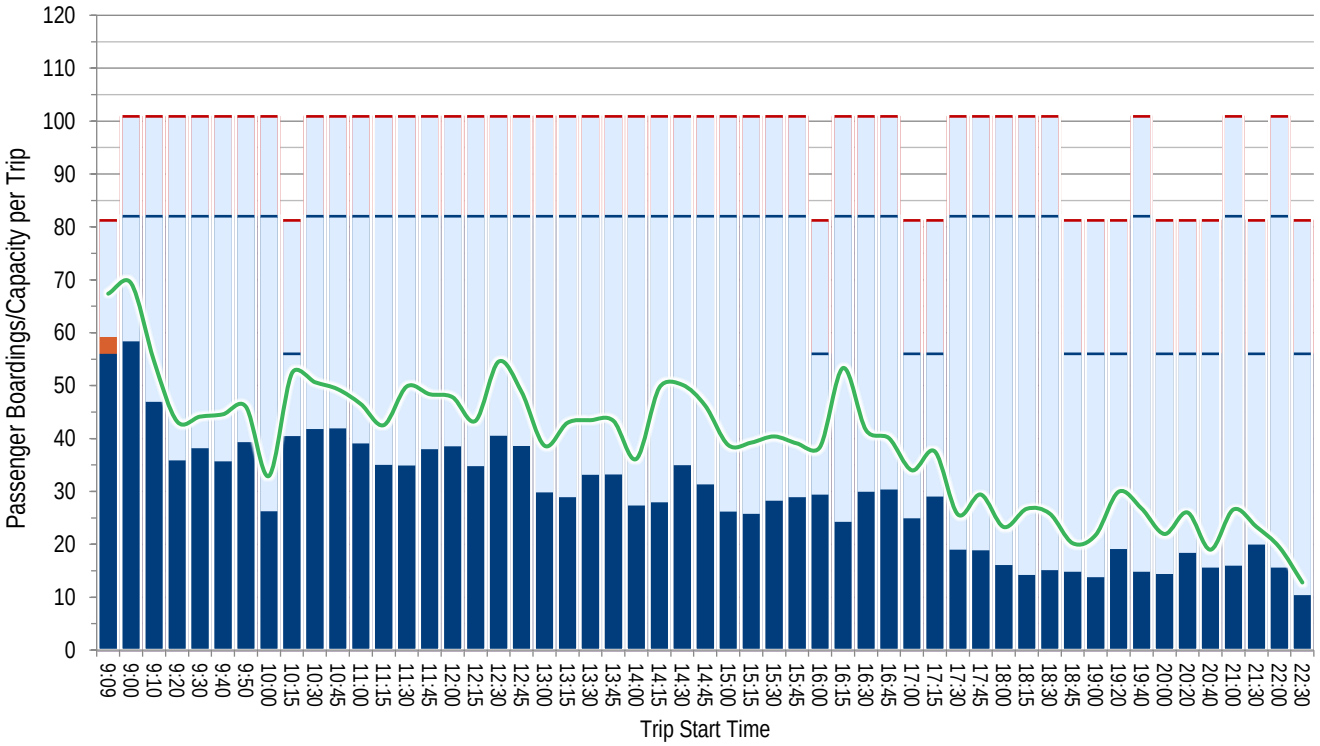
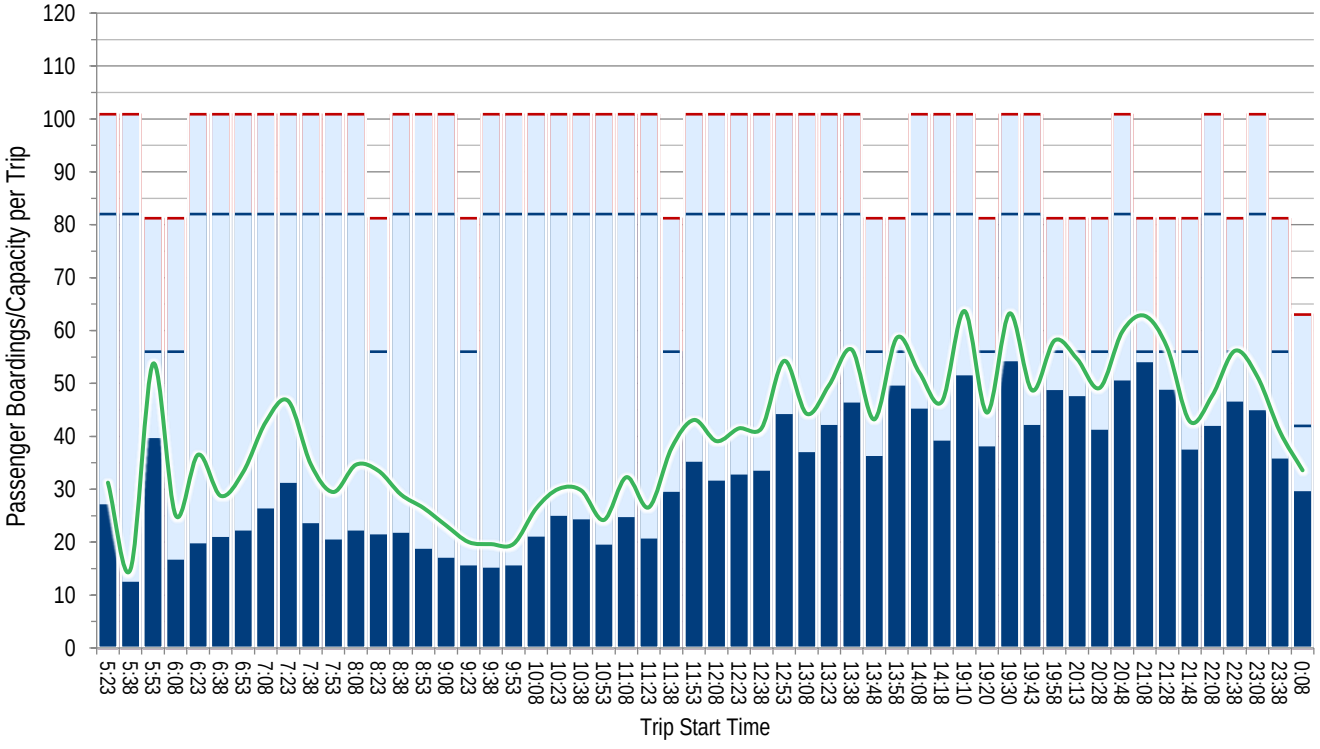
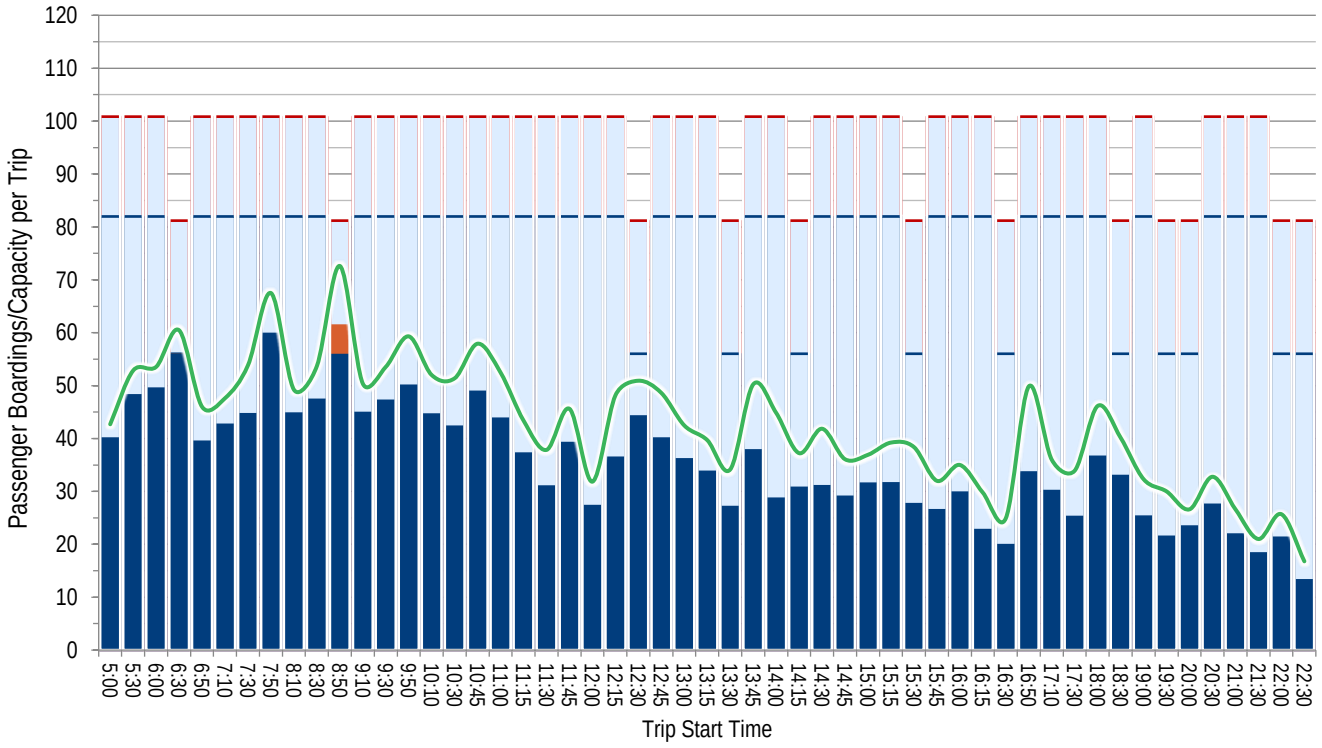
Southbound Average Trip Ridership & Maximum Passenger Loads — *Weekday*



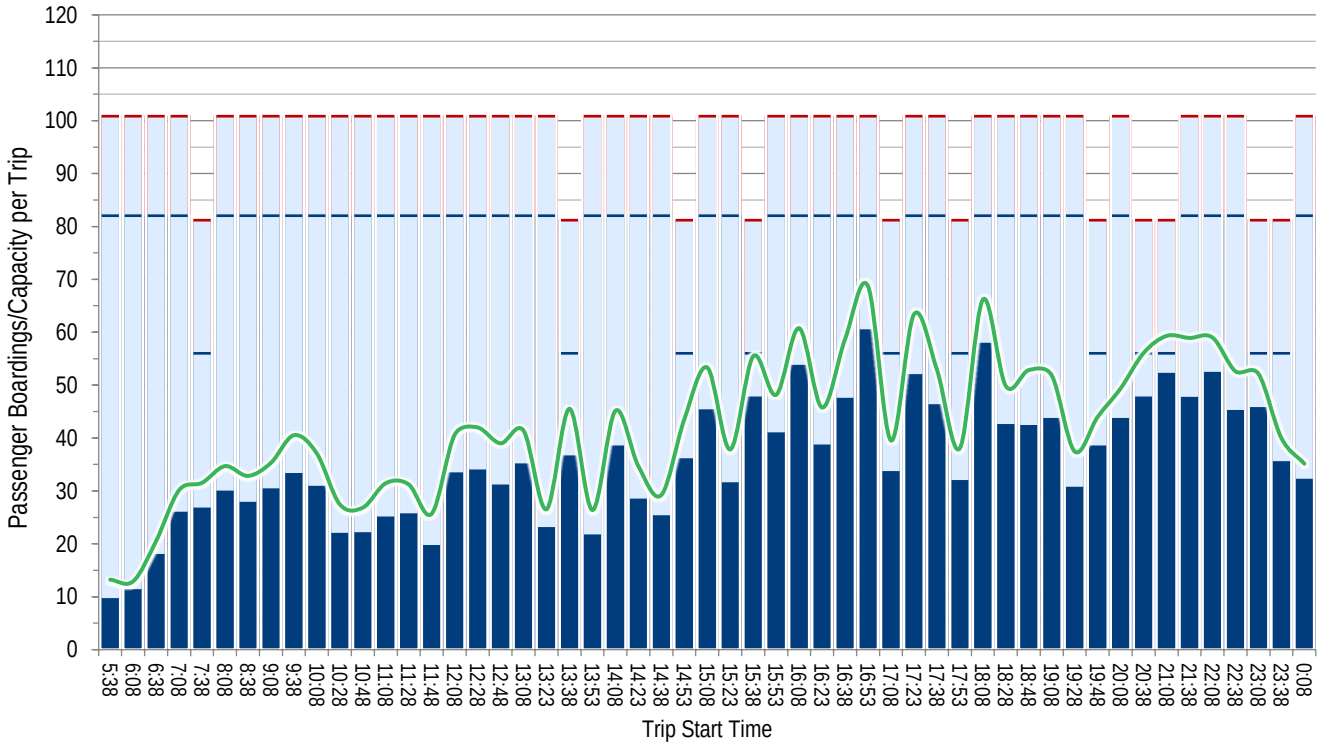
Weekday — **Northbound** Average Trip Ridership & Maximum Passenger Loads



Southbound Average Trip Ridership & Maximum Passenger Loads — *Saturday*



Saturday — **Northbound** Average Trip Ridership & Maximum Passenger Loads



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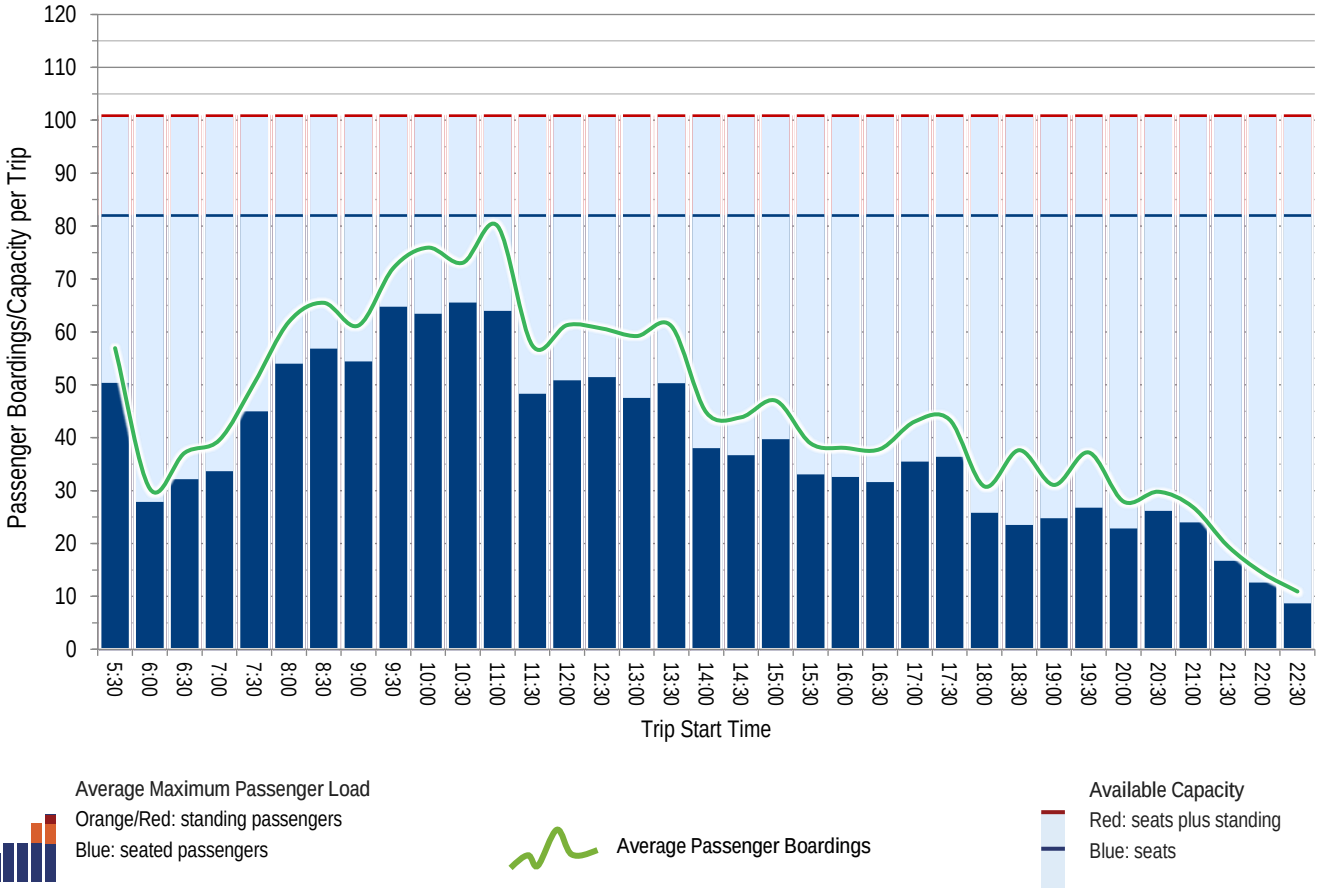
Southbound Average Trip Ridership & Maximum Passenger Loads — Sunday

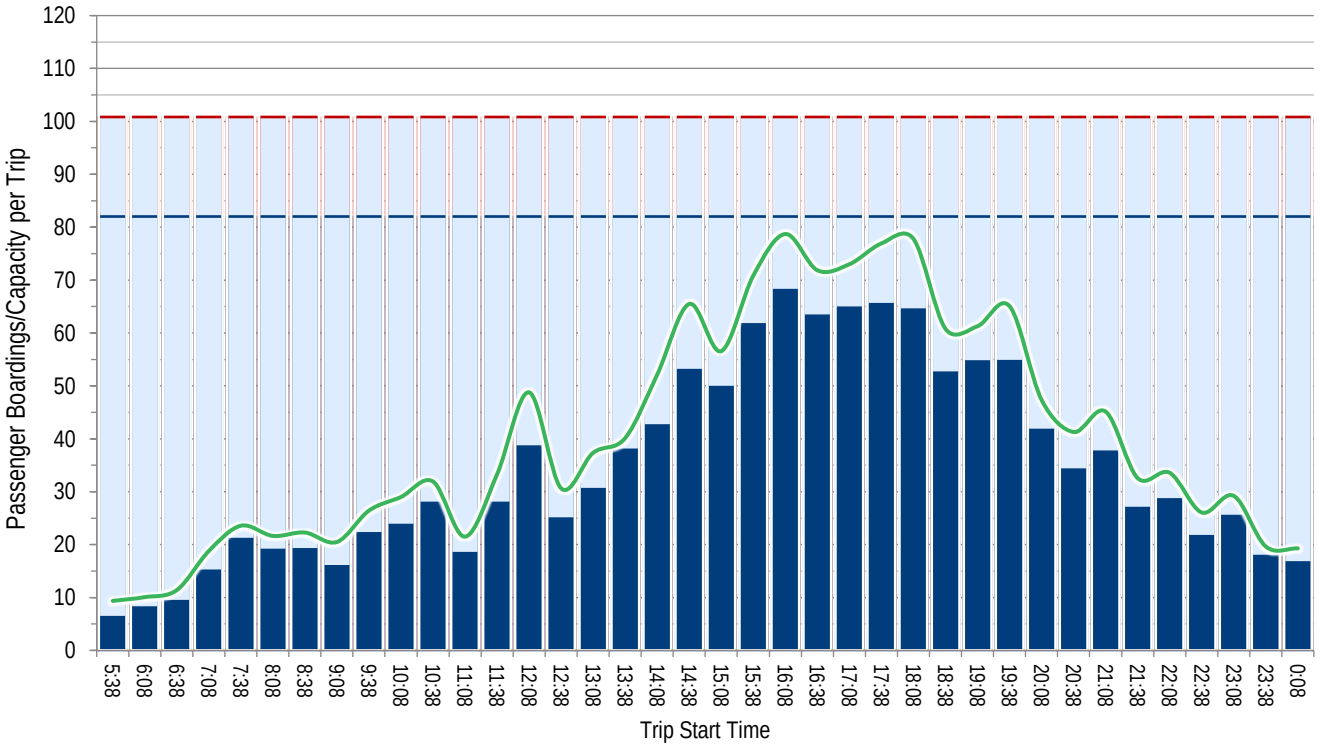


Average Maximum Passenger Load
Orange/Red: standing passengers
Blue: seated passengers

Average Passenger Boardings

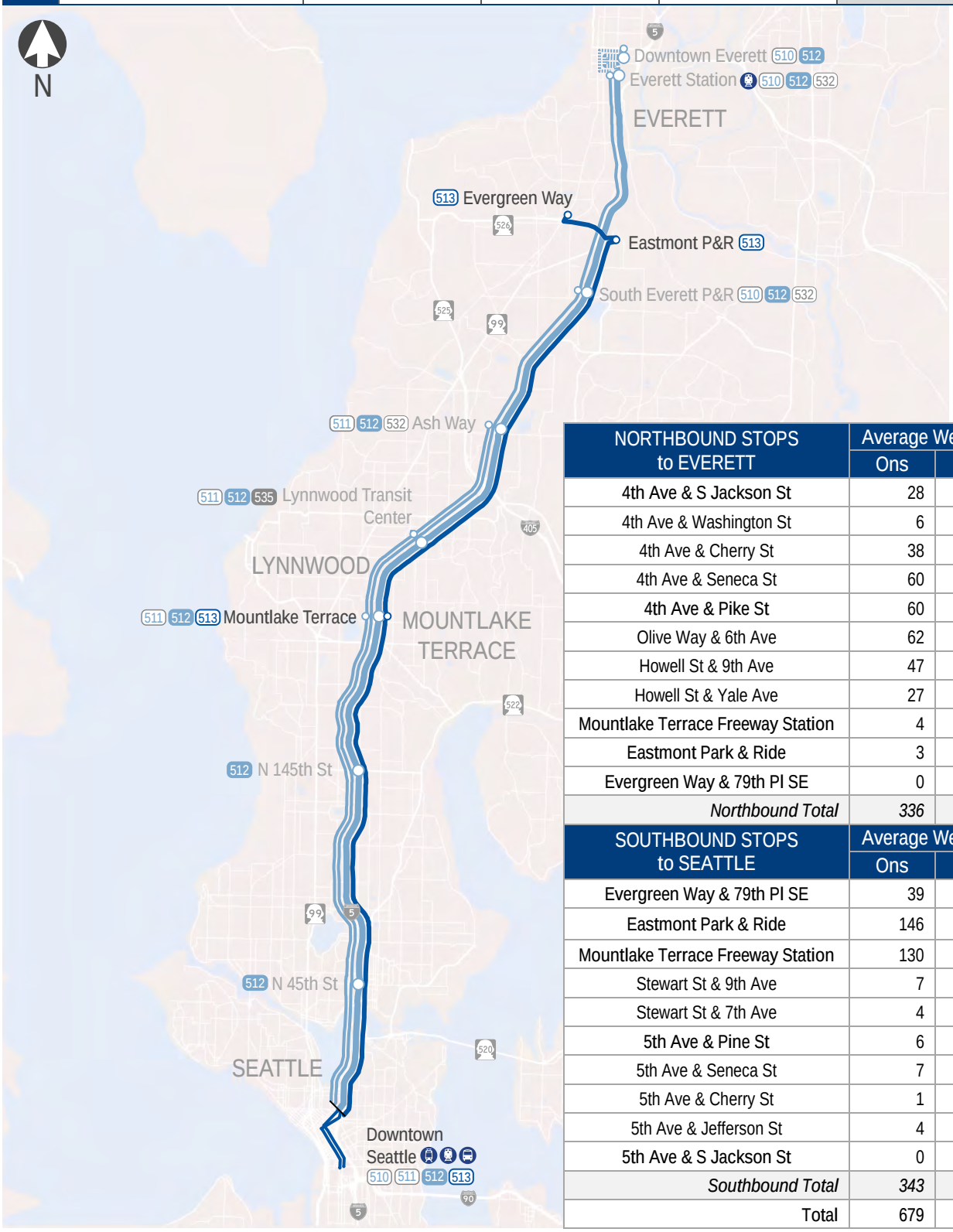
Available Capacity
Red: seats plus standing
Blue: seats

Sunday — **Northbound** Average Trip Ridership & Maximum Passenger Loads



I-5 North — Route 513 Everett – Seattle

Ridership	2015	2016	2017	SPRING 2018
Average **Weekday** Boardings	**696**	**670**	**632**	**661**
Average **Saturday** Boardings	**N/A**	**N/A**	**N/A**	**N/A**
Average **Sunday** Boardings	**N/A**	**N/A**	**N/A**	**N/A**
Annual Boardings	**177,506**	**170,936**	**160,615**	



NORTHBOUND STOPS to EVERETT	Average Weekday Ons	Offs
4th Ave & S Jackson St	28	0
4th Ave & Washington St	6	0
4th Ave & Cherry St	38	0
4th Ave & Seneca St	60	2
4th Ave & Pike St	60	4
Olive Way & 6th Ave	62	1
Howell St & 9th Ave	47	1
Howell St & Yale Ave	27	3
Mountlake Terrace Freeway Station	4	147
Eastmont Park & Ride	3	138
Evergreen Way & 79th Pl SE	0	40
Northbound Total	*336*	*336*
SOUTHBOUND STOPS to SEATTLE	**Average Weekday Ons**	**Offs**
Evergreen Way & 79th Pl SE	39	0
Eastmont Park & Ride	146	1
Mountlake Terrace Freeway Station	130	4
Stewart St & 9th Ave	7	88
Stewart St & 7th Ave	4	50
5th Ave & Pine St	6	53
5th Ave & Seneca St	7	64
5th Ave & Cherry St	1	36
5th Ave & Jefferson St	4	15
5th Ave & S Jackson St	0	31
Southbound Total	*343*	*343*
Total	679	679

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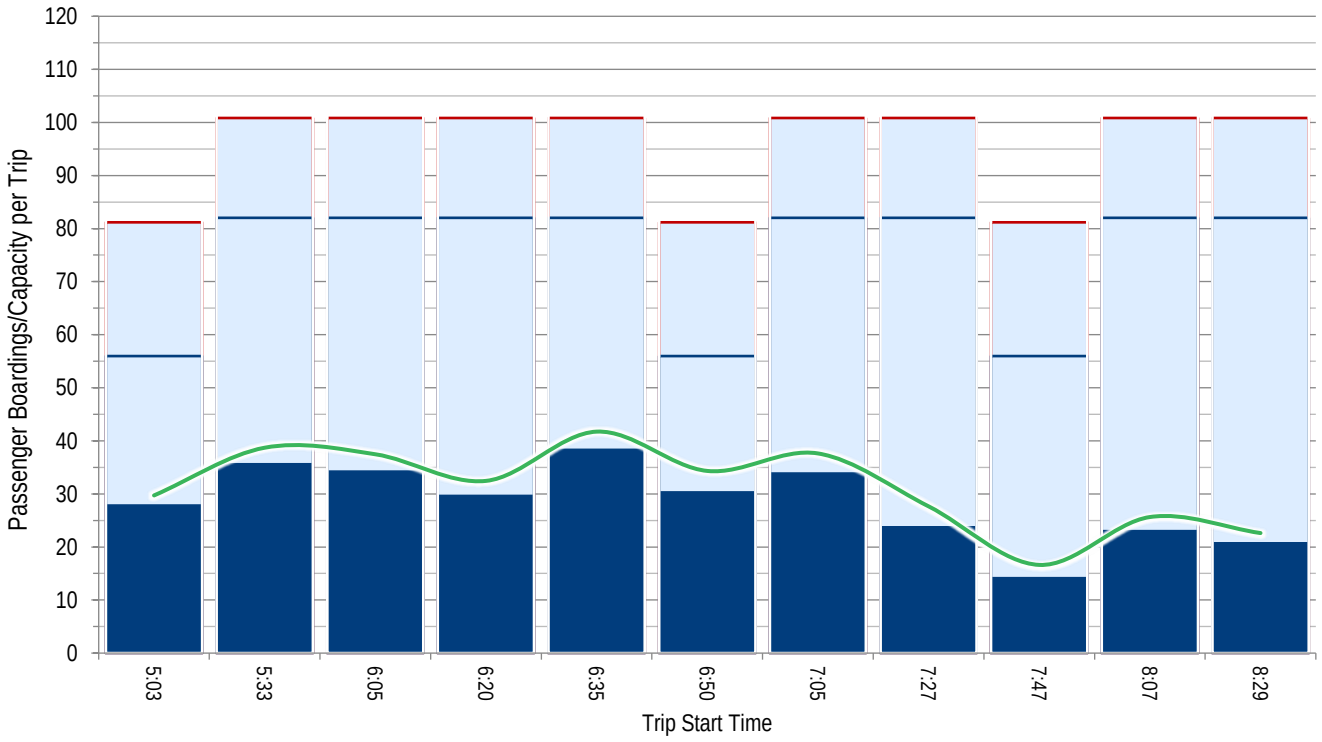
Southbound Average Trip Ridership & Maximum Passenger Loads — *Weekday*

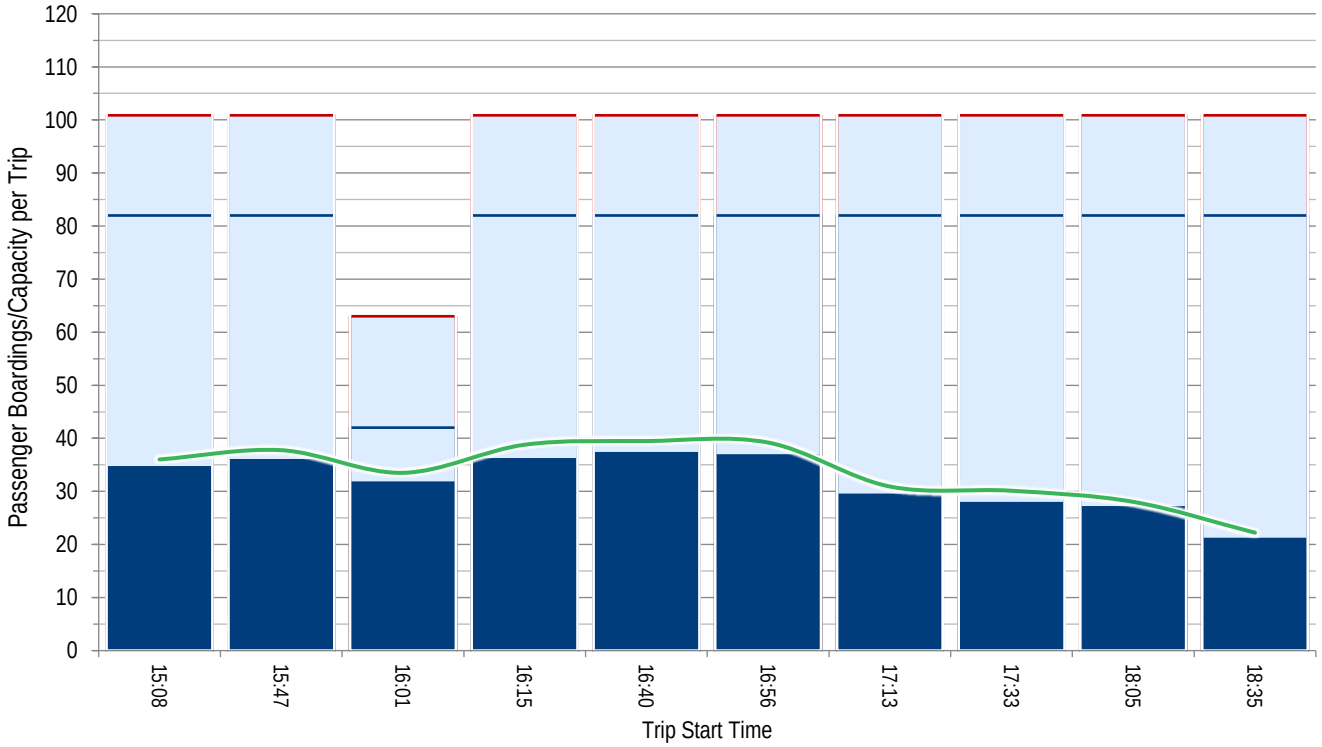


Average Maximum Passenger Load
Orange/Red: standing passengers
Blue: seated passengers

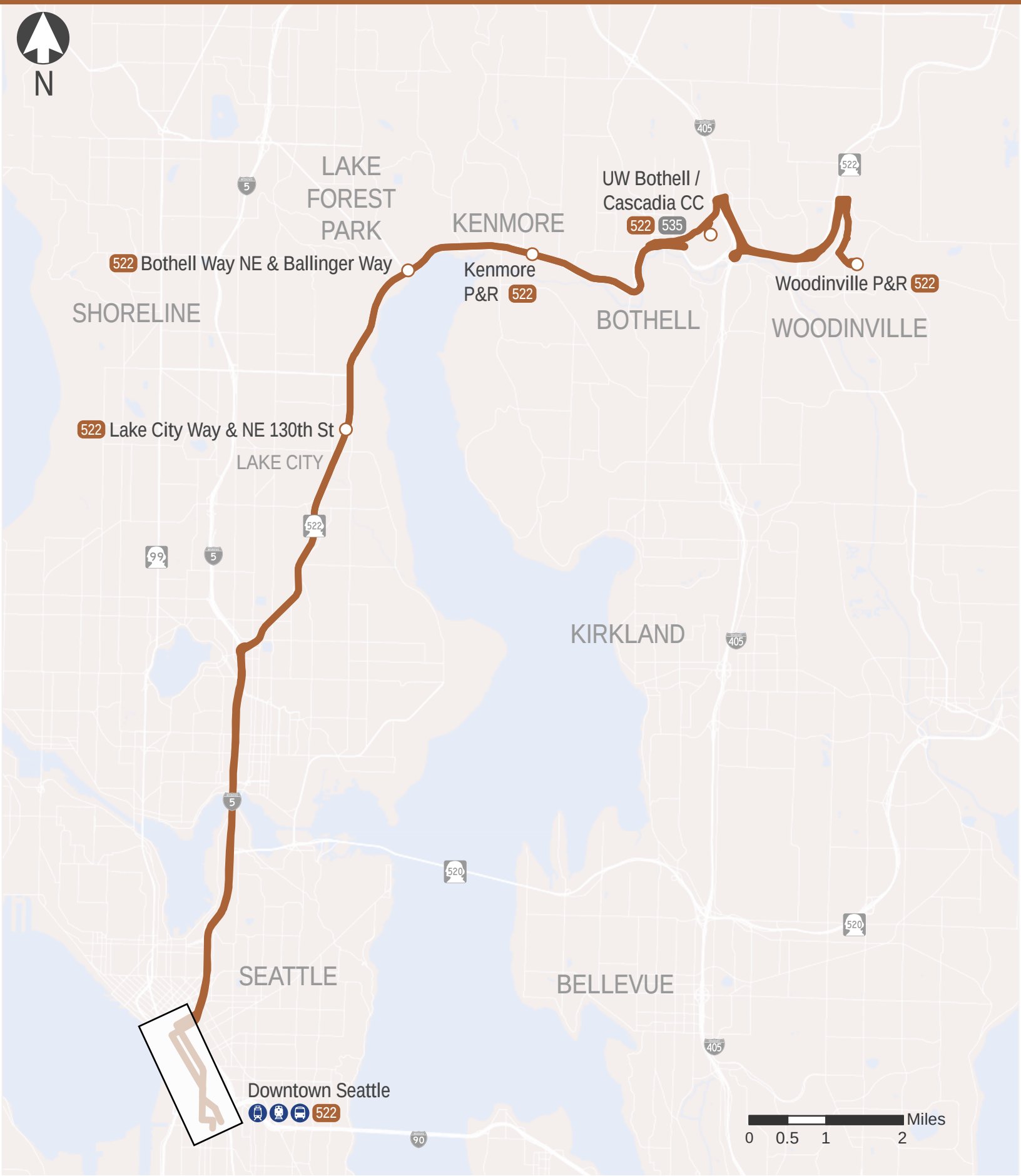
Average Passenger Boardings

Available Capacity
Red: seats plus standing
Blue: seats

Weekday — **Northbound** Average Trip Ridership & Maximum Passenger Loads



SR 522


N
LAKE FOREST PARK
KENMORE
UW Bothell / Cascadia CC
522 535
522 Bothell Way NE & Ballinger Way
Kenmore P&R 522
Woodinville P&R 522
SHORELINE
BOTHELL
WOODINVILLE
522 Lake City Way & NE 130th St
LAKE CITY
KIRKLAND
SEATTLE
BELLEVUE
Downtown Seattle
522
Miles
0 0.5 1 2

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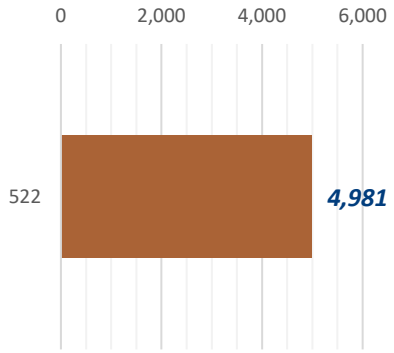
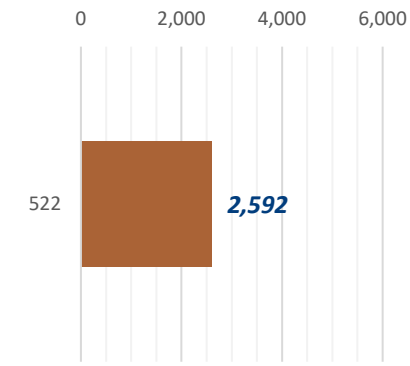
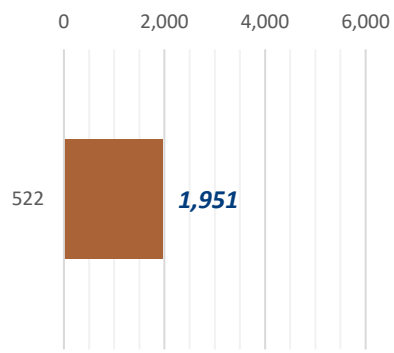
Weekday Ridership



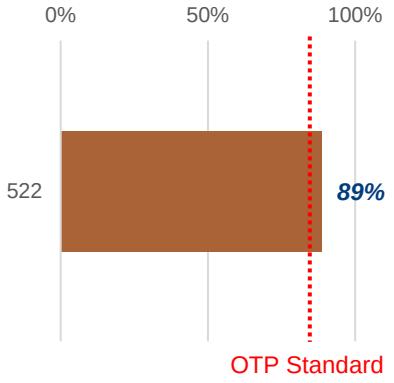
Saturday Ridership



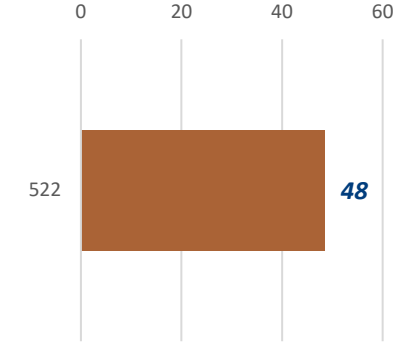
Sunday Ridership



OTP



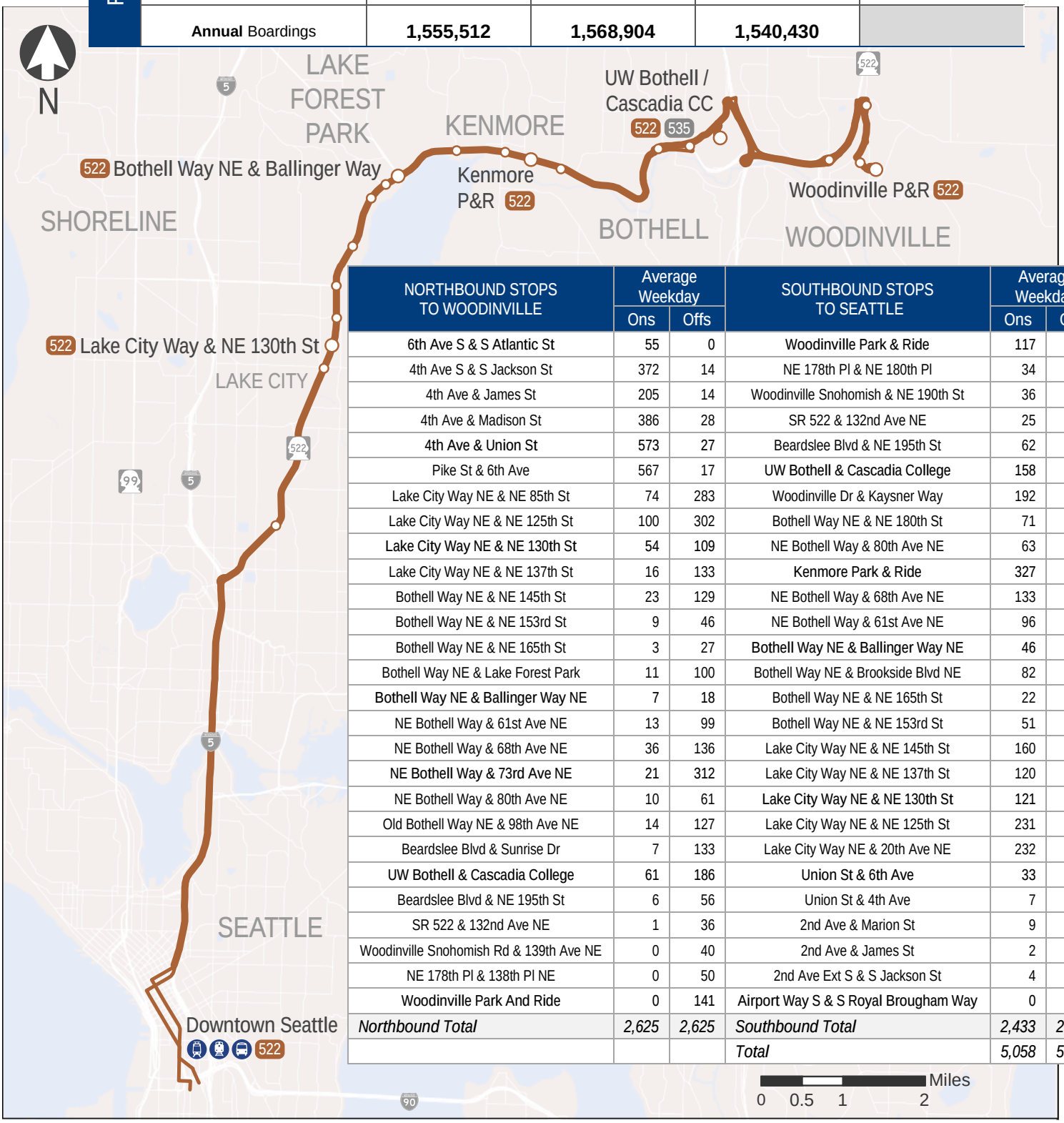
Passengers per Trip



Corridor	SR-522	Hour																						
Day Type	Direction	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Weekday	Northbound																								
Weekday	Southbound																								
Saturday	Northbound																								
Saturday	Southbound																								
Sunday	Northbound																								
Sunday	Southbound																								
Service Frequency Legend					Very Frequent (<10 min)				Frequent (10-20 min)						Moderate (20-30 min)						Minimum (30-60 min)			

SR 522 Route 522 Woodinville – Seattle

Ridership	2015	2016	2017	SPRING 2018
Average **Weekday** Boardings	**5,090**	**5,159**	**5,059**	**4,981**
Average **Saturday** Boardings	**2,669**	**2,575**	**2,657**	**2,592**
Average **Sunday** Boardings	**2,046**	**2,016**	**1,987**	**1,951**
Annual Boardings	**1,555,512**	**1,568,904**	**1,540,430**	



NORTHBOUND STOPS TO WOODINVILLE	Average Weekday Ons	Average Weekday Offs	SOUTHBOUND STOPS TO SEATTLE	Average Weekday Ons	Average Weekday Offs
6th Ave S & S Atlantic St	55	0	Woodinville Park & Ride	117	0
4th Ave S & S Jackson St	372	14	NE 178th Pl & NE 180th Pl	34	0
4th Ave & James St	205	14	Woodinville Snohomish & NE 190th St	36	0
4th Ave & Madison St	386	28	SR 522 & 132nd Ave NE	25	1
4th Ave & Union St	573	27	Beardslee Blvd & NE 195th St	62	5
Pike St & 6th Ave	567	17	UW Bothell & Cascadia College	158	45
Lake City Way NE & NE 85th St	74	283	Woodinville Dr & Kaysner Way	192	7
Lake City Way NE & NE 125th St	100	302	Bothell Way NE & NE 180th St	71	14
Lake City Way NE & NE 130th St	54	109	NE Bothell Way & 80th Ave NE	63	12
Lake City Way NE & NE 137th St	16	133	Kenmore Park & Ride	327	31
Bothell Way NE & NE 145th St	23	129	NE Bothell Way & 68th Ave NE	133	25
Bothell Way NE & NE 153rd St	9	46	NE Bothell Way & 61st Ave NE	96	9
Bothell Way NE & NE 165th St	3	27	Bothell Way NE & Ballinger Way NE	46	8
Bothell Way NE & Lake Forest Park	11	100	Bothell Way NE & Brookside Blvd NE	82	9
Bothell Way NE & Ballinger Way NE	7	18	Bothell Way NE & NE 165th St	22	2
NE Bothell Way & 61st Ave NE	13	99	Bothell Way NE & NE 153rd St	51	7
NE Bothell Way & 68th Ave NE	36	136	Lake City Way NE & NE 145th St	160	23
NE Bothell Way & 73rd Ave NE	21	312	Lake City Way NE & NE 137th St	120	10
NE Bothell Way & 80th Ave NE	10	61	Lake City Way NE & NE 130th St	121	48
Old Bothell Way NE & 98th Ave NE	14	127	Lake City Way NE & NE 125th St	231	72
Beardslee Blvd & Sunrise Dr	7	133	Lake City Way NE & 20th Ave NE	232	34
UW Bothell & Cascadia College	61	186	Union St & 6th Ave	33	886
Beardslee Blvd & NE 195th St	6	56	Union St & 4th Ave	7	578
SR 522 & 132nd Ave NE	1	36	2nd Ave & Marion St	9	232
Woodinville Snohomish Rd & 139th Ave NE	0	40	2nd Ave & James St	2	118
NE 178th Pl & 138th Pl NE	0	50	2nd Ave Ext S & S Jackson St	4	230
Woodinville Park And Ride	0	141	Airport Way S & S Royal Brougham Way	0	26
Northbound Total	*2,625*	*2,625*	*Southbound Total*	*2,433*	*2,433*
			Total	*5,058*	*5,058*

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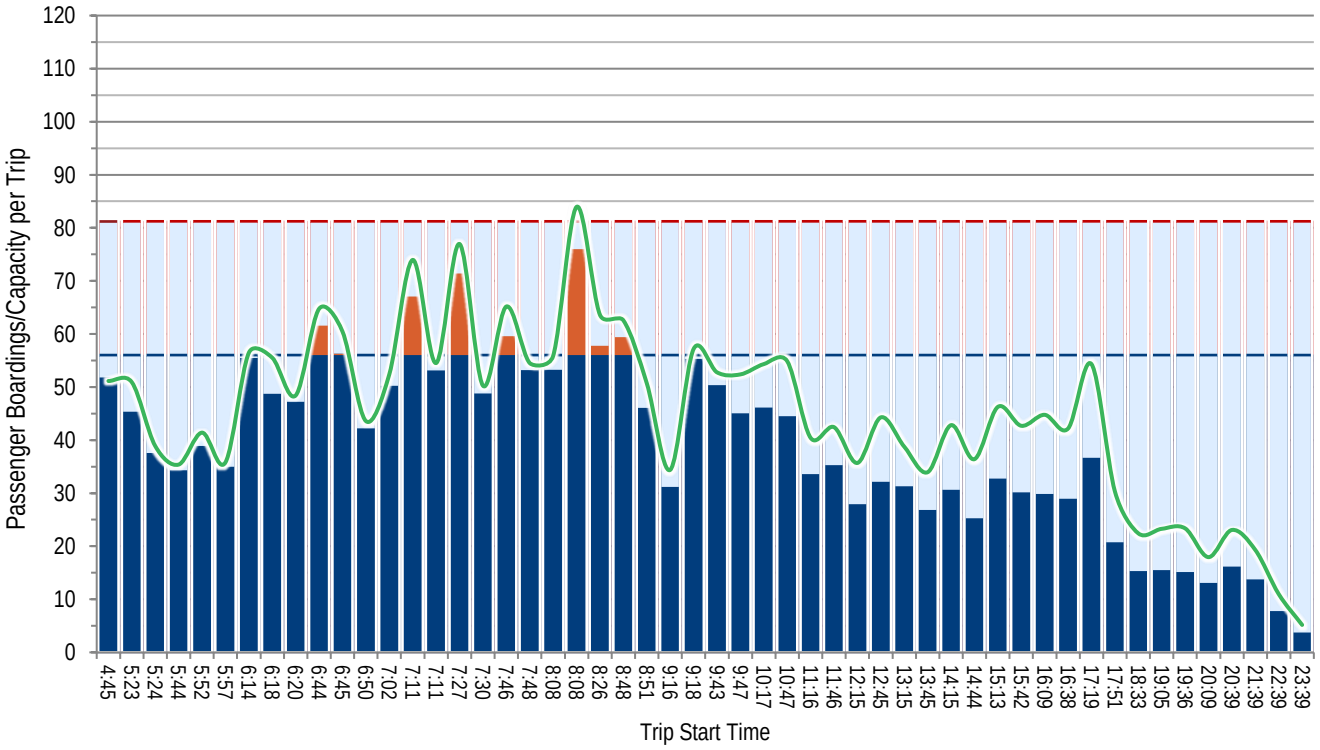
Southbound Average Trip Ridership & Maximum Passenger Loads — *Weekday*

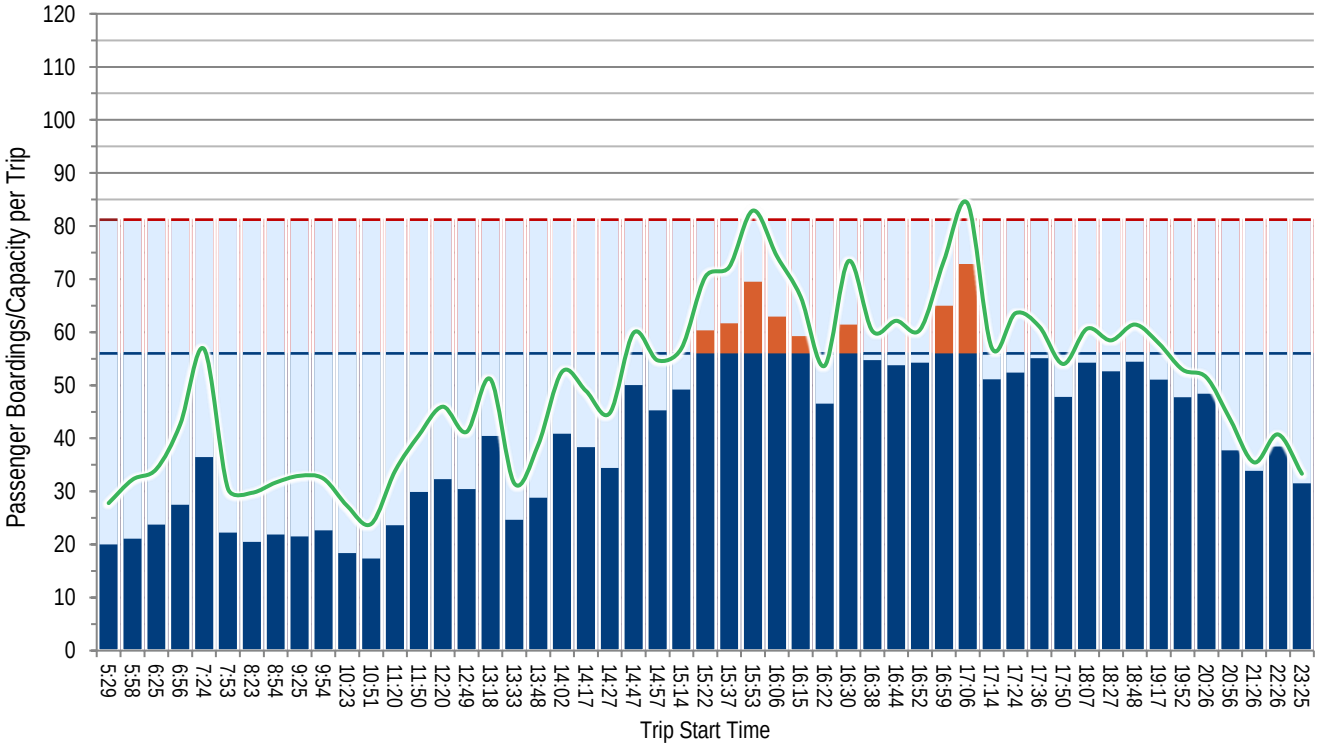


Average Maximum Passenger Load
Orange/Red: standing passengers
Blue: seated passengers

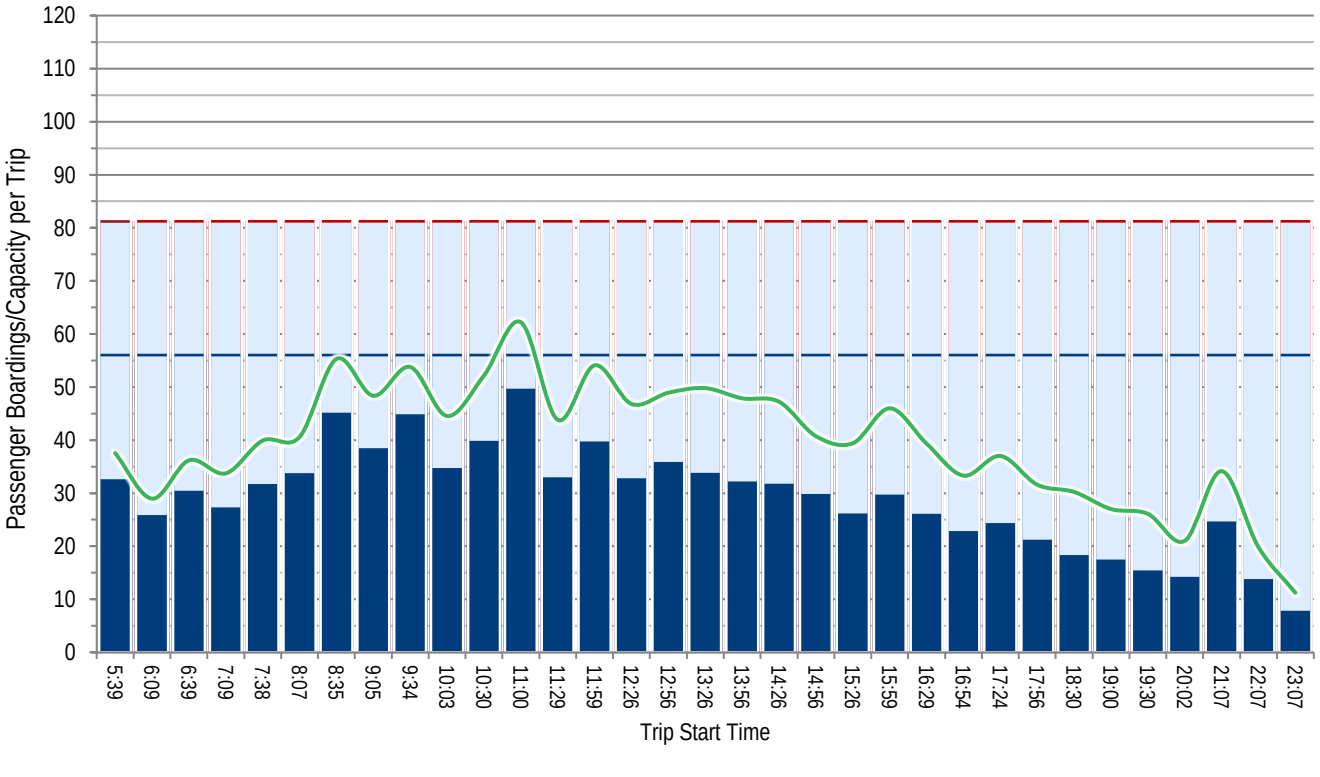
Average Passenger Boardings

Available Capacity
Red: seats plus standing
Blue: seats

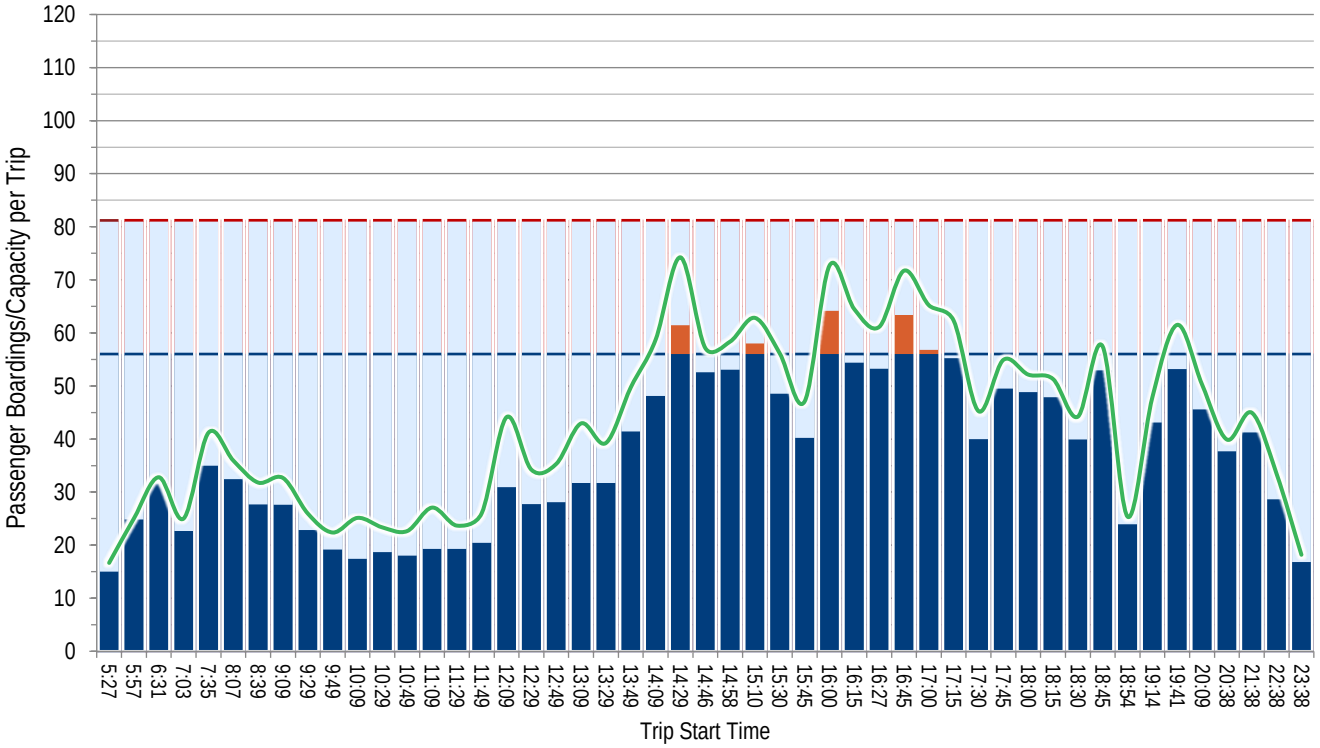
Weekday **Northbound** Average Trip Ridership & Maximum Passenger Loads



Southbound Average Trip Ridership & Maximum Passenger Loads — *Saturday*



Saturday **Northbound** Average Trip Ridership & Maximum Passenger Loads



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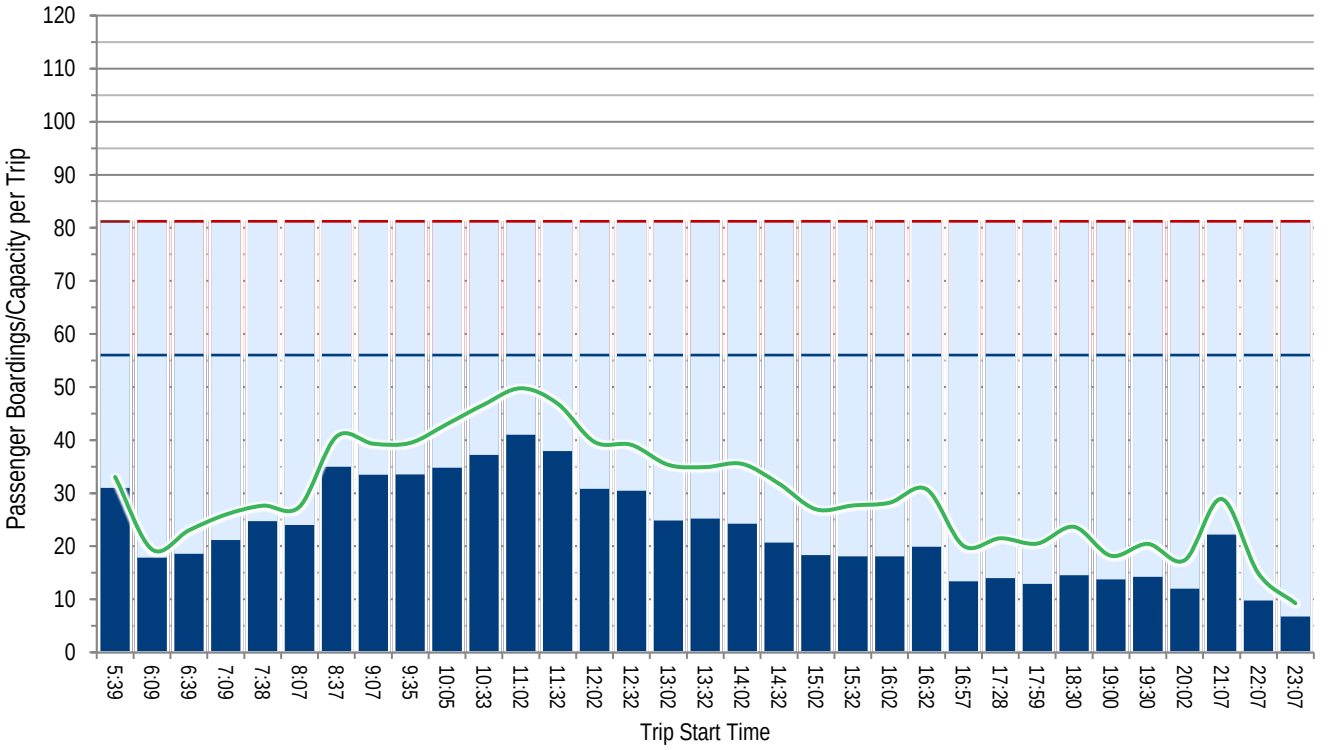
Southbound Average Trip Ridership & Maximum Passenger Loads — Sunday

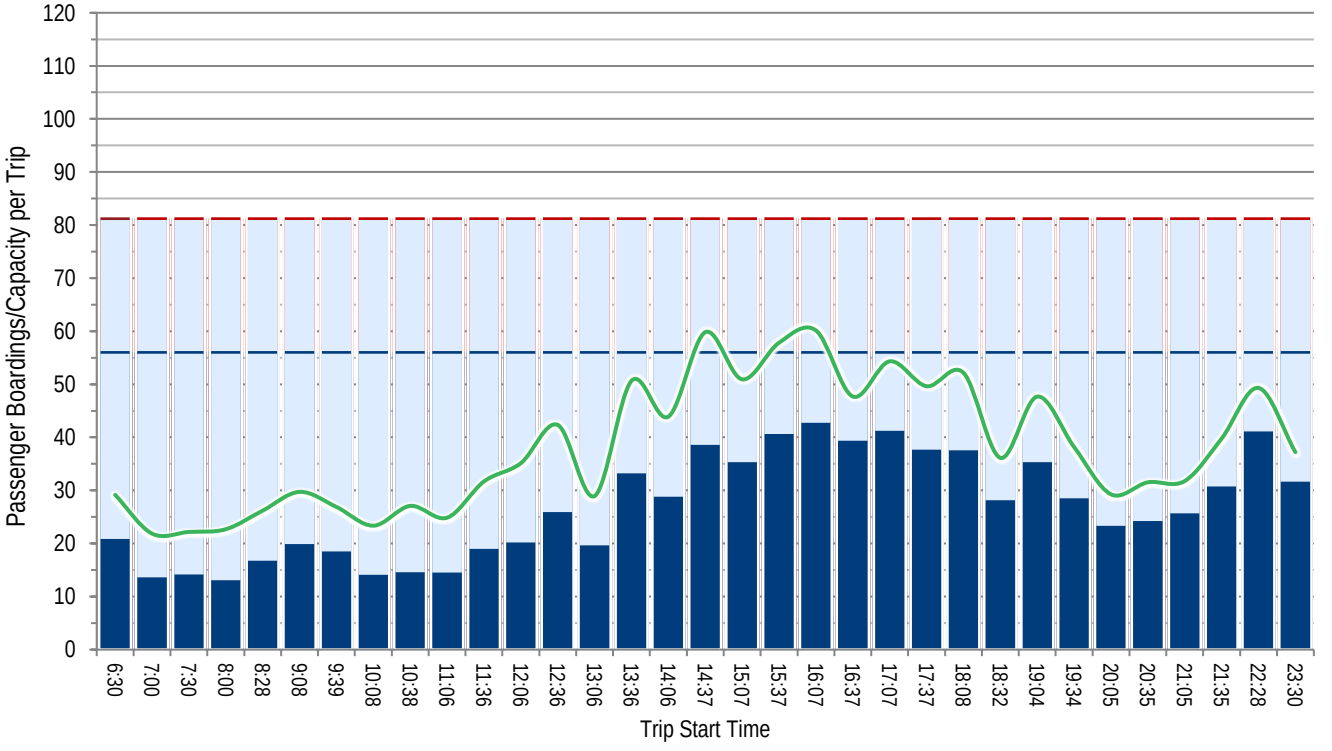


Average Maximum Passenger Load
Orange/Red: standing passengers
Blue: seated passengers

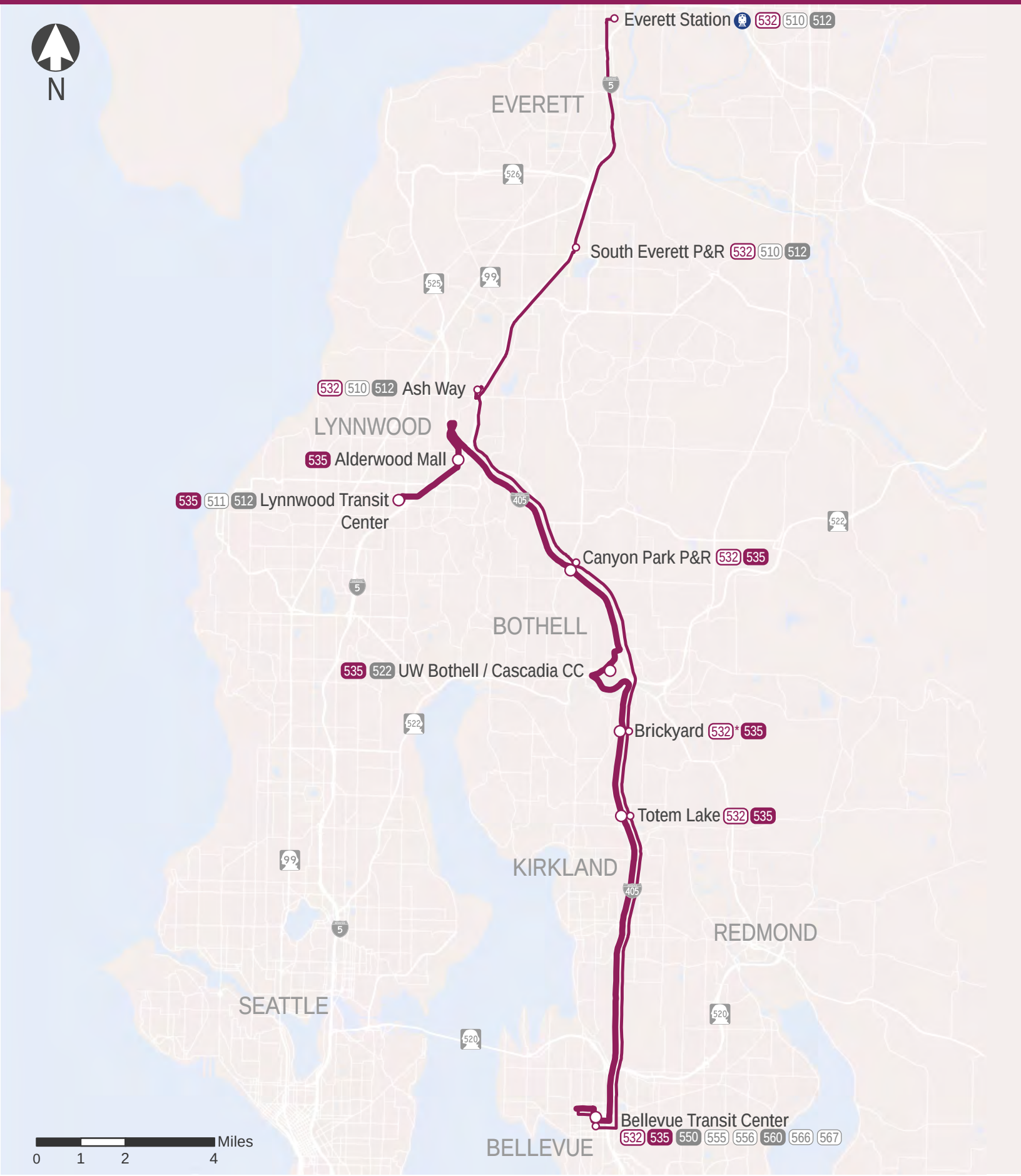
Average Passenger Boardings

Available Capacity
Red: seats plus standing
Blue: seats

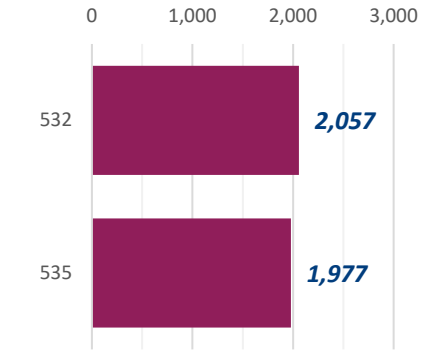
Sunday — **Northbound** Average Trip Ridership & Maximum Passenger Loads



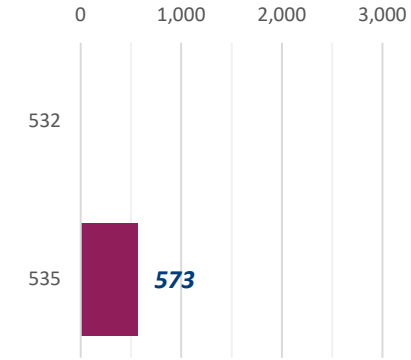
I-405 North


N
Everett Station 532 510 512
EVERETT
South Everett P&R 532 510 512
532 510 512 Ash Way
LYNNWOOD
535 Alderwood Mall
535 511 512 Lynnwood Transit Center
Canyon Park P&R 532 535
BOTHELL
535 522 UW Bothell / Cascadia CC
Brickyard 532* 535
Totem Lake 532 535
KIRKLAND
REDMOND
SEATTLE
Bellevue Transit Center
532 535 550 555 556 560 566 567
BELLEVUE
Miles
0 1 2 4

Weekday Ridership



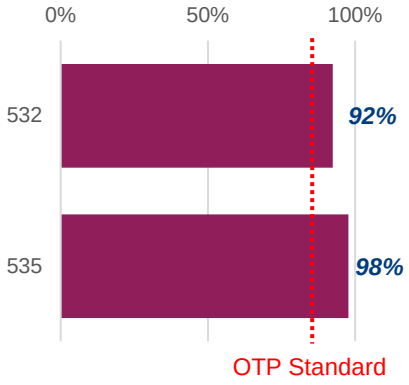
Saturday Ridership



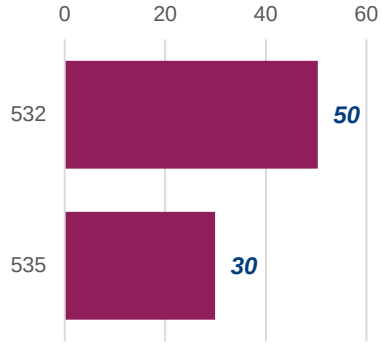
Sunday Ridership

No Sunday Service

OTP



Passengers per Trip



Corridor	I-405 North	Hour																							
Day Type	*Direction*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*
Weekday	*Northbound*																								
Weekday	*Southbound*																								
Saturday	*Northbound*																								
Saturday	*Southbound*																								
Sunday	*Northbound*																								
Sunday	*Southbound*																								
Service Frequency Legend		*Very Frequent (<10 min)*						*Frequent (10-20 min)*						*Moderate (20-30 min)*						*Minimum (30-60 min)*					

I-405 N

Route 532 Everett – Bellevue

Ridership	2015	2016	2017	SPRING 2018
Average **Weekday** Boardings	2,007	2,083	2,052	2,057
Average **Saturday** Boardings	N/A	N/A	N/A	N/A
Average **Sunday** Boardings	N/A	N/A	N/A	N/A
Annual Boardings	511,765	531,172	521,334	

NORTHBOUND STOPS to EVERETT	Average Weekday	
	Ons	Offs
NE 10th St & 102nd Ave NE	62	0
NE 10th St & 108th Ave NE	51	0
Bellevue Transit Center	769	7
Totem Lake Freeway Station	95	155
Brickyard Freeway Station	2	0
NE 195th St Flyer Stop	1	6
Canyon Park Park & Ride	39	331
Ash Way Park & Ride	25	301
South Everett Freeway Station	5	107
Broadway & 34th St	0	17
Everett Station	0	126
Northbound Total	*1,050*	*1,050*

SOUTHBOUND STOPS to BELLEVUE	Average Weekday	
	Ons	Offs
Everett Station	146	0
Broadway & 34th St	16	0
South Everett Freeway Station	118	3
Ash Way Park & Ride	332	20
Canyon Park Freeway Station	297	36
NE 195th St Flyer Stop	5	2
Brickyard Freeway Station	2	3
Totem Lake Freeway Station	129	103
Bellevue Transit Center	4	799
NE 8th St & 106th Ave NE	0	49
NE 8th St & 102nd Ave NE	0	13
NE 10th St & 102nd Ave NE	0	19
Southbound Total	*1,050*	*1,050*
Total	2,100	2,100

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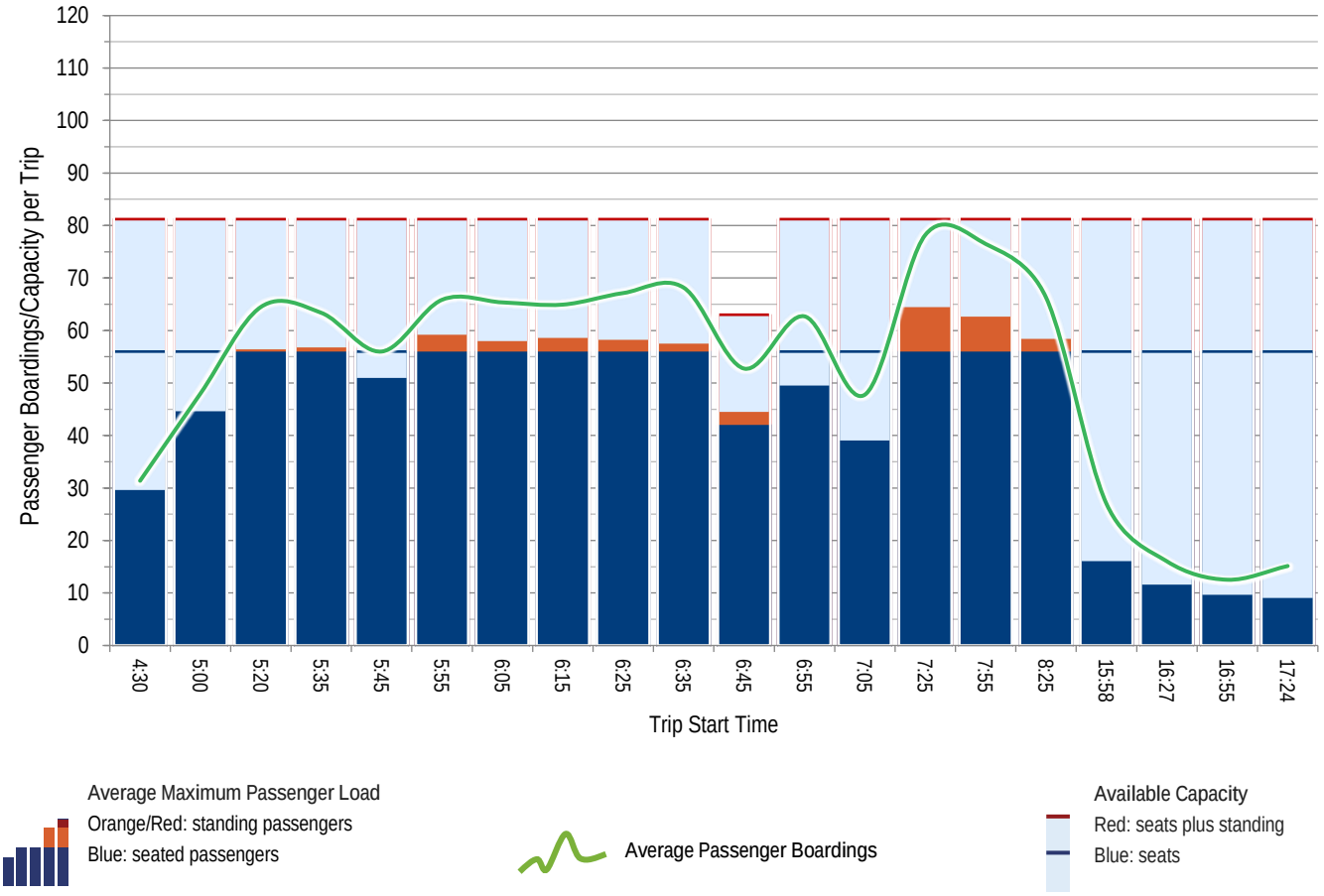
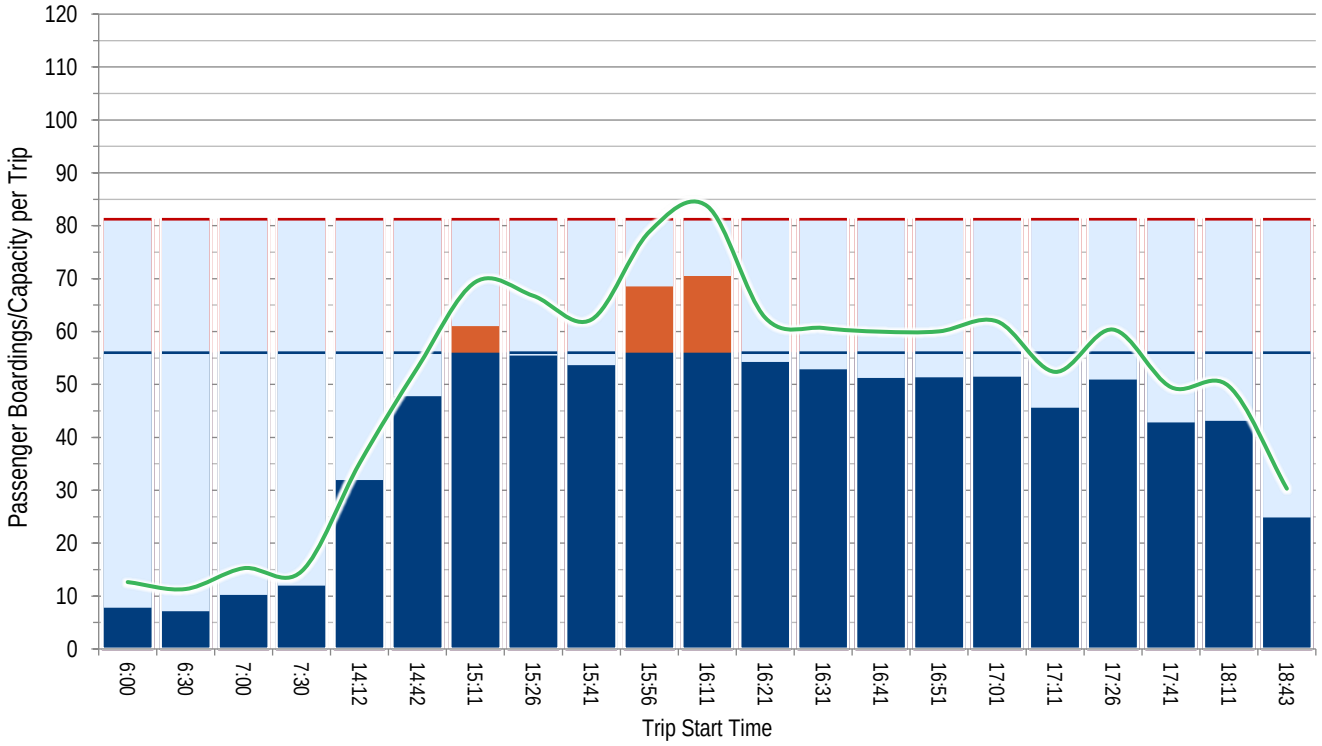
Southbound Average Trip Ridership & Maximum Passenger Loads — *Weekday*



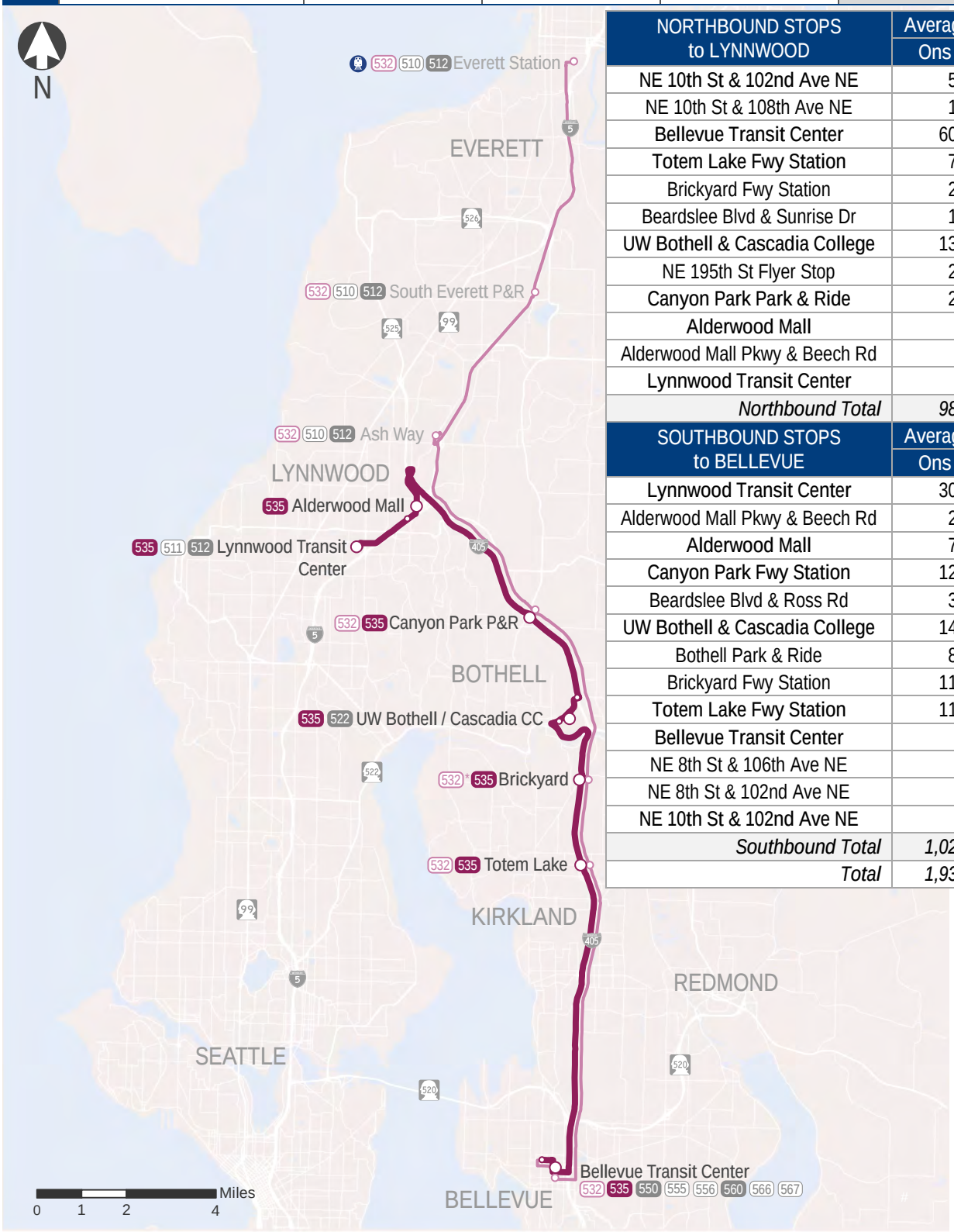
Weekday — **Northbound** Average Trip Ridership & Maximum Passenger Loads



I-405 N

Route 535 Lynnwood – Bellevue

Ridership		2015	2016	2017	SPRING 2018
	Average **Weekday** Boardings	**1,876**	**1,901**	**1,921**	**1,977**
	Average **Saturday** Boardings	**580**	**532**	**547**	**573**
	Average **Sunday** Boardings	**N/A**	**N/A**	**N/A**	**N/A**
	Annual Boardings	**508,603**	**512,940**	**516,330**	



NORTHBOUND STOPS to LYNNWOOD	Average Weekday	
	Ons	Offs
NE 10th St & 102nd Ave NE	59	0
NE 10th St & 108th Ave NE	15	0
Bellevue Transit Center	605	12
Totem Lake Fwy Station	79	124
Brickyard Fwy Station	23	109
Beardslee Blvd & Sunrise Dr	12	113
UW Bothell & Cascadia College	139	137
NE 195th St Flyer Stop	21	20
Canyon Park Park & Ride	23	102
Alderwood Mall	6	112
Alderwood Mall Pkwy & Beech Rd	2	26
Lynnwood Transit Center	0	228
Northbound Total	*984*	*984*

SOUTHBOUND STOPS to BELLEVUE	Average Weekday	
	Ons	Offs
Lynnwood Transit Center	303	0
Alderwood Mall Pkwy & Beech Rd	28	3
Alderwood Mall	78	4
Canyon Park Fwy Station	120	22
Beardslee Blvd & Ross Rd	35	32
UW Bothell & Cascadia College	143	140
Bothell Park & Ride	85	7
Brickyard Fwy Station	115	23
Totem Lake Fwy Station	117	66
Bellevue Transit Center	5	655
NE 8th St & 106th Ave NE	0	29
NE 8th St & 102nd Ave NE	0	19
NE 10th St & 102nd Ave NE	0	29
Southbound Total	*1,029*	*1,029*
Total	*1,938*	*1,938*

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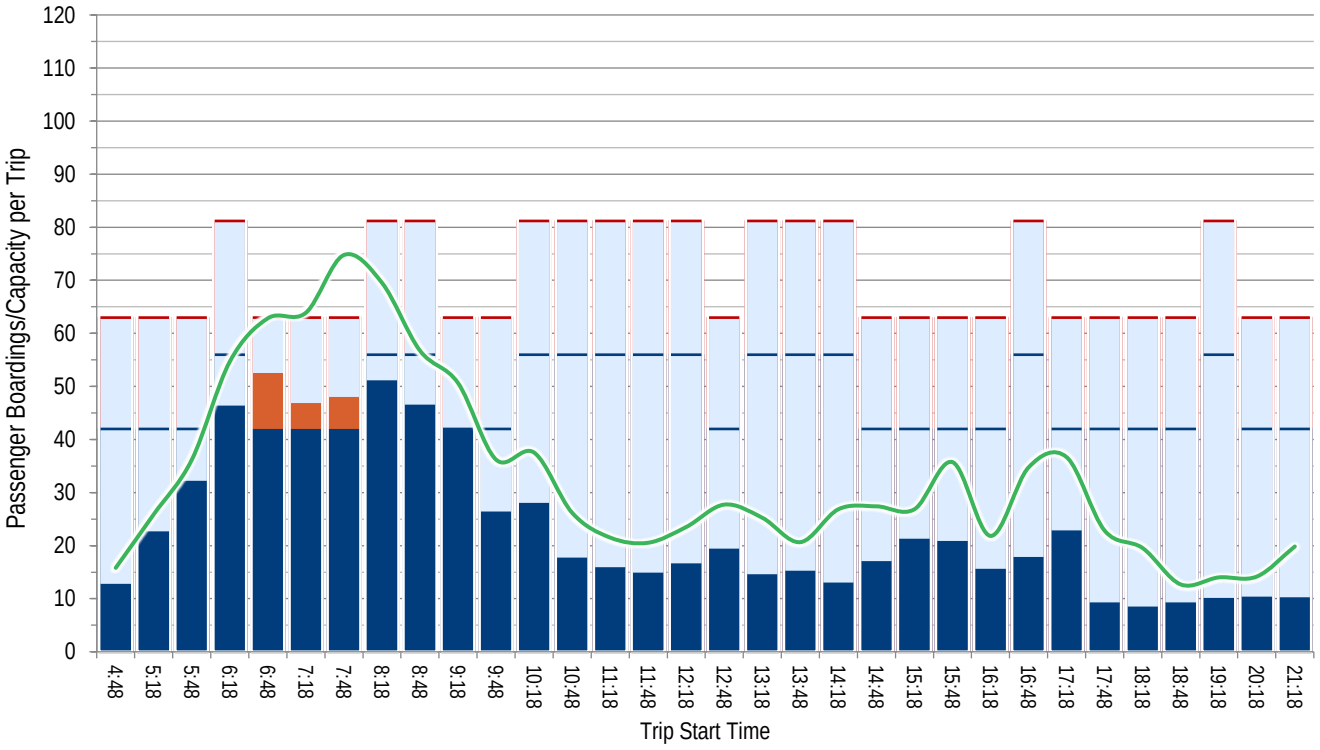
Westbound Average Trip Ridership & Maximum Passenger Loads — *Weekday*

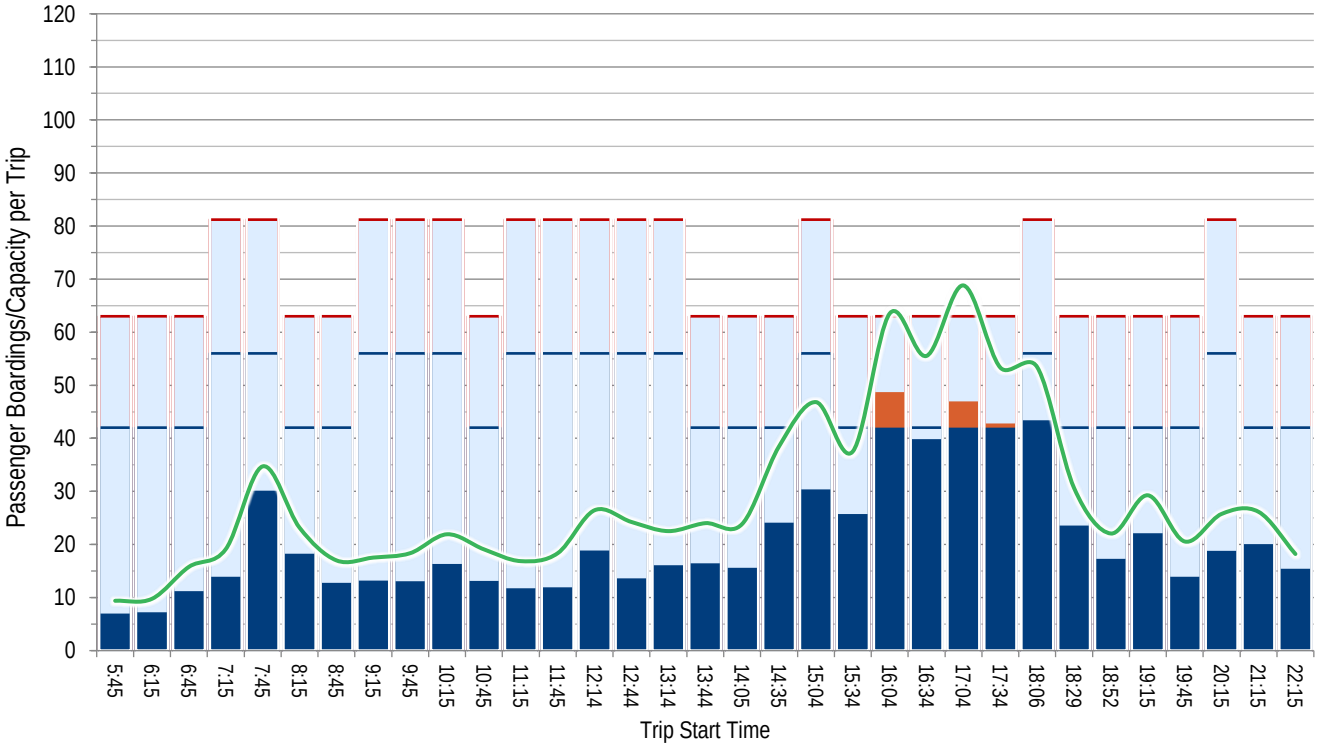


Average Maximum Passenger Load
Orange/Red: standing passengers
Blue: seated passengers

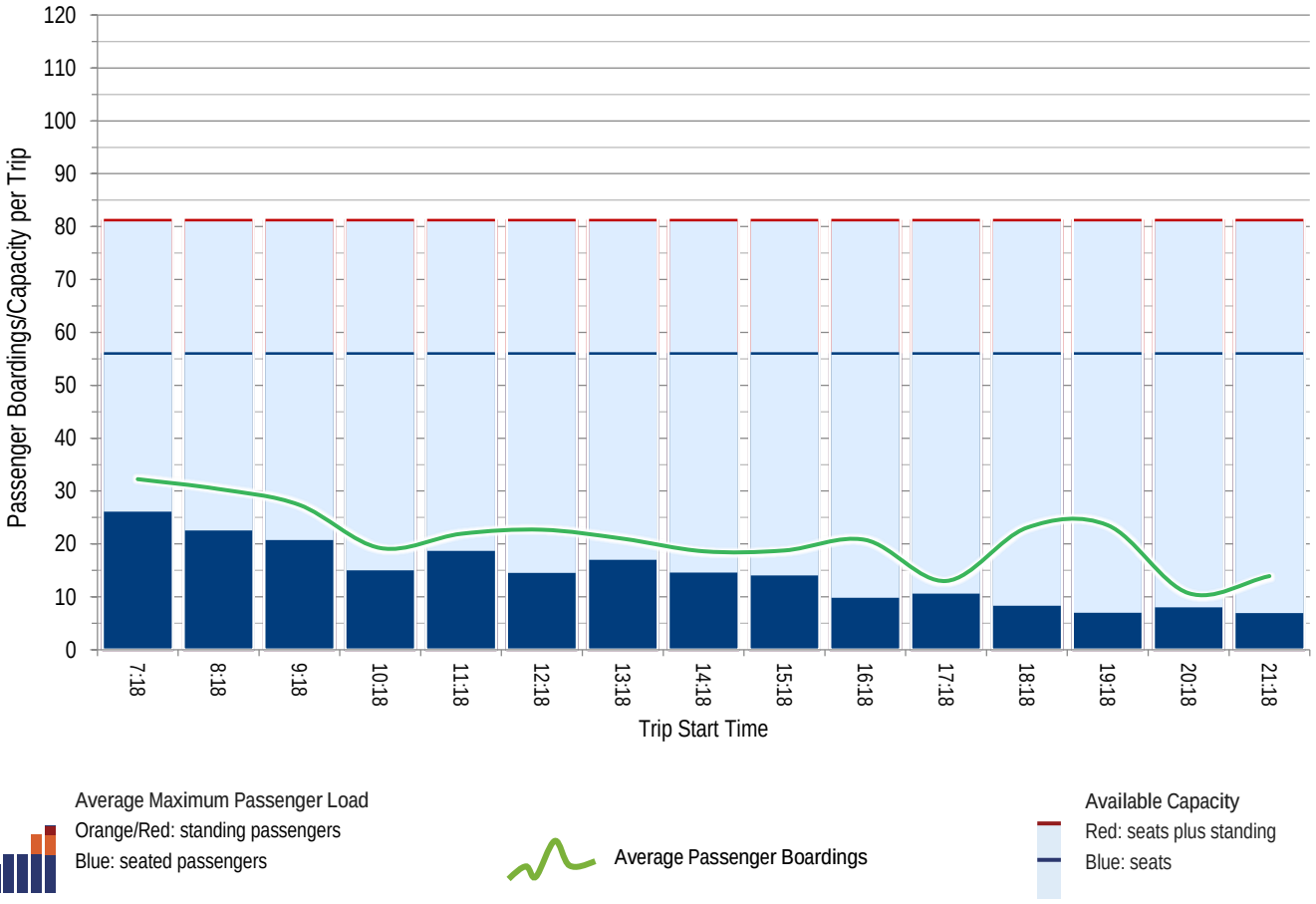
Average Passenger Boardings

Available Capacity
Red: seats plus standing
Blue: seats

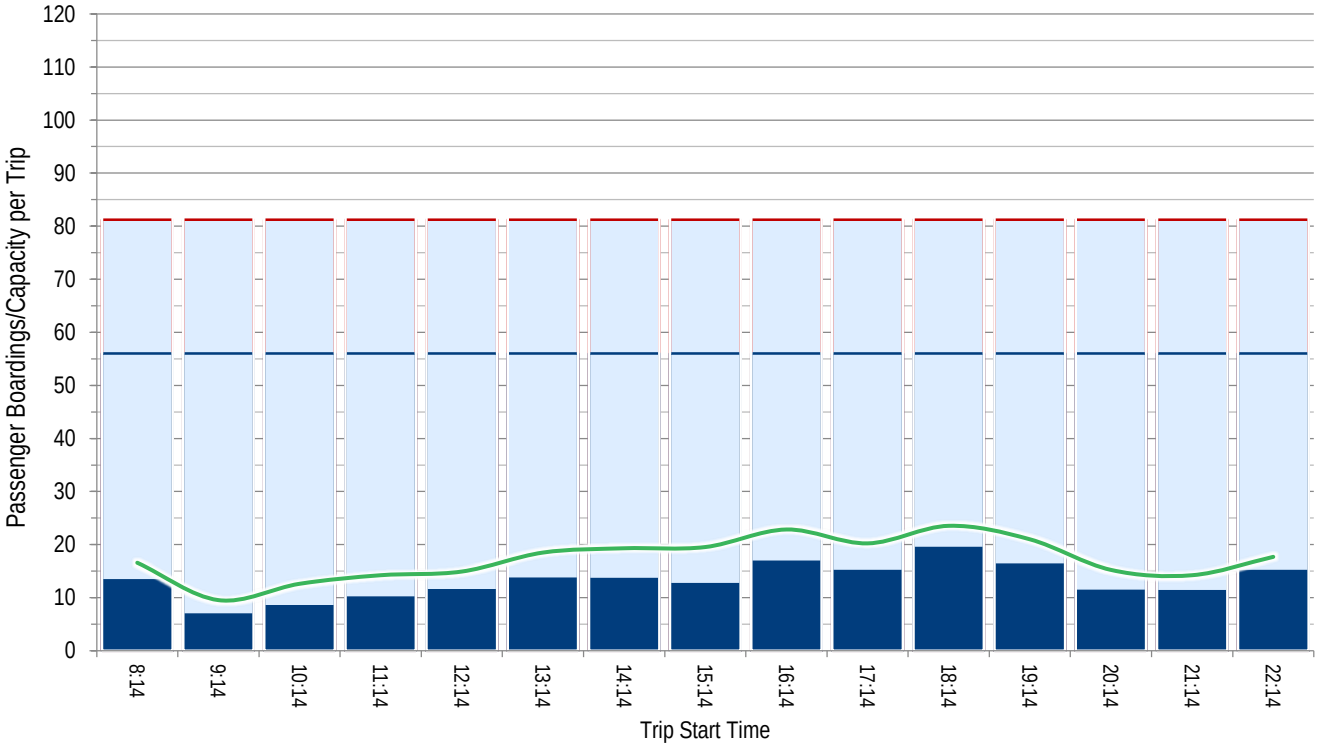
Weekday — **Eastbound** Average Trip Ridership & Maximum Passenger Loads



Westbound Average Trip Ridership & Maximum Passenger Loads — *Saturday*

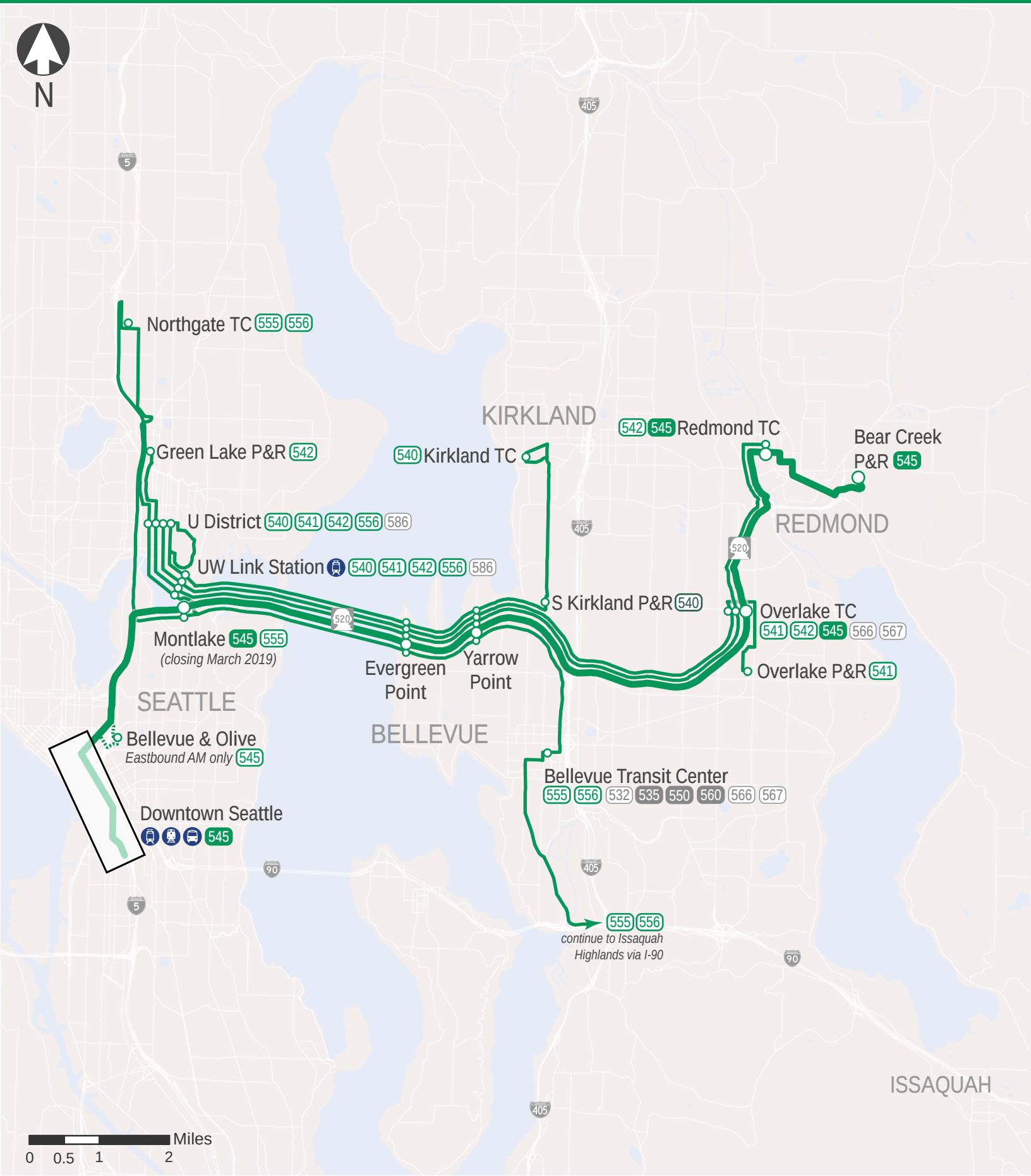


Saturday — **Eastbound** Average Trip Ridership & Maximum Passenger Loads



NO SUNDAY SERVICE OPERATED ON ROUTE 535

SR 520


N
Northgate TC 555 556
Green Lake P&R 542
U District 540 541 542 556 586
UW Link Station 540 541 542 556 586
Montlake 545 555
(closing March 2019)
SEATTLE
Bellevue & Olive
Eastbound AM only 545
Downtown Seattle
545
KIRKLAND
540 Kirkland TC
Evergreen Point
Yarrow Point
S Kirkland P&R 540
BELLEVUE
542 545 Redmond TC
Bear Creek P&R 545
REDMOND
Overlake TC
541 542 545 566 567
Overlake P&R 541
Bellevue Transit Center
555 556 532 535 550 560 566 567
555 556
continue to Issaquah Highlands via I-90
ISSAQUAH
405
5
90
520
Miles
0 0.5 1 2

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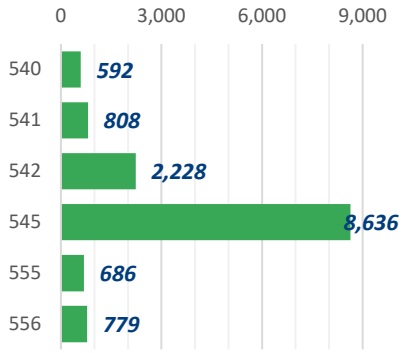
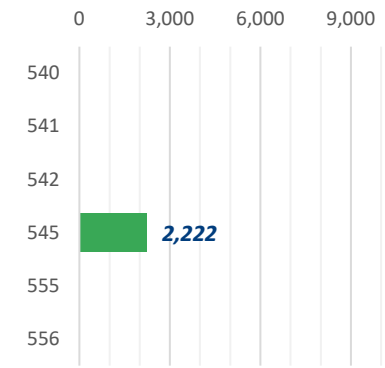
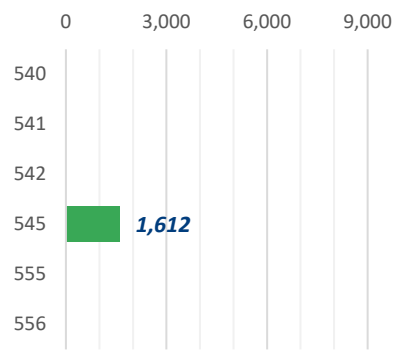
Weekday Ridership



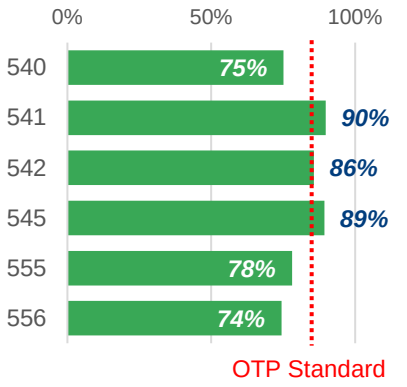
Saturday Ridership



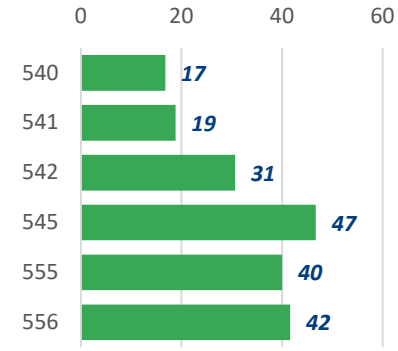
Sunday Ridership



OTP



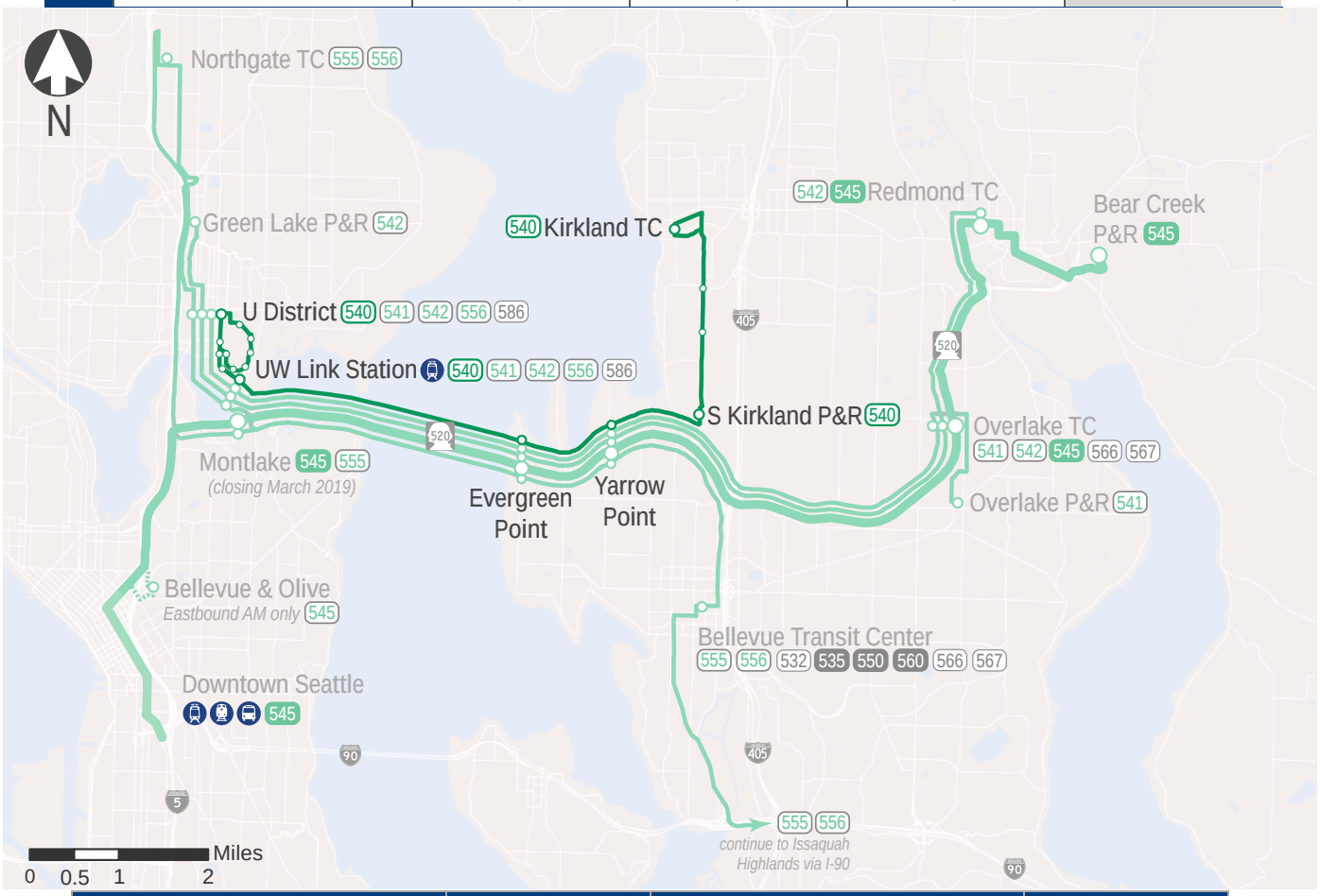
Passengers per Trip



Corridor	SR-520	Hour																						
Day Type	Direction	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Weekday	Eastbound																								
Weekday	Westbound																								
Saturday	Eastbound																								
Saturday	Westbound																								
Sunday	Eastbound																								
Sunday	Westbound																								
Service Frequency Legend		Very Frequent (<10 min)							Frequent (10-20 min)							Moderate (20-30 min)						Minimum (30-60 min)			

SR 520 Route 540 Kirkland – University District

Ridership	2015	2016	2017	SPRING 2018
Average **Weekday** Boardings	**660**	**631**	**598**	**592**
Average **Saturday** Boardings	**N/A**	**N/A**	**N/A**	**N/A**
Average **Sunday** Boardings	**N/A**	**N/A**	**N/A**	**N/A**
Annual Boardings	**168,214**	**160,862**	**151,869**	



EASTBOUND STOPS to KIRKLAND	Average Weekday Ons	Offs	WESTBOUND STOPS to UNIVERSITY DISTRICT	Average Weekday Ons	Offs
15th Ave NE & NE 42nd St	0	0	Kirkland Transit Center	52	0
Stevens Way & Memorial Way	19	6	6th St S & 9th Ave S	45	0
Stevens Way & Pend Oreille Rd	20	4	108th Ave NE & NE 58th St	7	0
Stevens Way & Benton Ln	20	6	South Kirkland Park & Ride	152	2
Stevens Way & Rainier Vis	4	2	SR 520 & 92nd Ave NE	19	9
Stevens Way & Garfield Ln	4	2	Evergreen Point Freeway Station	7	3
Grant Ln & Stevens Way	21	3	Montlake Blvd E & E Shelby St	3	7
15th Ave NE & NE 40th St	51	2	University of Washington Link Station	22	140
NE Pacific St & 15th Ave NE	31	1	15th Ave NE & NE Pacific St	3	29
University of Washington Link Station	65	7	15th Ave NE & NE 40th St	2	57
Montlake Blvd E & E Lake Washington Bl	7	2	15th Ave NE & NE 42nd St	0	56
Evergreen Point Freeway Station	23	13	Stevens Way & Memorial Way	1	3
SR 520 & 92nd Ave NE	5	3	Stevens Way & Pend Oreille Rd	2	2
South Kirkland Park & Ride	4	131	Stevens Way & Benton Ln	1	3
108th Ave NE & NE 58th St	0	8	Stevens Way & Rainier Vis	0	1
6th St S & NE 68th St	1	36	Stevens Way & Garfield Ln	0	2
Kirkland Transit Center	0	51	Grant Ln & Stevens Way	0	1
Eastbound Total	*277*	*277*	*Westbound Total*	*317*	*317*
			Total	*594*	*594*

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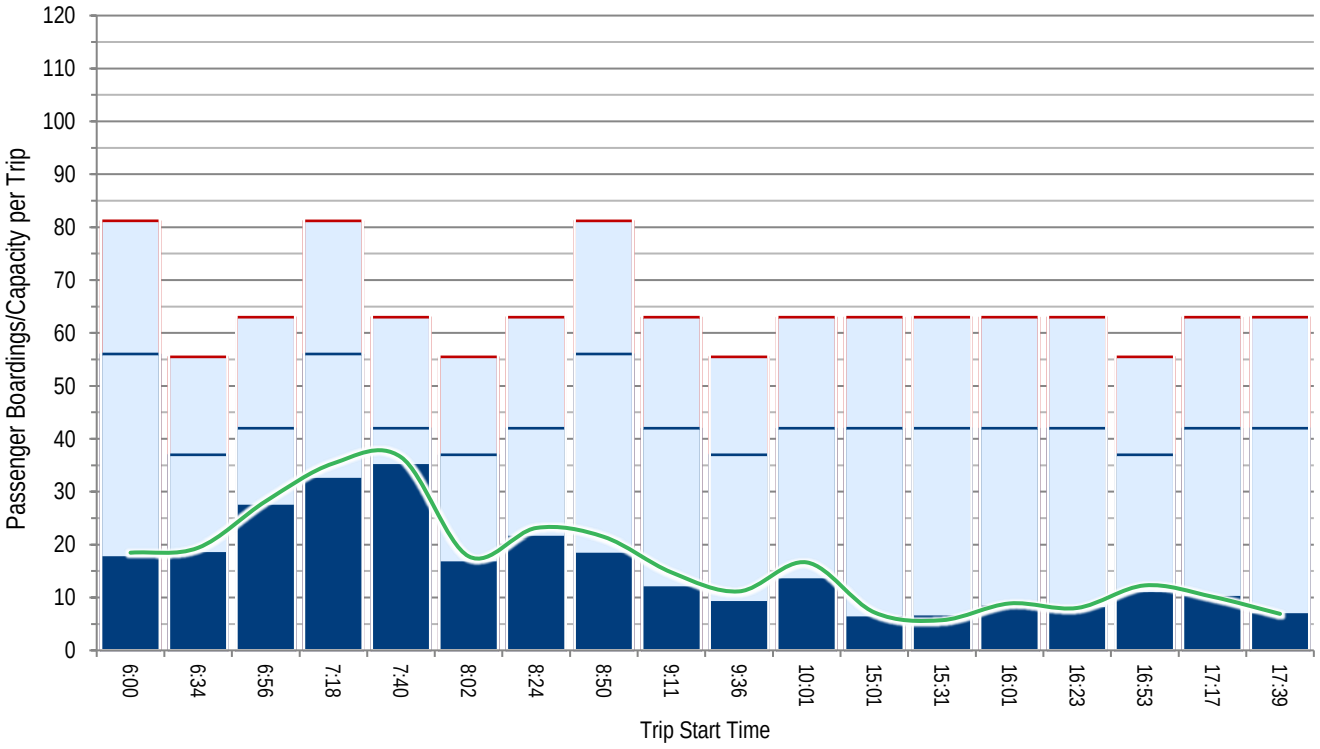
Westbound Average Trip Ridership & Maximum Passenger Loads — *Weekday*

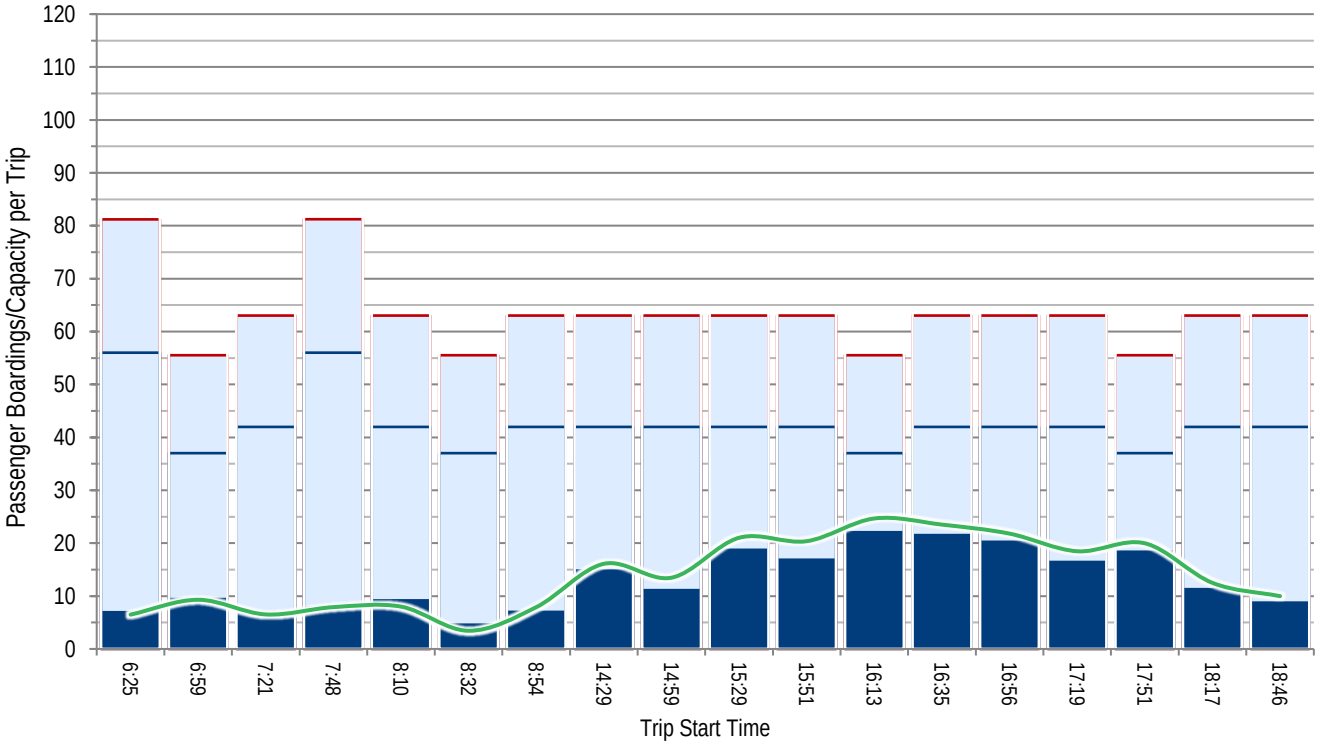


Average Maximum Passenger Load
Orange/Red: standing passengers
Blue: seated passengers

Average Passenger Boardings

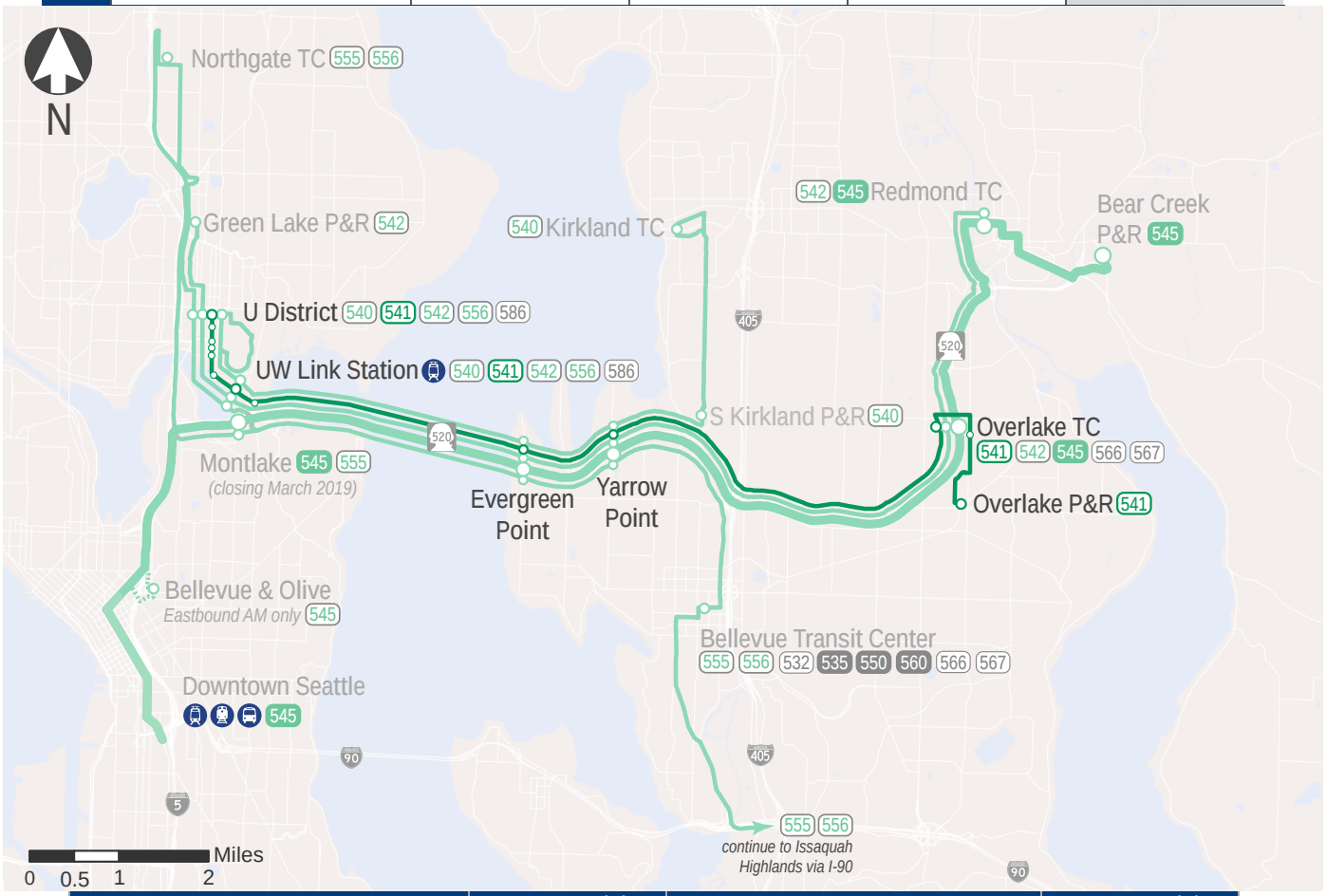
Available Capacity
Red: seats plus standing
Blue: seats

Weekday **Eastbound** Average Trip Ridership & Maximum Passenger Loads



SR 520 Route 541 Overlake – University District

		2015	2016	2017	SPRING 2018
Ridership	Average **Weekday** Boardings	**N/A**	**521**	**778**	**808**
	Average **Saturday** Boardings	**N/A**	**N/A**	**N/A**	**N/A**
	Average **Sunday** Boardings	**N/A**	**N/A**	**N/A**	**N/A**
	Annual Boardings	**N/A**	**132,851**	**197,726**	



EASTBOUND STOPS to OVERLAKE	Average Weekday Ons	Offs	WESTBOUND STOPS to UNIVERSITY DISTRICT	Average Weekday Ons	Offs
15th Ave NE & NE 43rd St	60	0	Overlake Park & Ride	118	0
15th Ave NE & NE Campus Pkwy	42	1	Overlake Transit Center	136	3
15th Ave NE & NE 40th St	43	0	SR 520 & NE 40th St	131	6
NE Pacific St & 15th Ave NE	33	4	Yarrow Point Freeway Station	26	11
University of Washington Link Station	111	20	Evergreen Point Freeway Station	9	9
Montlake Blvd E & E Lake Washington Blvd	28	6	Montlake Blvd E & E Shelby St	5	22
Evergreen Point Freeway Station	18	31	University of Washington Link Station	38	211
Yarrow Point Freeway Station	6	7	15th Ave NE & NE Pacific St	7	22
SR 520 & NE 40th St	8	137	15th Ave NE & NE 40th St	4	70
156th Ave NE & NE 40th St	9	36	15th Ave NE & NE 42nd St	4	49
Overlake Park & Ride	0	114	15th Ave NE & NE 45th St	0	31
			NE 50th St & University Way NE	0	44
Eastbound Total	*357*	*357*	*Westbound Total*	*478*	*478*
			Total	*835*	*835*

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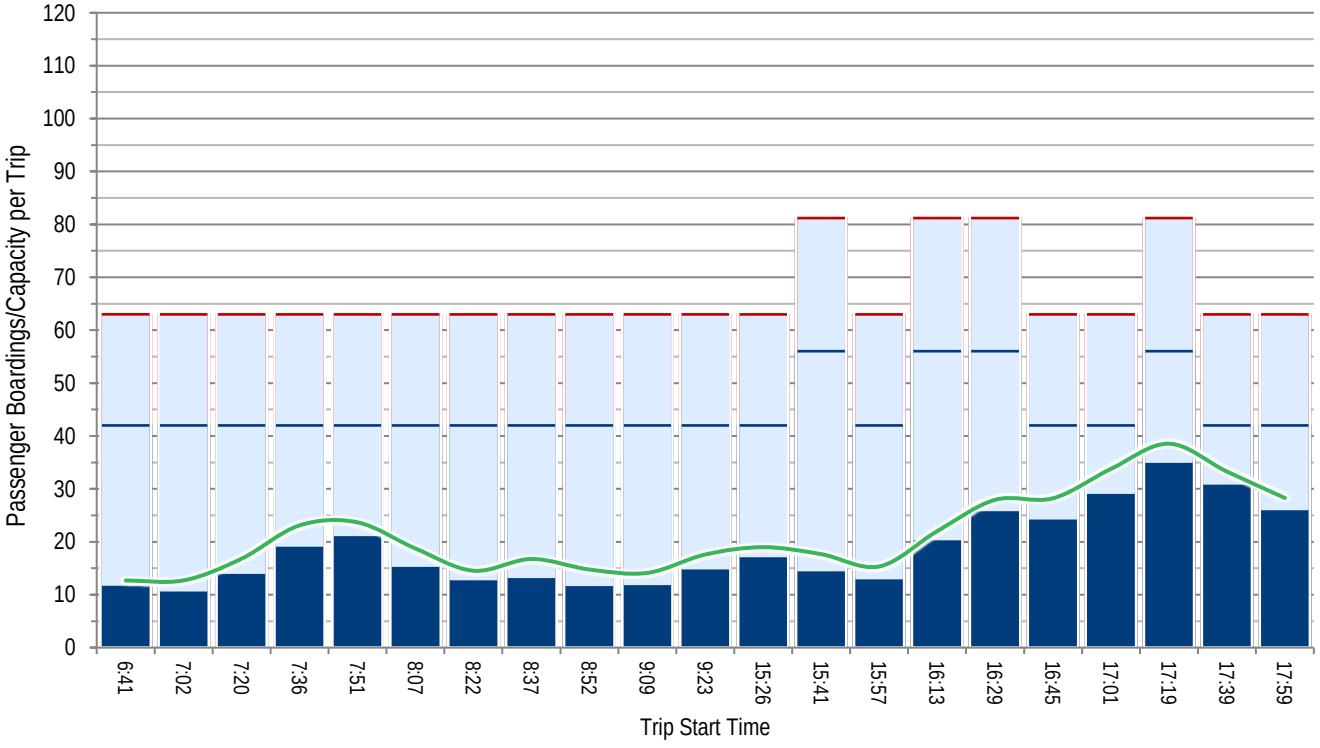
Westbound Average Trip Ridership & Maximum Passenger Loads — *Weekday*

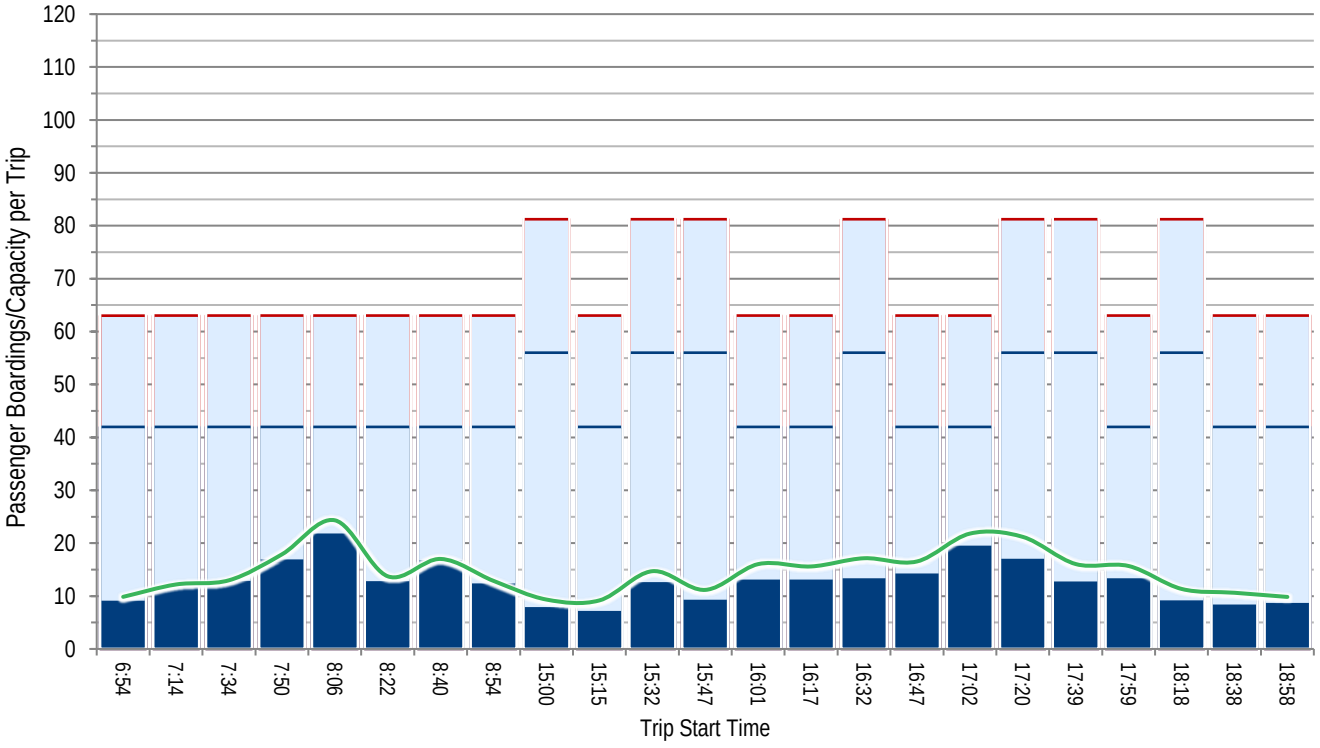


Average Maximum Passenger Load
Orange/Red: standing passengers
Blue: seated passengers

Average Passenger Boardings

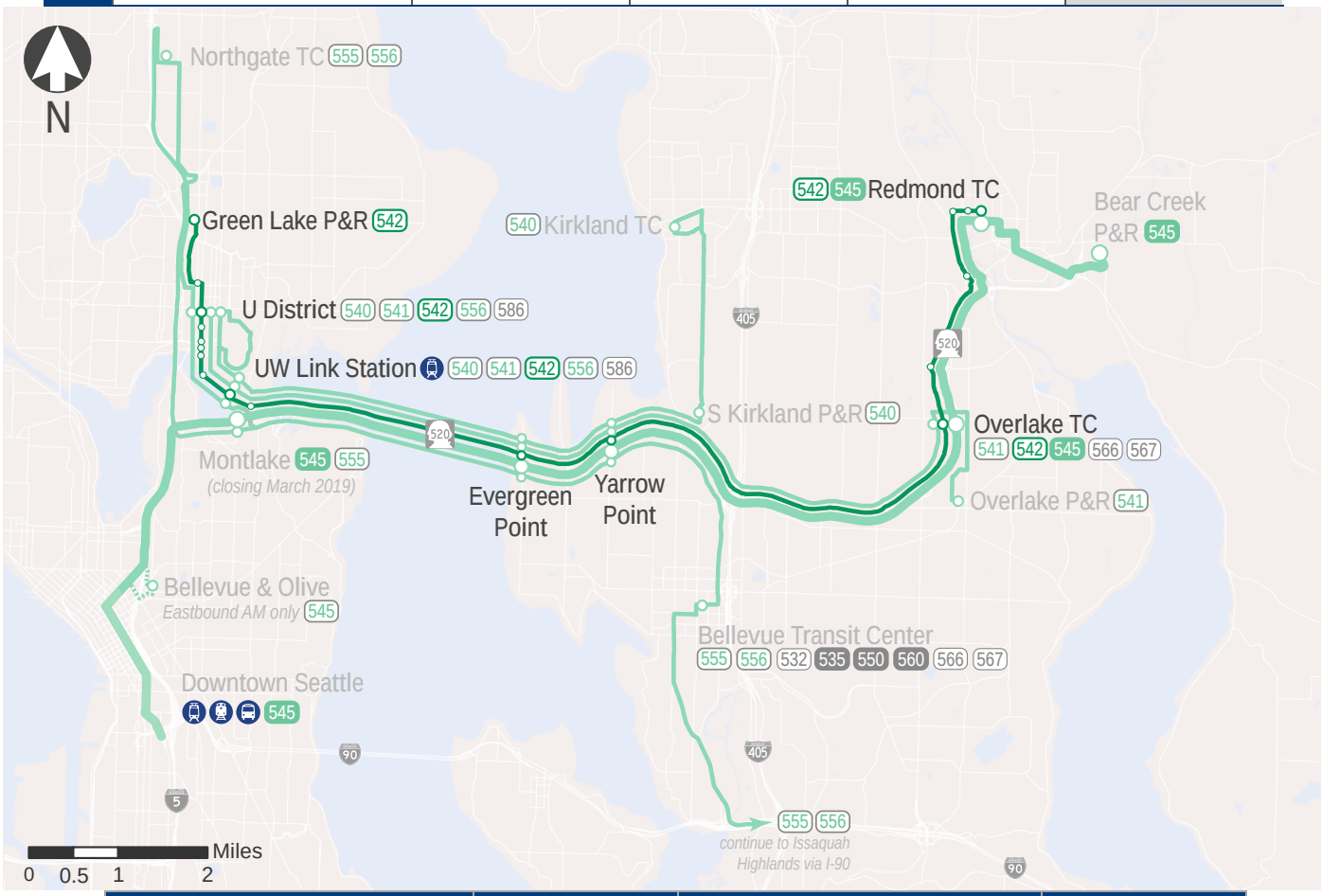
Available Capacity
Red: seats plus standing
Blue: seats

Weekday — **Eastbound** Average Trip Ridership & Maximum Passenger Loads



SR 520 Route 542 Redmond – University District

Ridership	2015	2016	2017	SPRING 2018
Average **Weekday** Boardings	1,704	2,116	2,206	2,228
Average **Saturday** Boardings	N/A	N/A	N/A	N/A
Average **Sunday** Boardings	N/A	N/A	N/A	N/A
Annual Boardings	434,469	539,674	560,364	



EASTBOUND STOPS to REDMOND	Average Weekday Ons	Average Weekday Offs	WESTBOUND STOPS to UNIVERSITY DISTRICT	Average Weekday Ons	Average Weekday Offs
Green Lake Park & Ride	195	0	Redmond Transit Center	213	0
NE 50th St & University Way NE	102	2	NE 85th St & 160th Ave NE	100	1
15th Ave NE & NE 45th St	47	3	154th Ave NE & NE 85th St	34	0
15th Ave NE & NE 43rd St	124	16	West Lake Sammamish & Leary Way	50	1
15th Ave NE & NE Campus Pkwy	137	17	SR 520 & NE 51st St	184	5
15th Ave NE & NE 40th St	104	7	SR 520 & NE 40th St	293	22
NE Pacific St & 15th Ave NE	80	29	SR 520 & 92nd Ave NE	54	9
University of Washington Link Station	213	69	SR 520 & Evergreen Point Rd	30	8
Montlake Blvd E & E Lake Washington Bl	59	13	Montlake Blvd E & E Shelby St	9	47
SR 520 & Evergreen Point Rd	17	60	University of Washington Link Station	91	358
SR 520 & 92nd Ave NE	10	25	15th Ave NE & NE Pacific St	41	65
SR 520 & NE 40th St	30	387	15th Ave NE & NE 40th St	22	200
SR 520 & NE 51st St	9	135	15th Ave NE & NE 42nd St	15	115
West Lake Sammamish & Leary Way	1	41	15th Ave NE & NE 45th St	2	75
NE 85th St & 154th Ave NE	0	42	NE 50th St & University Way NE	2	110
NE 85th St & 161st Ave NE	1	96	Green Lake Park & Ride	0	125
Redmond Transit Center	0	189			
Eastbound Total	*1,131*	*1,131*	*Westbound Total*	*1,140*	*1,140*
			Total	*2,270*	*2,270*

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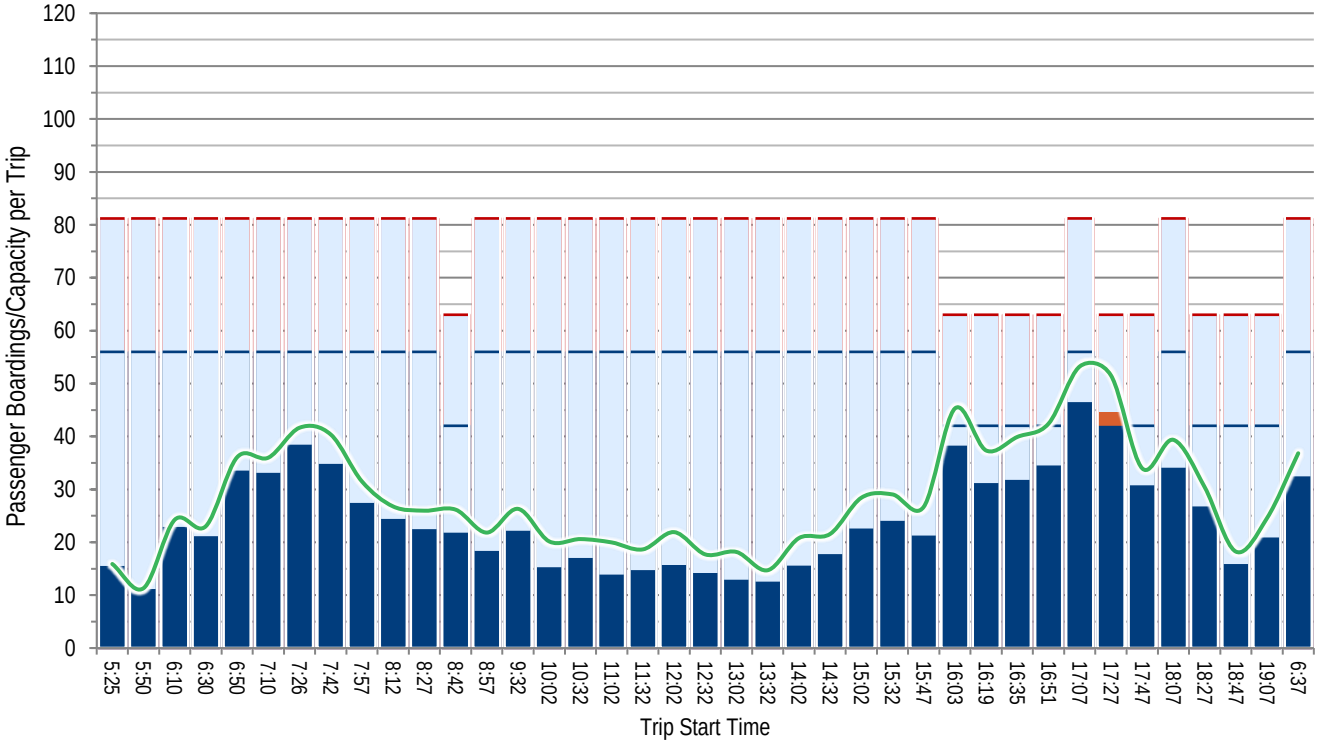
Westbound Average Trip Ridership & Maximum Passenger Loads — *Weekday*

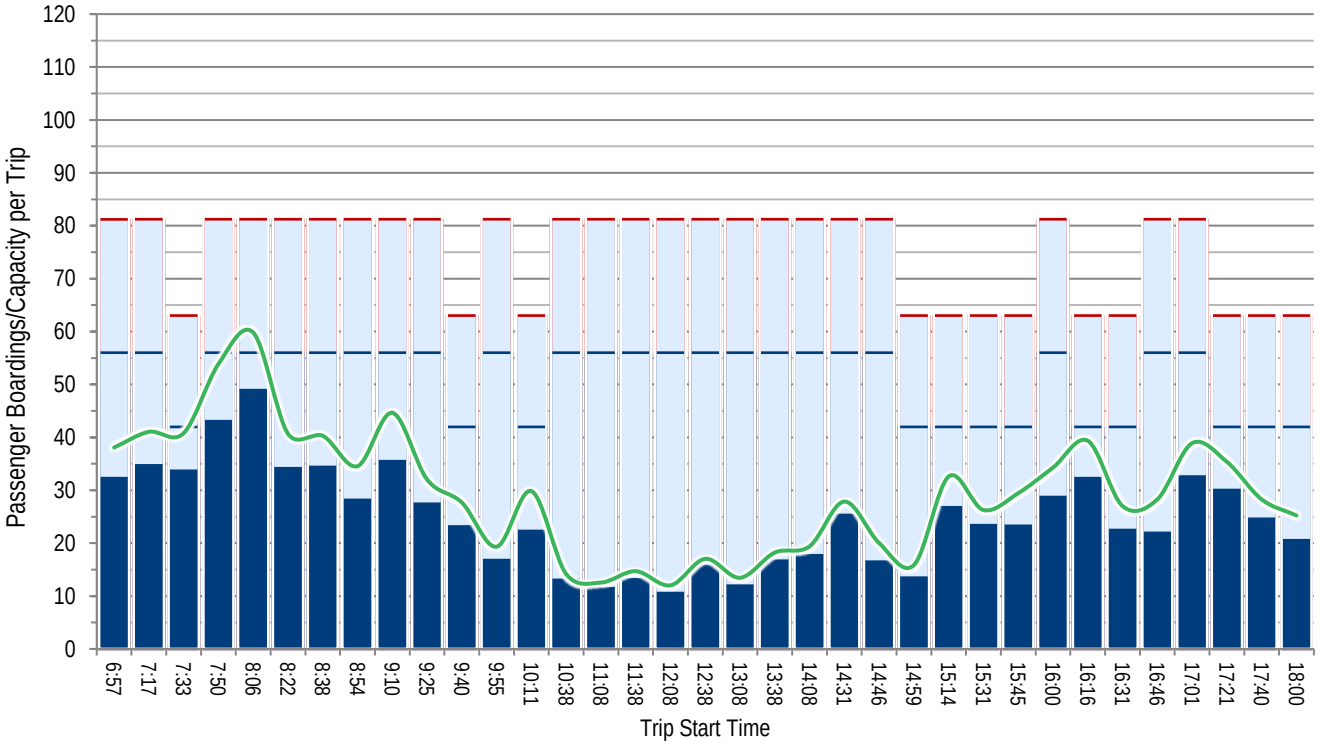


Average Maximum Passenger Load
Orange/Red: standing passengers
Blue: seated passengers

Average Passenger Boardings

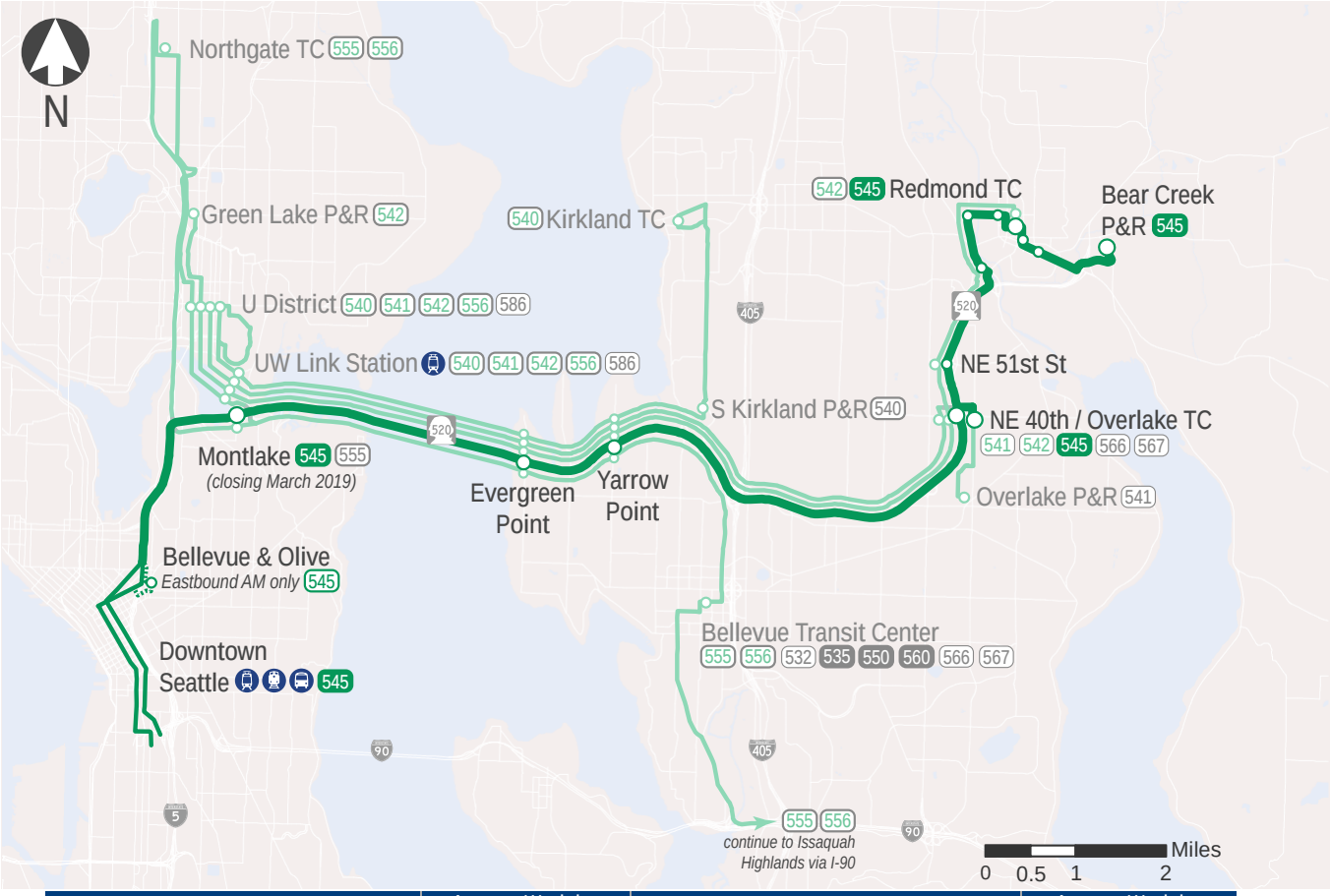
Available Capacity
Red: seats plus standing
Blue: seats

Weekday **Eastbound** Average Trip Ridership & Maximum Passenger Loads



SR 520 Route 545 Redmond – Seattle

Ridership	2015	2016	2017	SPRING 2018
Average **Weekday** Boardings	**9,727**	**9,330**	**9,234**	**8,636**
Average **Saturday** Boardings	**2,438**	**2,340**	**2,390**	**2,222**
Average **Sunday** Boardings	**1,796**	**1,761**	**1,783**	**1,612**
Annual Boardings	**2,711,310**	**2,605,320**	**2,574,790**	



EASTBOUND STOPS to REDMOND	Average Weekday Ons	Average Weekday Offs	WESTBOUND STOPS to SEATTLE	Average Weekday Ons	Average Weekday Offs
6th Ave & Atlantic St	92	0	Bear Creek Park & Ride	380	0
4th Ave & S Jackson St	601	32	NE 76th St & 177th Pl NE	193	7
4th Ave & James St	224	59	NE Redmond Way & NE 79th St	177	14
4th Ave & Madison St	487	116	Redmond Transit Center	667	54
4th Ave & University St	0	0	NE 85th St & 160th Ave NE	368	23
4th Ave & Pike St	1,044	105	154th Ave NE & NE 85th St	67	3
Olive Way & 8th Ave	653	61	West Lake Sammamish & Leary Way	202	9
Olive Way & Terry Ave	360	36	SR 520 Ramp & NE 51st St	407	35
Bellevue Ave & Olive St	430	8	Overlake Transit Center	555	39
Montlake Freeway Station	257	57	SR 520 & NE 40th St	839	116
Evergreen Point Freeway Station	41	64	Yarrow Point Freeway Station	68	30
Yarrow Pt Freeway Station	29	54	Evergreen Point Freeway Station	51	15
SR-520 & NE 40th St	155	1,566	Montlake Freeway Station	44	328
SR-520 & NE 51st St	36	408	Stewart St & Yale Ave	75	695
W. Lake Sammamish Pkwy & Leary Way	7	185	Stewart St & 9th Ave	51	470
NE 85th St & 154th Ave	5	130	Stewart St & 7th Ave	37	547
NE 85th St & 161st Ave	19	351	5th Ave & Pine St	64	818
Redmond Transit Center	69	589	5th Ave & Seneca St	61	410
Cleveland St & 166th Ave	8	145	5th Ave & Cherry St	19	217
NE 76th St & 177th Pl	4	227	5th Ave & Jefferson St	52	131
Bear Creek Park & Ride	0	328	5th Ave S & S Jackson St	13	401
			Airport Way S & S Royal Brougham Way	0	27
Eastbound Total	4,521	4,521	Westbound Total	4,388	4,388
			Total	8,909	8,909

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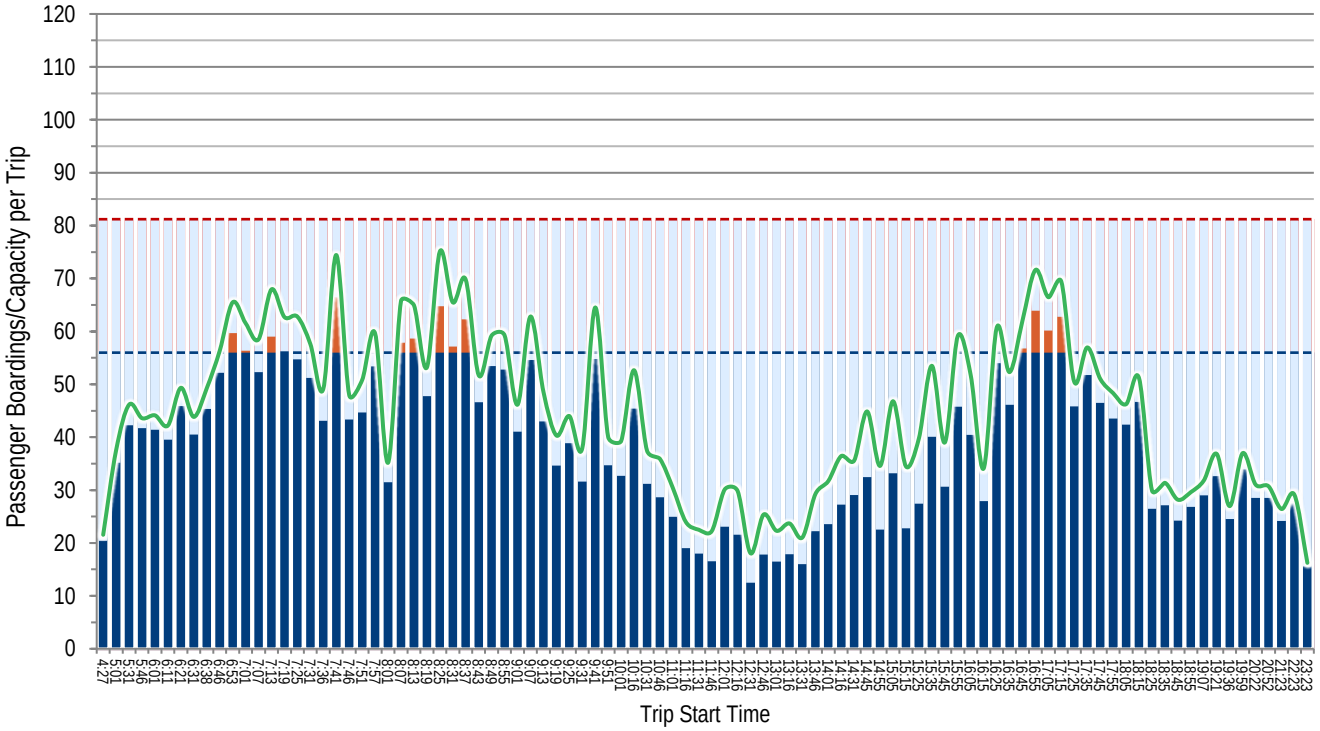
Westbound Average Trip Ridership & Maximum Passenger Loads — *Weekday*

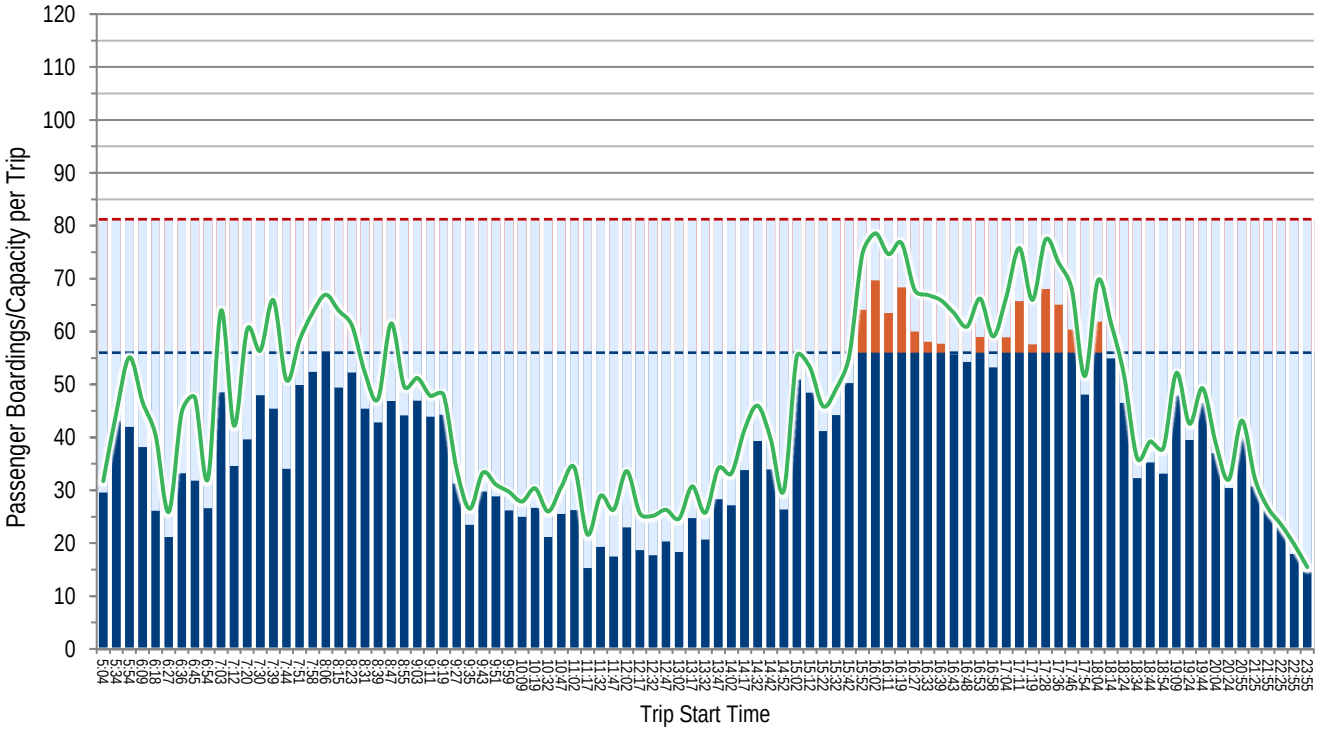


Average Maximum Passenger Load
Orange/Red: standing passengers
Blue: seated passengers

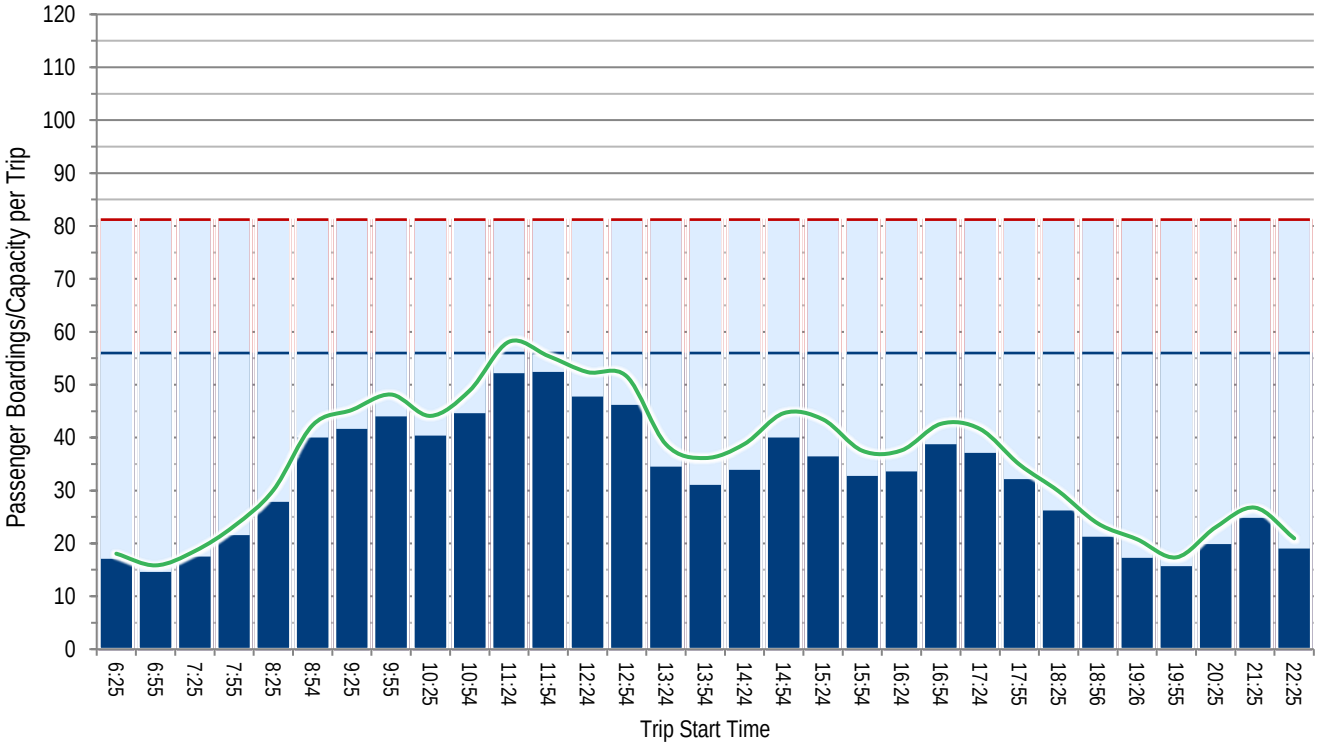
Average Passenger Boardings

Available Capacity
Red: seats plus standing
Blue: seats

Weekday — **Eastbound** Average Trip Ridership & Maximum Passenger Loads



Westbound Average Trip Ridership & Maximum Passenger Loads — *Saturday*

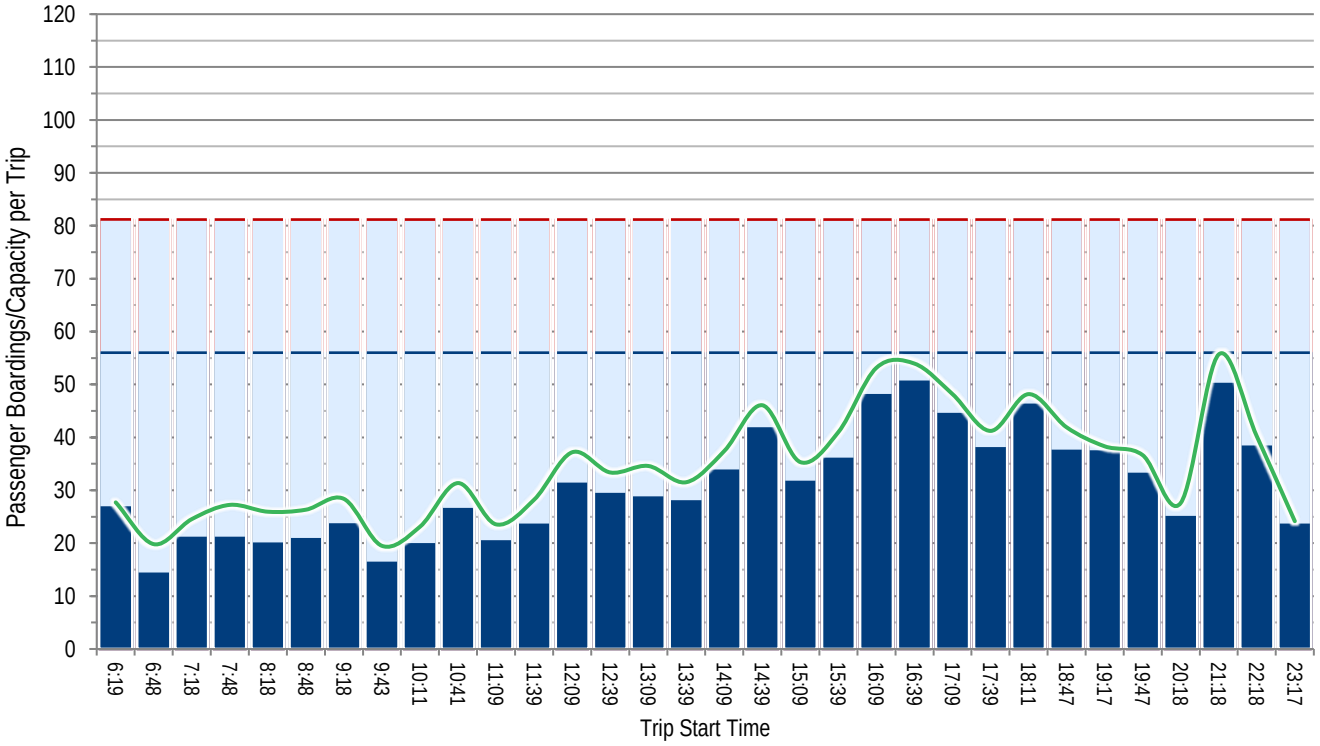


Average Maximum Passenger Load
Orange/Red: standing passengers
Blue: seated passengers

Average Passenger Boardings

Available Capacity
Red: seats plus standing
Blue: seats

Saturday — **Eastbound** Average Trip Ridership & Maximum Passenger Loads



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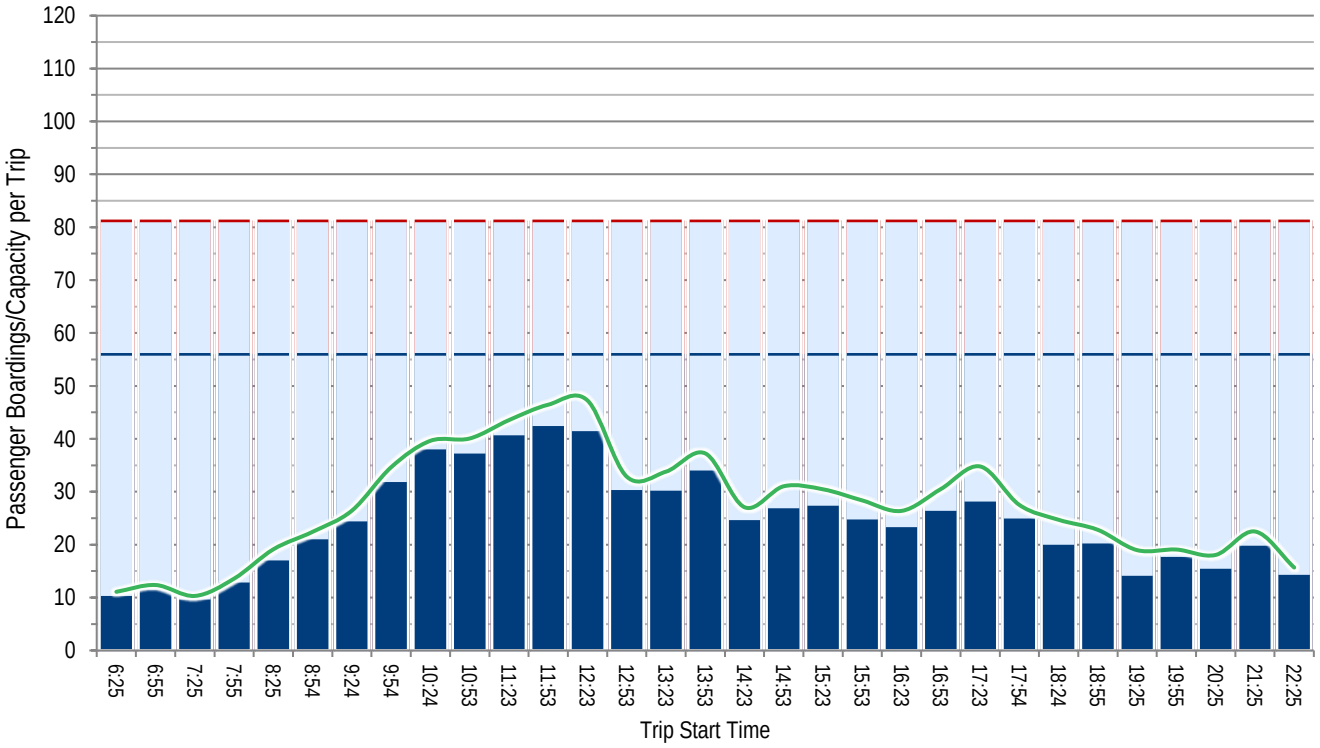
Westbound Average Trip Ridership & Maximum Passenger Loads — Sunday

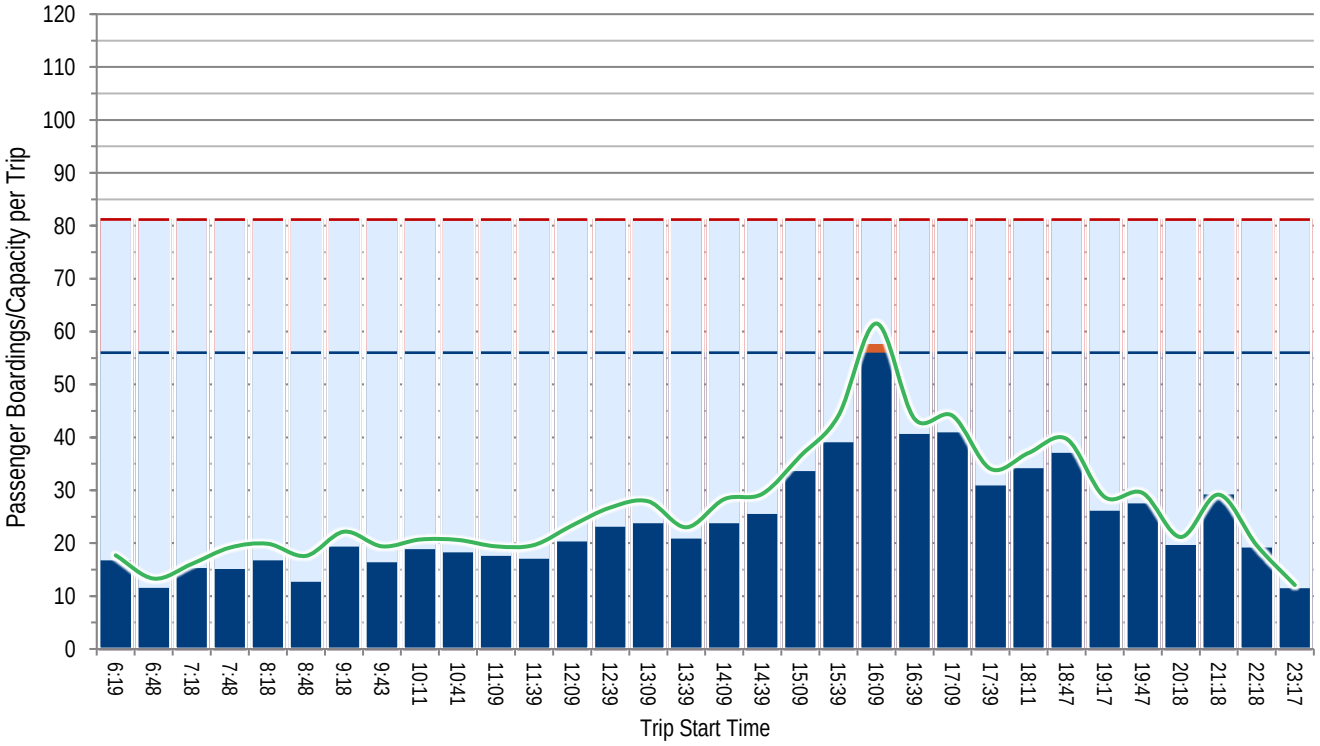


Average Maximum Passenger Load
Orange/Red: standing passengers
Blue: seated passengers

Average Passenger Boardings

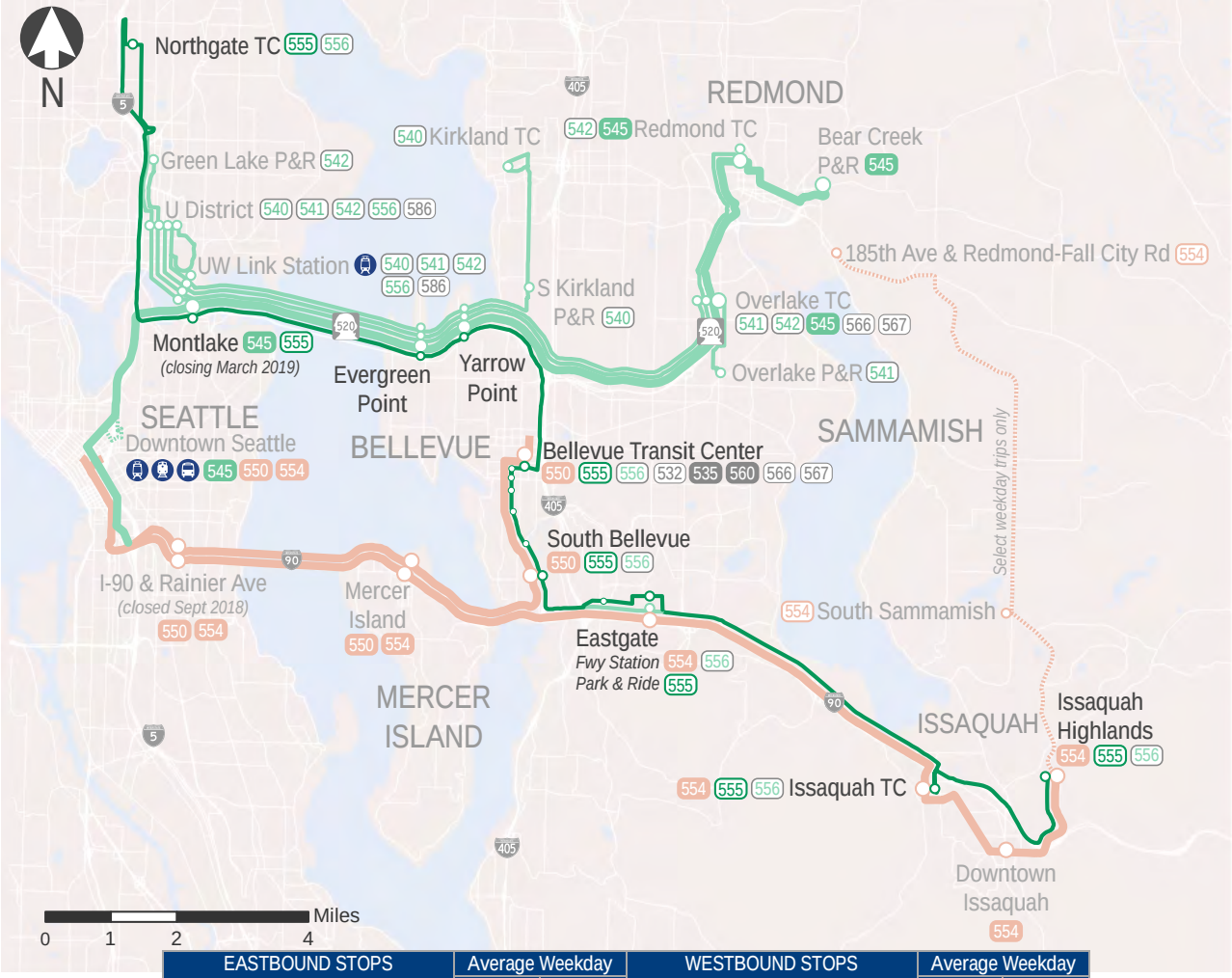
Available Capacity
Red: seats plus standing
Blue: seats

Sunday — **Eastbound** Average Trip Ridership & Maximum Passenger Loads



SR 520 Route 555 Northgate – Issaquah

Ridership	2015	2016	2017	SPRING 2018
Average **Weekday** Boardings	**730**	**742**	**721**	**686**
Average **Saturday** Boardings	**N/A**	**N/A**	**N/A**	**N/A**
Average **Sunday** Boardings	**N/A**	**N/A**	**N/A**	**N/A**
Annual Boardings	**186,245**	**189,334**	**183,031**	



EASTBOUND STOPS to ISSAQUAH	Average Weekday Ons	Offs	WESTBOUND STOPS to NORTHGATE	Average Weekday Ons	Offs
Northgate Transit Center	279	0	Issaquah Highlands Park & Ride	9	0
Montlake Freeway Station	24	6	9th Ave & NE Ellis Dr	4	0
Evergreen Point Freeway Station	3	7	Issaquah Transit Center	15	1
Yarrow Pt Freeway Station	4	6	142nd Pl & SE 32nd St	2	4
Bellevue Transit Center	15	259	Eastgate Park & Ride	17	4
108th Ave NE & NE 2nd St	1	11	I-90 & Richards Rd	12	2
108th Ave NE & Main St	1	5	South Bellevue Park & Ride	1	2
Bellevue Way SE & Main St	7	1	Bellevue Way SE & SE 16th St	1	0
Bellevue Way SE & SE 3rd St	1	1	Bellevue Way SE & SE 10th St	1	0
Bellevue Way SE & SE 11th St	0	0	Bellevue Way SE & SE 3rd St	4	3
Bellevue Way SE & SE 16th St	1	0	Bellevue Way NE & Main St	2	3
South Bellevue Park & Ride	2	0	NE 4th St & 105th Ave NE	14	5
Eastgate Way & Richards Rd	1	10	Bellevue Transit Center	237	24
Eastgate Park & Ride	3	13	Yarrow Pt Freeway Station	12	5
142nd Pl & SE 32nd St	0	2	Evergreen Point Freeway Station	4	3
Isssaquah Transit Center	1	10	Montlake Freeway Station	8	37
Highlands Dr & NE Ellis Dr	0	5	Northgate Transit Center	0	248
Issaquah Highlands Park & Ride	0	5			
Eastbound Total	*341*	*341*	*Westbound Total*	*342*	*342*
			Total	*683*	*683*

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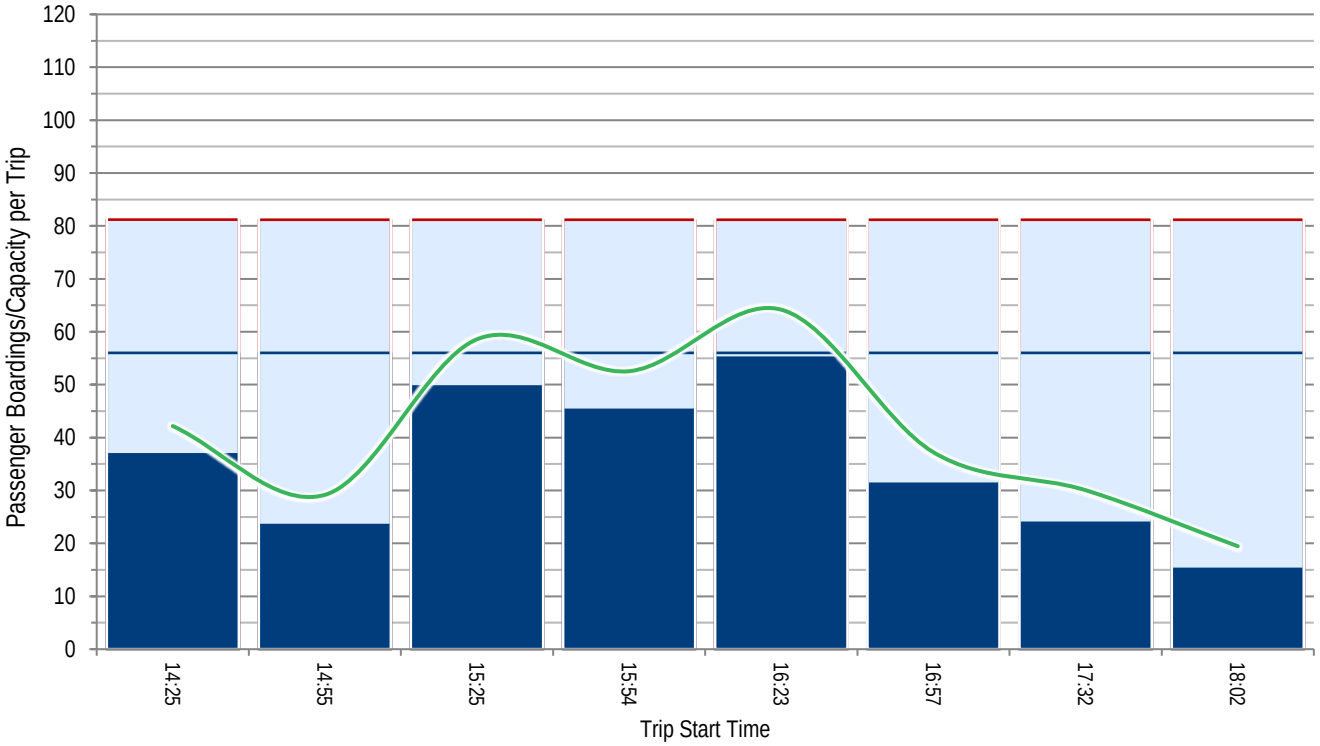
Westbound Average Trip Ridership & Maximum Passenger Loads — *Weekday*

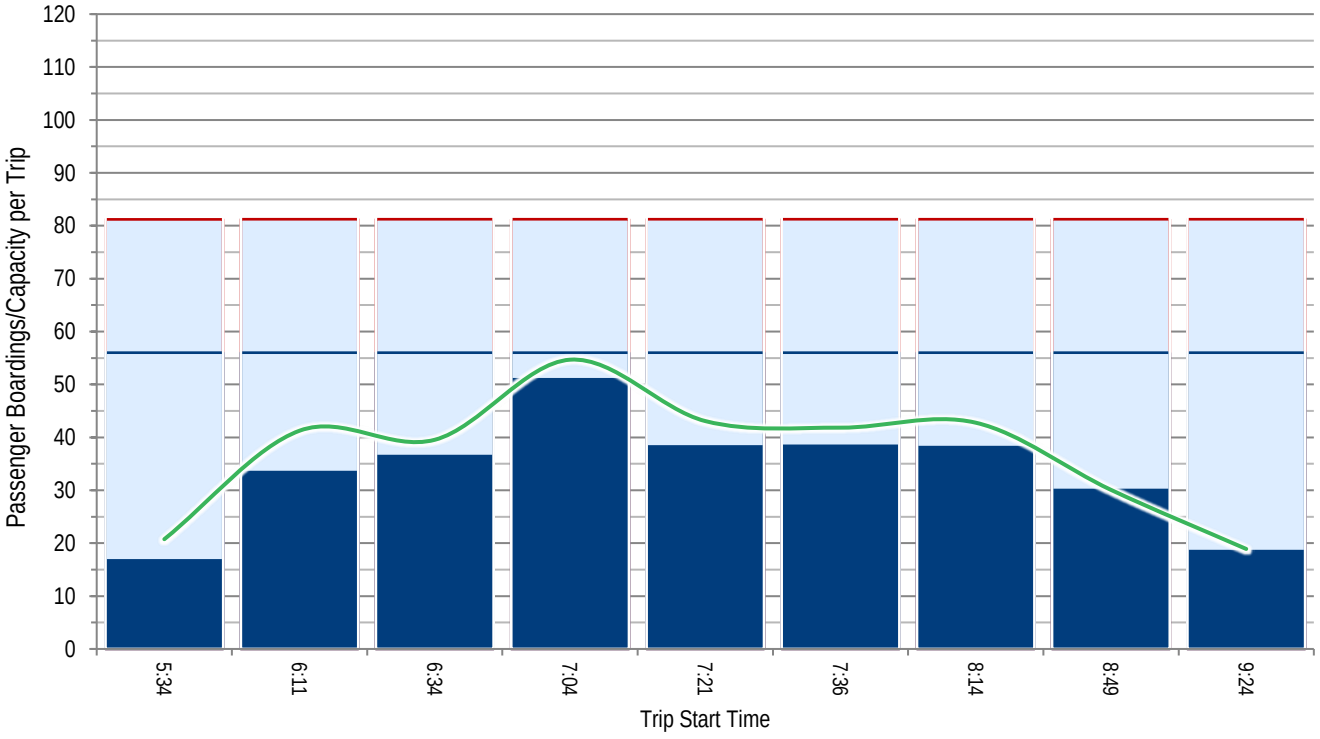


Average Maximum Passenger Load
Orange/Red: standing passengers
Blue: seated passengers

Average Passenger Boardings

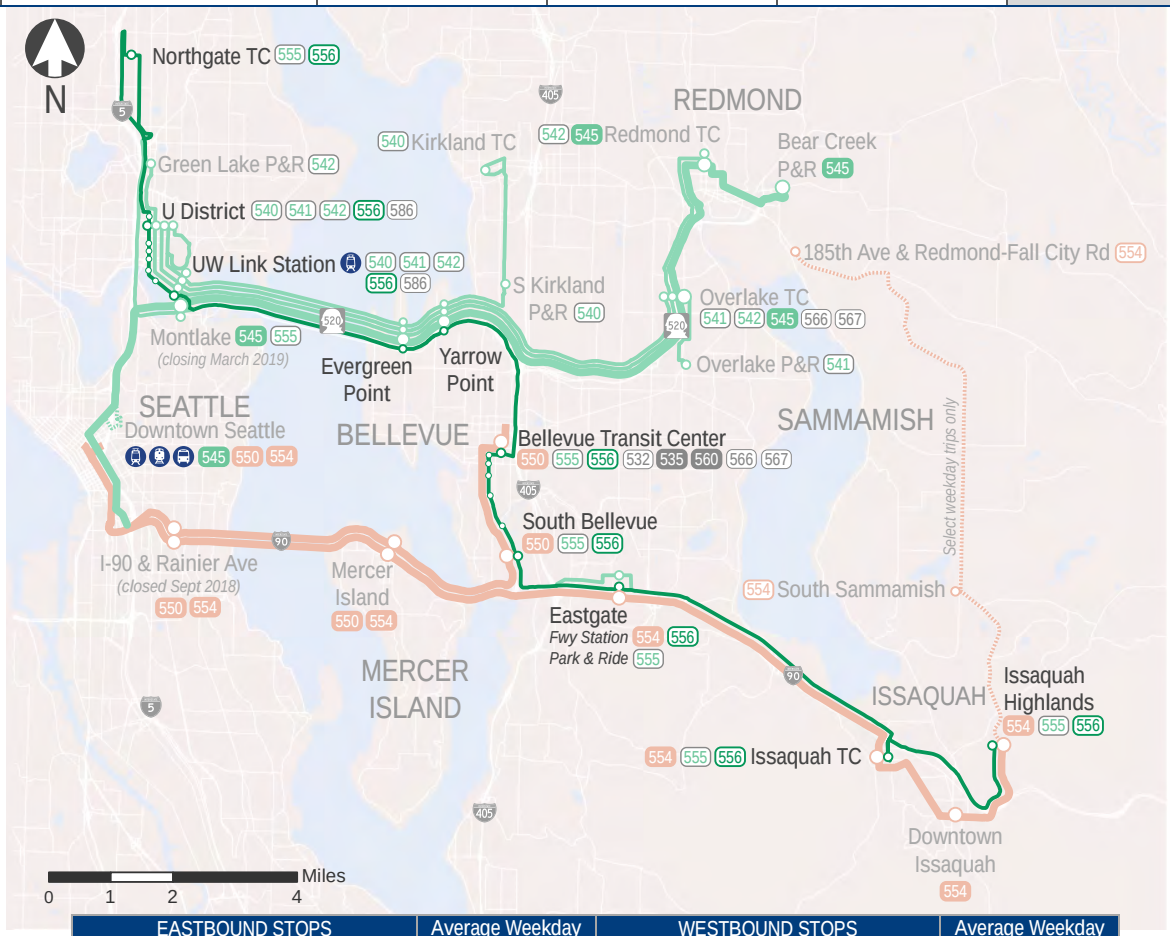
Available Capacity
Red: seats plus standing
Blue: seats

Weekday — **Eastbound** Average Trip Ridership & Maximum Passenger Loads



SR 520 Route 556 Issaquah – Northgate

Ridership	2015	2016	2017	SPRING 2018
Average **Weekday** Boardings	**859**	**825**	**829**	**779**
Average **Saturday** Boardings	**N/A**	**N/A**	**N/A**	**N/A**
Average **Sunday** Boardings	**N/A**	**N/A**	**N/A**	**N/A**
Annual Boardings	**218,954**	**210,471**	**210,443**	



EASTBOUND STOPS to ISSAQUAH	Average Weekday Ons	Offs	WESTBOUND STOPS to NORTHGATE	Average Weekday Ons	Offs
Northgate Transit Center	36	0	Issaquah Highlands Park & Ride	101	0
NE 50th St & University Way	8	4	9th Ave & NE Ellis Dr	16	0
15th Ave & NE 45th St	15	2	Issaquah Transit Center	107	2
15th Ave & NE 43rd St	24	2	Eastgate Freeway Station	41	6
15th Ave & NE Campus Pkwy	33	2	South Bellevue Park & Ride	2	1
15th Ave & NE 40th St	20	1	Bellevue Way SE & SE 16th St	6	0
Pacific St & 15th Ave	26	2	Bellevue Way SE & SE 10th St	2	1
University of Washington Link Station	45	24	Bellevue Way SE & SE 3rd St	11	2
Montlake Freeway Station	3	3	Bellevue Way NE & Main St	5	2
Evergreen Point Freeway Station	1	18	NE 4th St & 105th Ave NE	3	60
Yarrow Point Freeway Station	2	4	Bellevue Transit Center	36	117
Bellevue Transit Center	118	52	Yarrow Point Freeway Station	14	3
108th Ave NE & NE 2nd St	33	2	Evergreen Point Freeway Station	6	0
108th Ave NE & Main St	14	4	Montlake Blvd & Shelby St	1	3
Bellevue Way SE & Main St	4	3	University of Washington Link Station	13	51
Bellevue Way SE & SE 3rd St	1	5	Pacific St & 15th Ave	1	22
Bellevue Way SE & SE 11th St	0	1	15th Ave & NE 40th St	2	43
Bellevue Way SE & SE 16th St	1	3	15th Ave & NE 42nd St	1	20
South Bellevue Park & Ride	1	1	15th Ave & NE 45th St	1	14
Eastgate Freeway Station	17	33	NE 50th St & University Way	2	4
Issaquah Transit Center	4	108	Northgate Transit Center	0	23
Highlands Dr & NE Ellis Dr	0	36			
Issaquah Highlands Park & Ride	0	96			
Eastbound Total	*406*	*406*	*Westbound Total*	*372*	*372*

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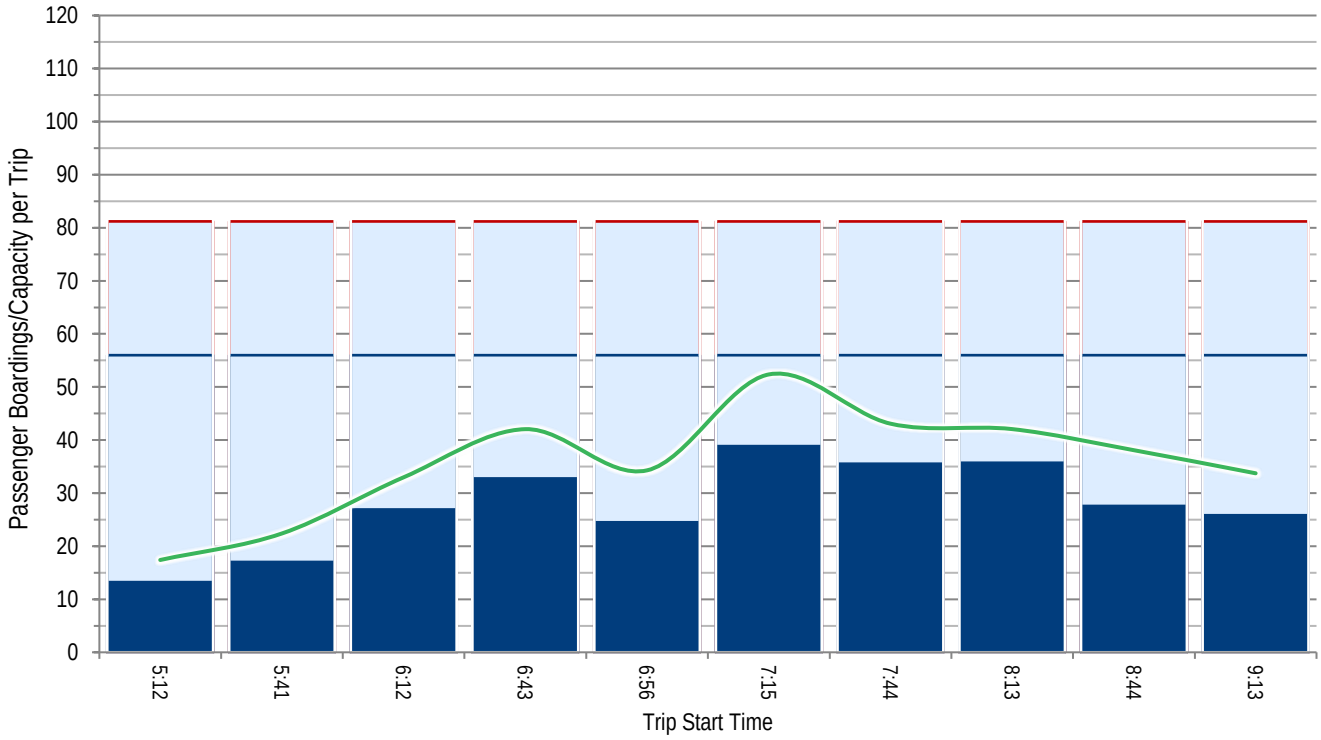
Westbound Average Trip Ridership & Maximum Passenger Loads — *Weekday*

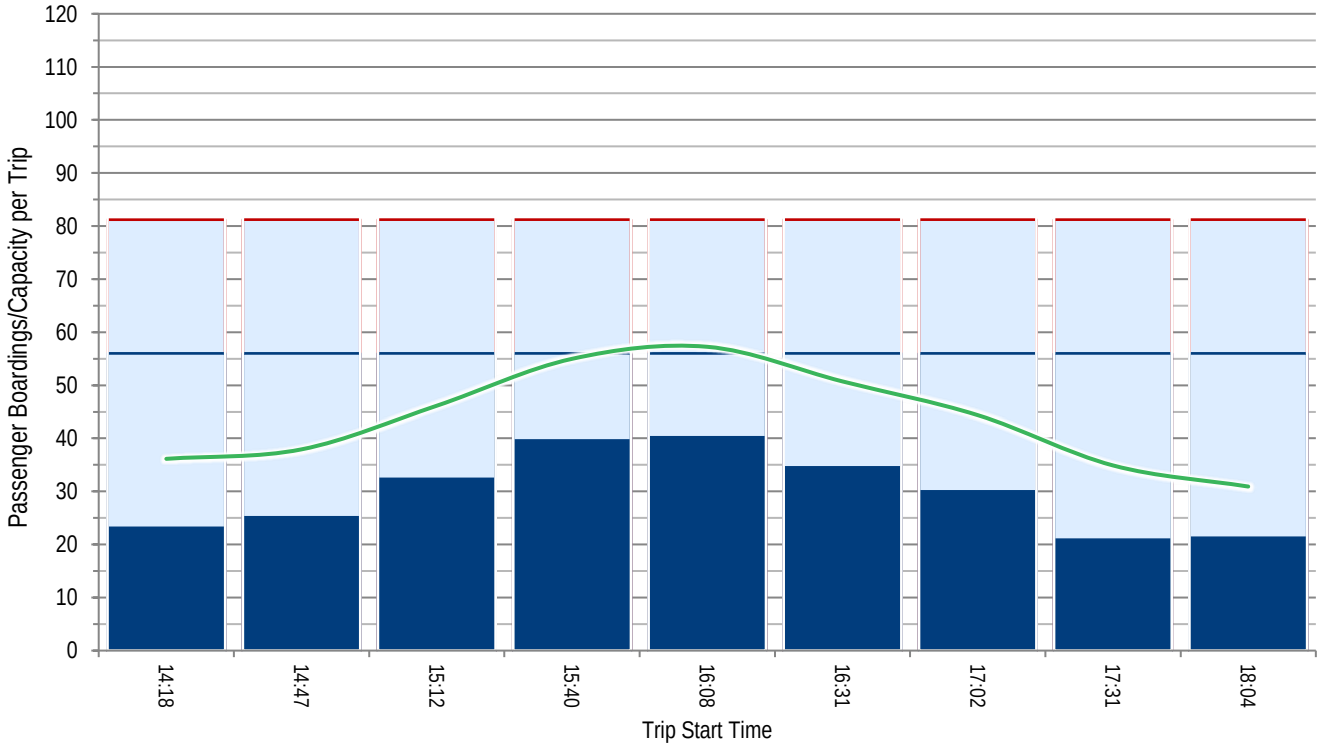


Average Maximum Passenger Load
Orange/Red: standing passengers
Blue: seated passengers

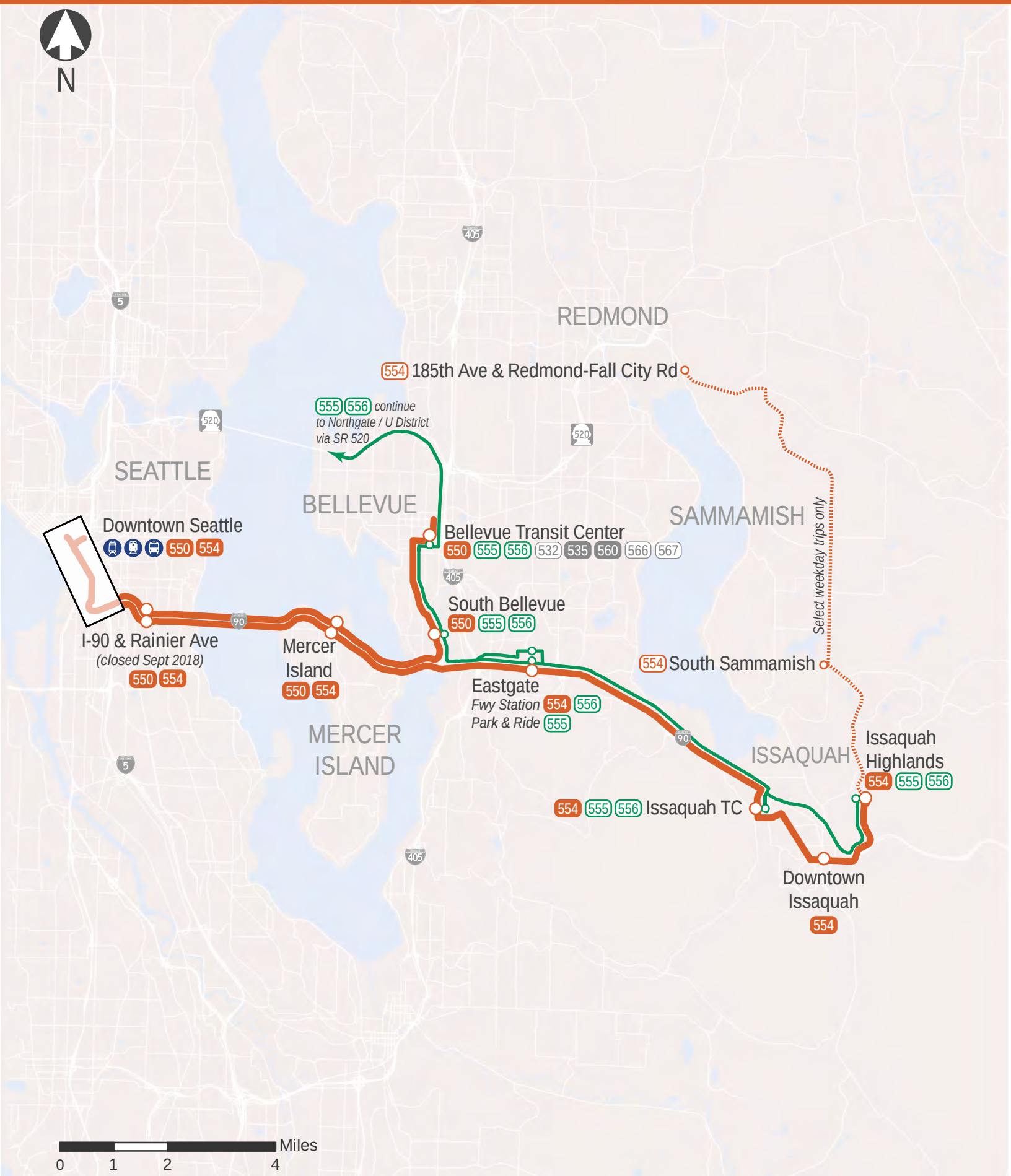
Average Passenger Boardings

Available Capacity
Red: seats plus standing
Blue: seats

Weekday — **Eastbound** Average Trip Ridership & Maximum Passenger Loads



I-90


N
554 185th Ave & Redmond-Fall City Rd
555 556 continue to Northgate / U District via SR 520
REDMOND
SEATTLE
BELLEVUE
SAMMAMISH
Select weekday trips only
Downtown Seattle
550 554
Bellevue Transit Center
550 555 556 532 535 560 566 567
South Bellevue
550 555 556
I-90 & Rainier Ave
(closed Sept 2018)
550 554
Mercer Island
550 554
Eastgate
Fwy Station 554 556
Park & Ride 555
554 South Sammamish
MERCER ISLAND
ISSAQUAH
Issaquah Highlands
554 555 556
554 555 556 Issaquah TC
Downtown Issaquah
554
Miles
0 1 2 4

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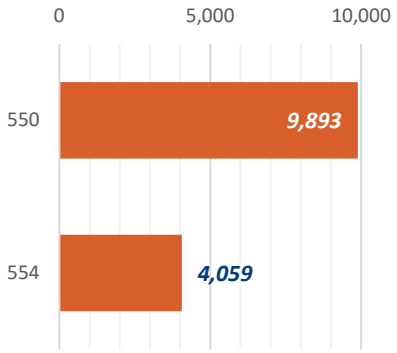
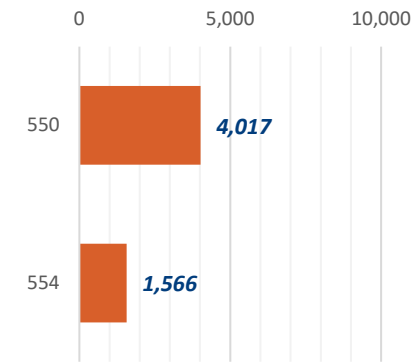
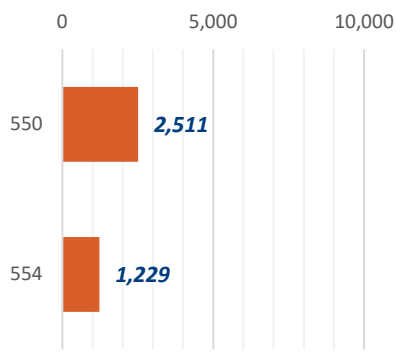
Weekday Ridership



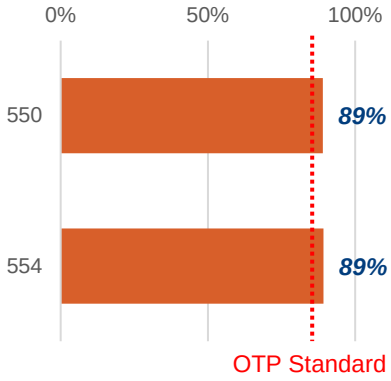
Saturday Ridership



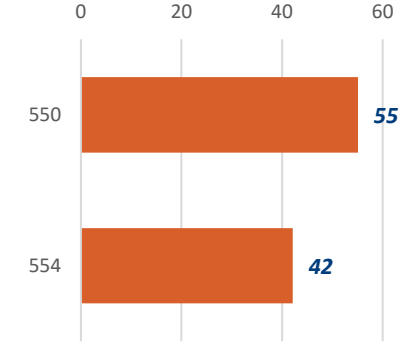
Sunday Ridership



OTP



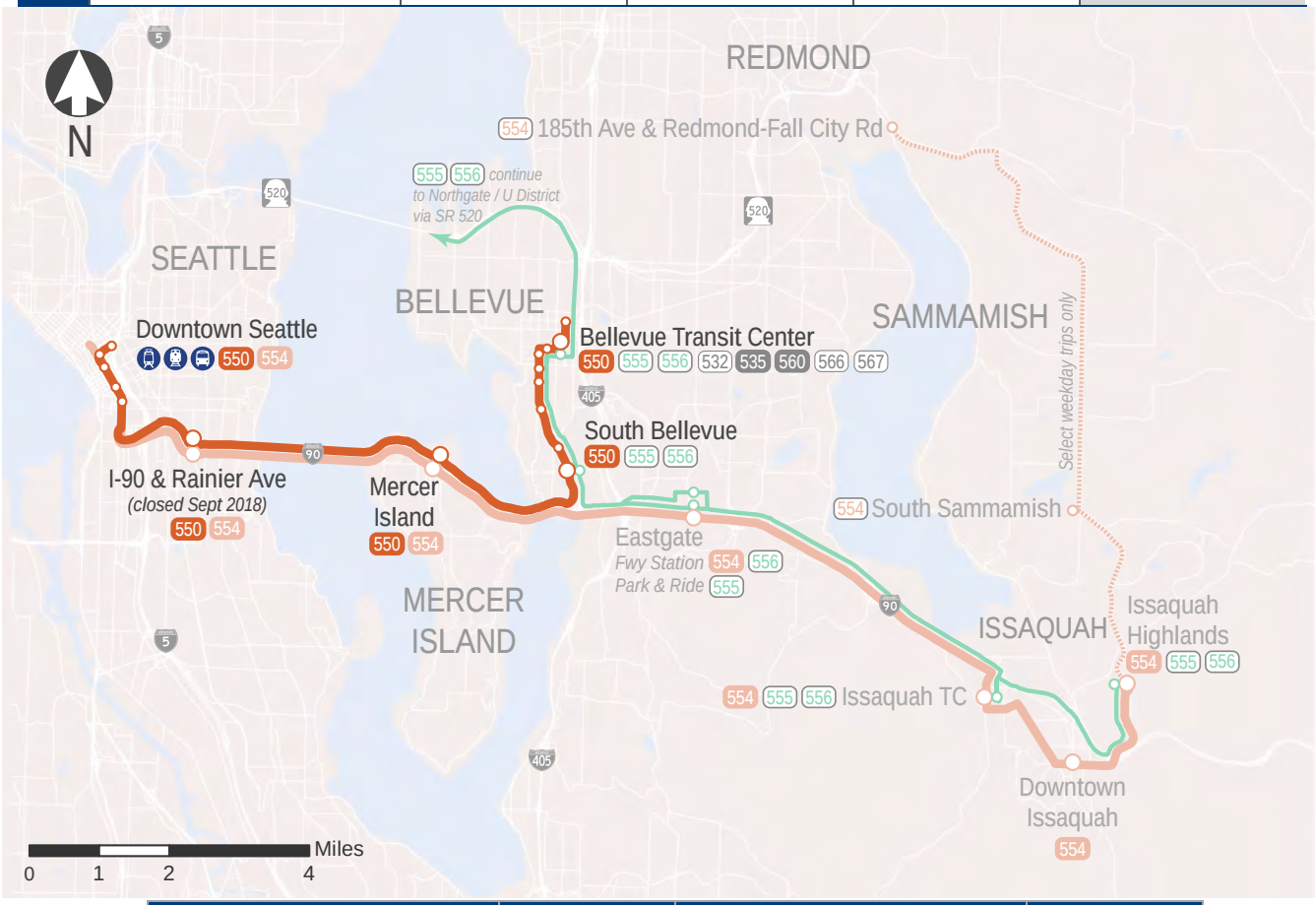
Passengers per Trip



Corridor	I-90	Hour																							
Day Type	Direction	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Weekday	Eastbound																								
Weekday	Westbound																								
Saturday	Eastbound																								
Saturday	Westbound																								
Sunday	Eastbound																								
Sunday	Westbound																								
Service Frequency Legend		Very Frequent (<10 min)					Frequent (10-20 min)							Moderate (20-30 min)						Minimum (30-60 min)					

I-90 Route 550 Bellevue – Seattle

Ridership		2015	2016	2017	SPRING 2018
	Average **Weekday** Boardings	**10,362**	**10,816**	**10,269**	**9,893**
	Average **Saturday** Boardings	**4,462**	**4,325**	**4,331**	**4,017**
	Average **Sunday** Boardings	**2,886**	**2,808**	**2,735**	**2,511**
	Annual Boardings	**3,044,248**	**3,151,998**	**2,998,662**	



EASTBOUND STOPS to BELLEVUE	Average Weekday		WESTBOUND STOPS to SEATTLE	Average Weekday	
	Ons	Offs		Ons	Offs
Convention Place Station	648	0	110th Ave & NE 10th St	445	0
Westlake Station	1,688	36	Bellevue Transit Center	1,538	52
University St Station	932	37	NE 4th St & 108th Ave	257	9
Pioneer Square Station	530	55	Bellevue Way & NE 4th St	373	23
International District/Chinatown Station	828	426	Bellevue Way & NE 1st St	278	36
Rainier Avenue Freeway Station	224	165	Belleway Way & Main St	105	47
Mercer Island Park & Ride	220	1,227	Bellevue Way & SE 3rd St	48	15
South Bellevue Park & Ride	13	97	Bellevue Way & SE 11th St	123	25
Bellevue Way & SE 16th St	25	134	South Bellevue Park & Ride	104	15
Bellevue Way & SE 10th St	13	62	Mercer Island Park & Ride	993	182
Bellevue Way & SE 3rd St	77	131	Rainier Avenue Freeway Station	74	208
Bellevue Way & Main St	35	300	International District/Chinatown Station	317	955
NE 4th St & 105th Ave	42	750	Pioneer Square Station	79	627
Bellevue Transit Center	32	1,450	University St Station	52	913
110th Ave & NE 10th St	0	438	Westlake Station	30	1,239
			Convention Place Station	0	470
Eastbound Total	*5,308*	*5,308*	*Westbound Total*	*4,816*	*4,816*
			Total	10,124	10,124

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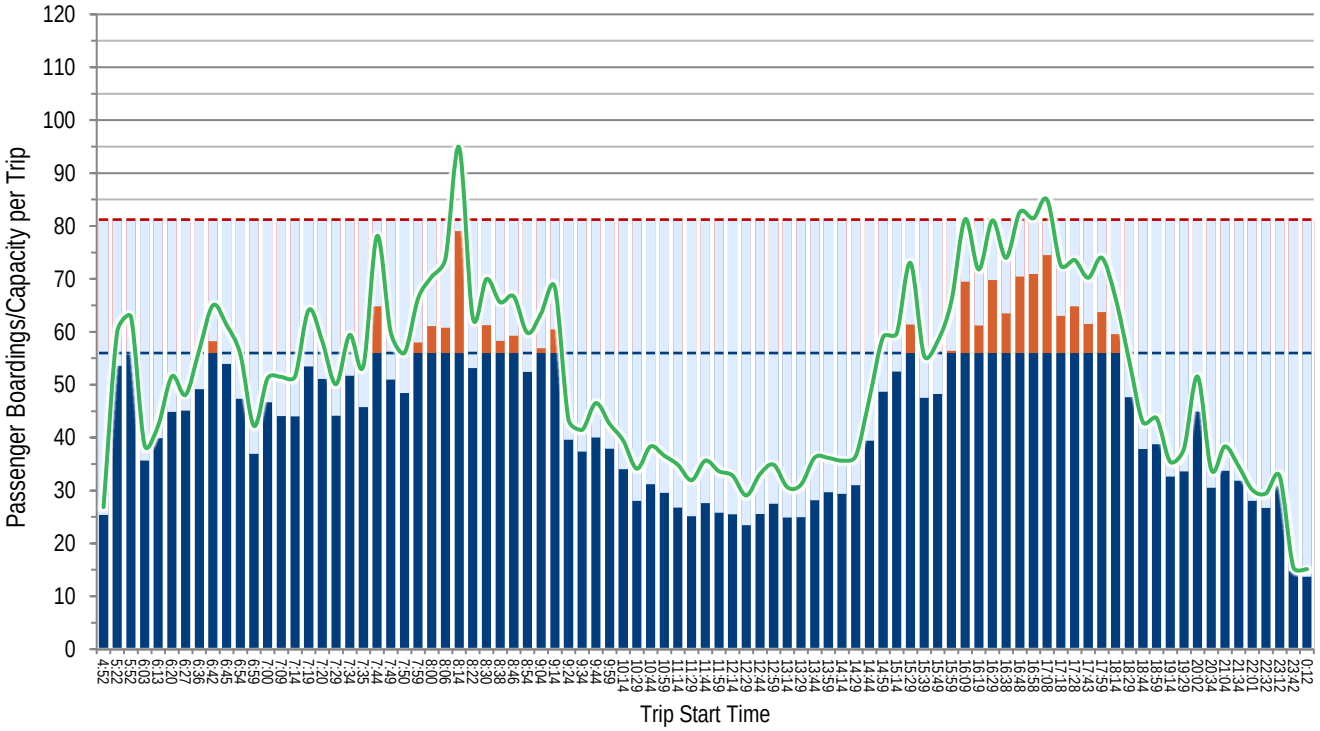
Westbound Average Trip Ridership & Maximum Passenger Loads — *Weekday*

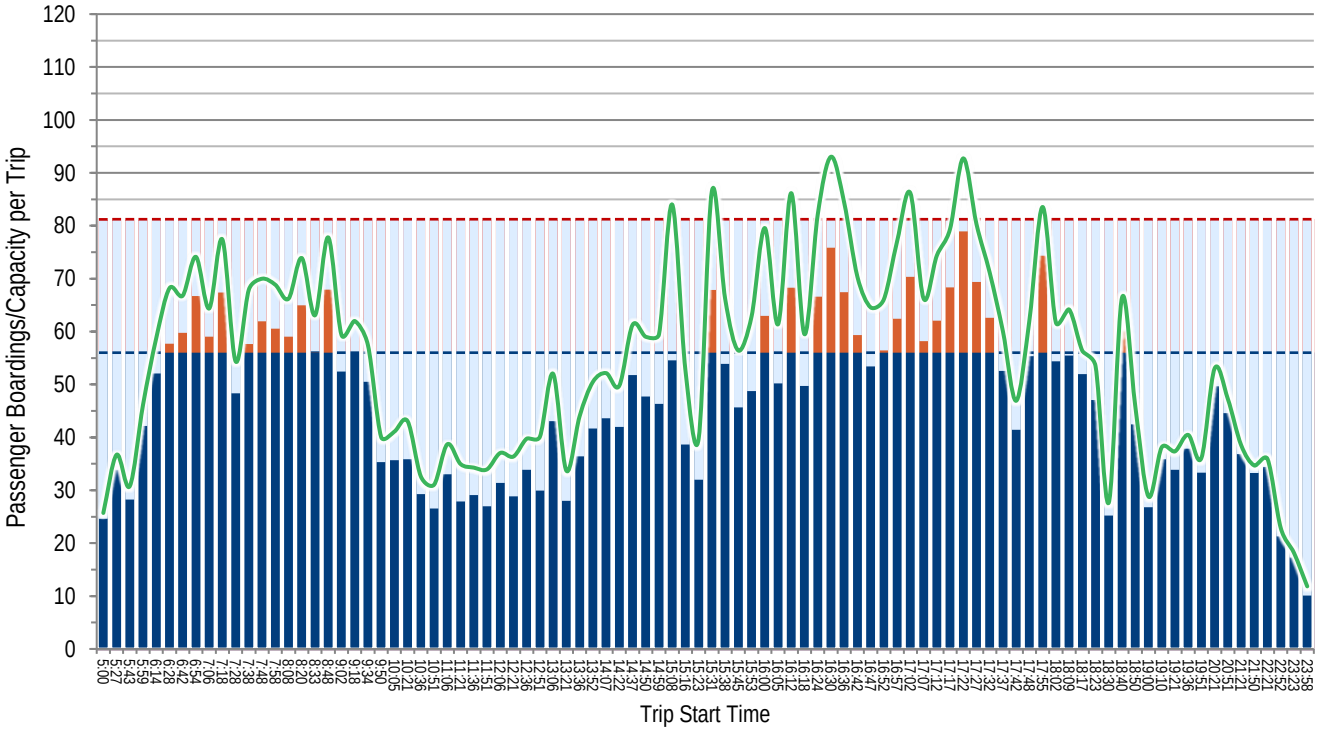


Average Maximum Passenger Load
Orange/Red: standing passengers
Blue: seated passengers

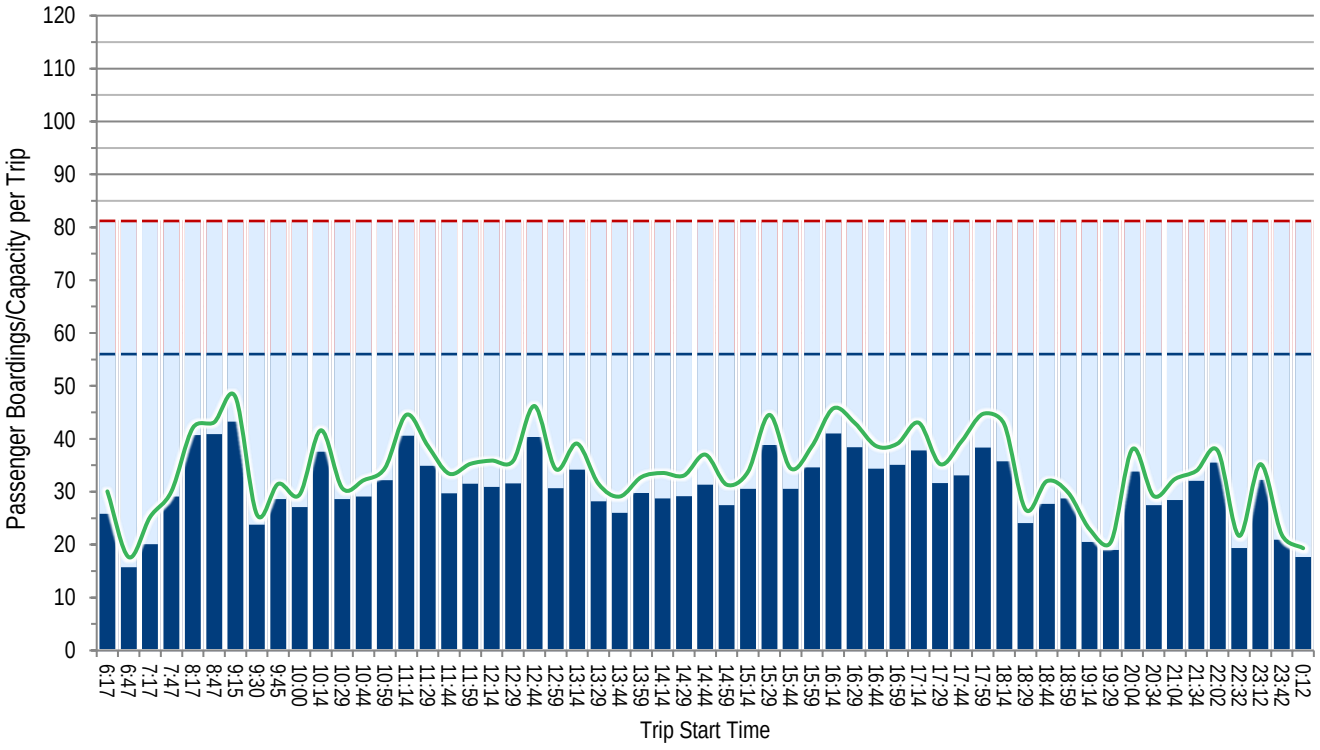
Average Passenger Boardings

Available Capacity
Red: seats plus standing
Blue: seats

Weekday — **Eastbound** Average Trip Ridership & Maximum Passenger Loads



Westbound Average Trip Ridership & Maximum Passenger Loads — *Saturday*

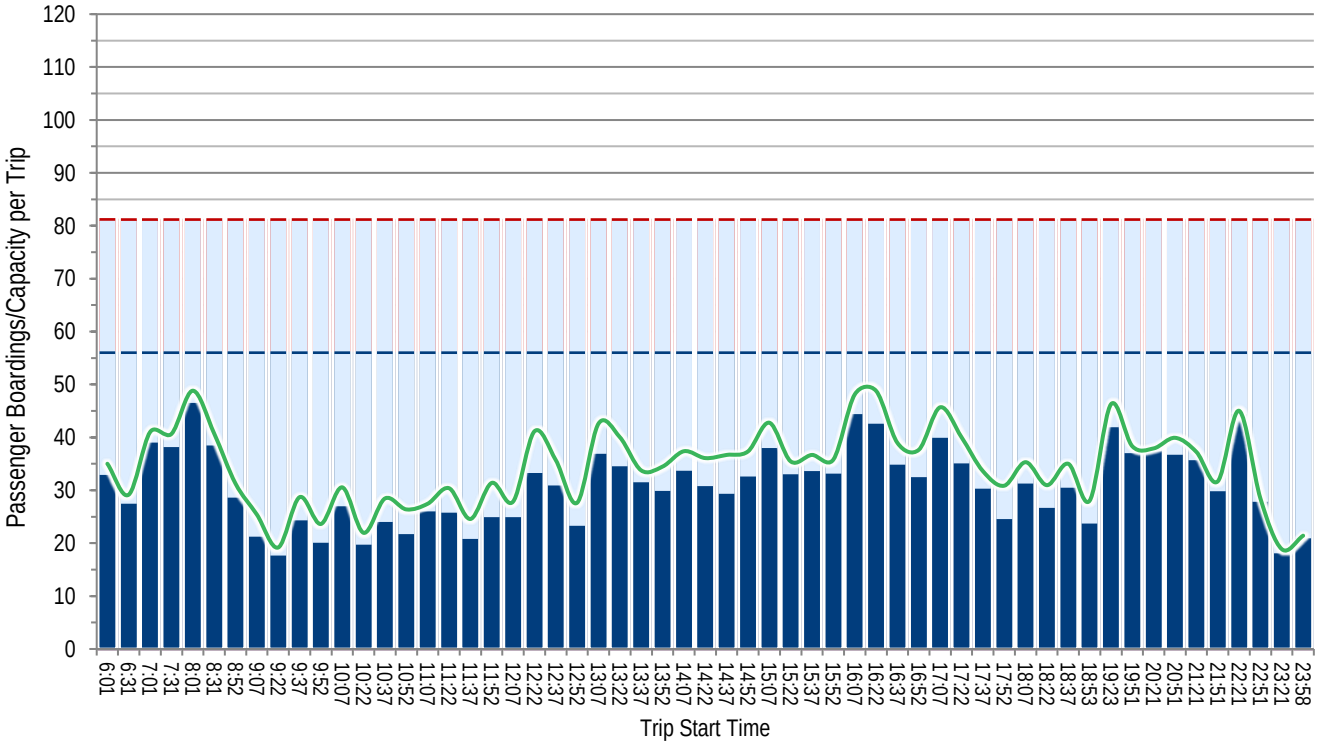


Average Maximum Passenger Load
Orange/Red: standing passengers
Blue: seated passengers

Average Passenger Boardings

Available Capacity
Red: seats plus standing
Blue: seats

Saturday **Eastbound** Average Trip Ridership & Maximum Passenger Loads



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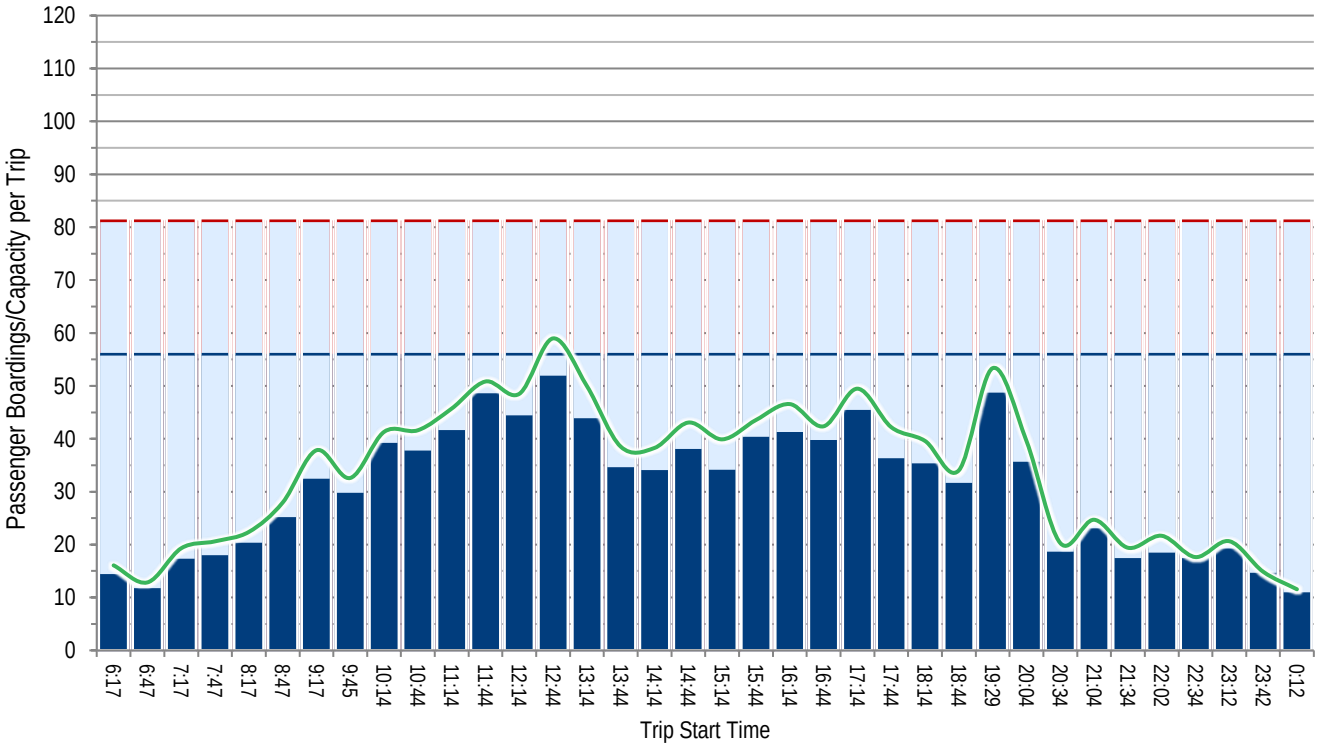
Westbound Average Trip Ridership & Maximum Passenger Loads — Sunday

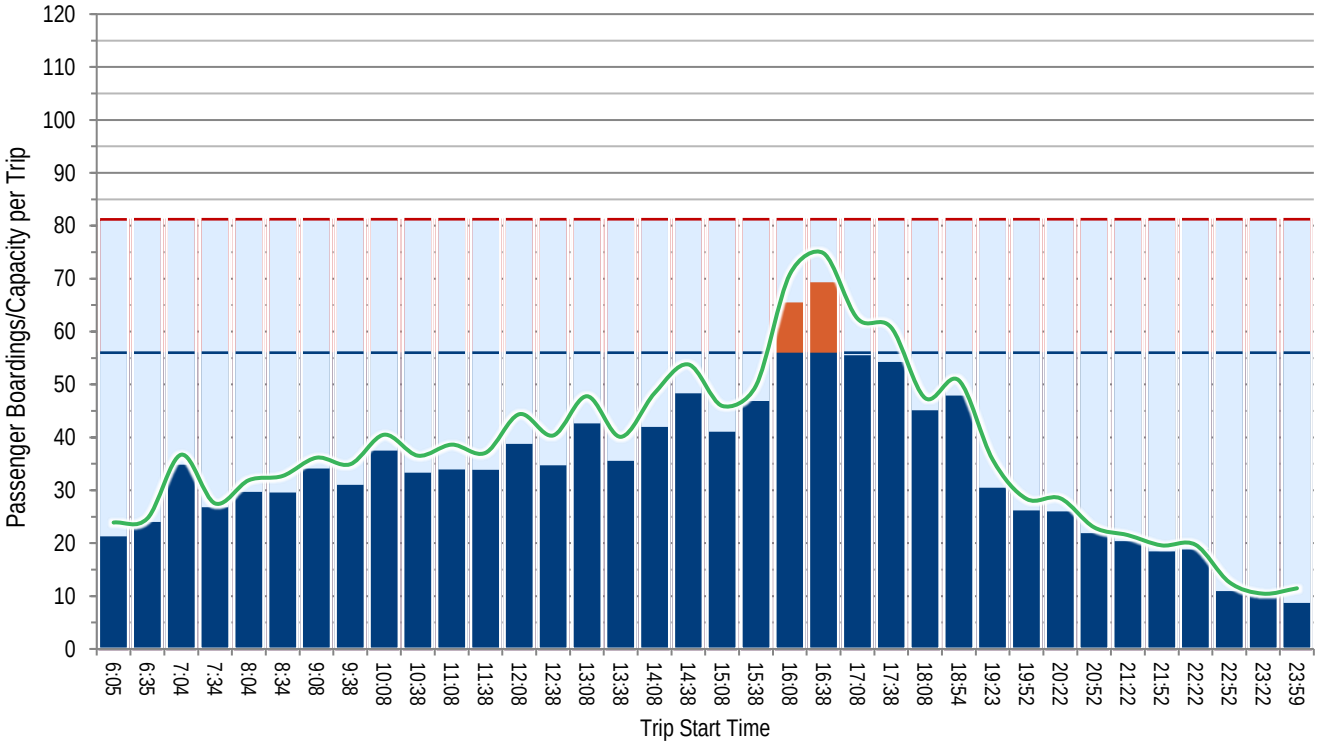


Average Maximum Passenger Load
Orange/Red: standing passengers
Blue: seated passengers

Average Passenger Boardings

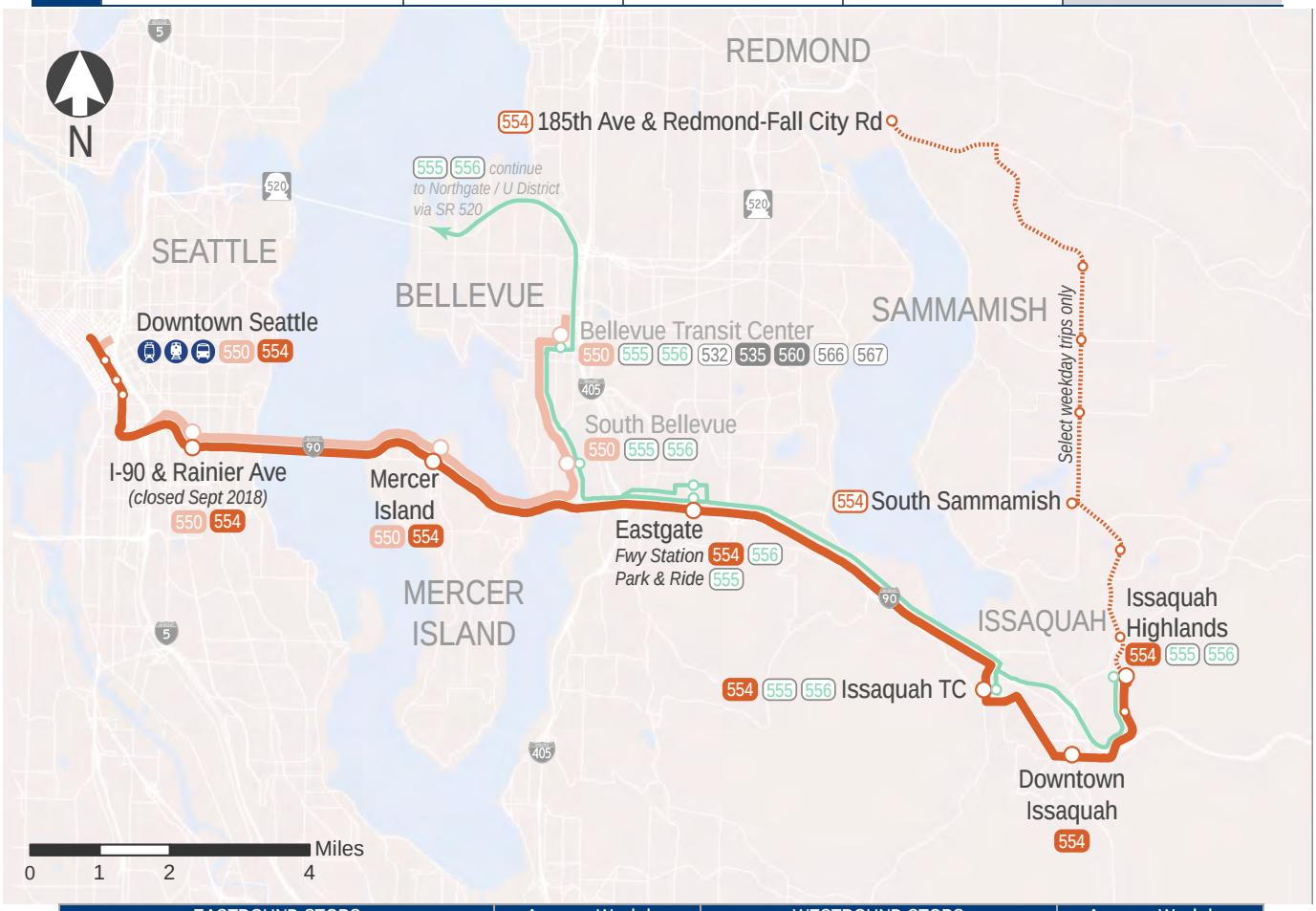
Available Capacity
Red: seats plus standing
Blue: seats

Sunday — **Eastbound** Average Trip Ridership & Maximum Passenger Loads



Route 554 Issaquah – Seattle

Ridership	2015	2016	2017	SPRING 2018
Average **Weekday** Boardings	**3,720**	**4,020**	**4,116**	**4,059**
Average **Saturday** Boardings	**1,533**	**1,561**	**1,672**	**1,566**
Average **Sunday** Boardings	**1,310**	**1,237**	**1,339**	**1,229**
Annual Boardings	**1,104,901**	**1,180,368**	**1,213,152**	



EASTBOUND STOPS to ISSAQUAH	Average Weekday Ons	Average Weekday Offs	WESTBOUND STOPS to SEATTLE	Average Weekday Ons	Average Weekday Offs
Lenora St & 4th Ave	275	0	Redmond Way & 185th Ave	1	0
2nd Ave & Stewart St	255	4	229th Ave & NE 25th Way	1	0
2nd Ave & Seneca St	440	5	228th Ave & NE 8th St	1	0
2nd Ave & Cherry St	249	8	228th Ave & SE 8th St	1	0
S Washington St & 4th Ave S	80	5	South Sammamish Park & Ride	2	0
5th Ave S & S Jackson St	487	15	Issaquah Pine Lake Rd & SE 37th Pl	0	0
Rainier Avenue Freeway Station	85	10	Issaquah Highlands Park & Ride	186	0
Mercer Island Park & Ride	80	126	9th Ave & NE Ellis Dr	69	1
Eastgate Freeway Station	175	873	Sunset Way & 1st Ave	190	29
Issaquah Transit Center	39	606	Issaquah Transit Center	524	30
Sunset Way & Rainier Blvd	31	195	Eastgate Freeway Station	586	115
Highlands Dr & NE Ellis Dr	1	117	Mercer Island Park & Ride	308	76
Issaquah Highlands Park & Ride	5	222	Rainier Avenue Freeway Station	22	71
Issaquah Pine Lake Rd & Issaquah Fall City Rd	0	2	4th Ave & S Jackson St	52	472
Issaquah Pine Lake Rd & SE 40th Pl	0	1	4th Ave & Washington St	6	62
Issaquah Pine Lake Rd & SE 37th Pl	0	5	4th Ave & Cherry St	13	260
South Sammamish Park & Ride	0	4	4th Ave & Seneca St	3	300
228th Ave NE & NE 8th St	0	3	4th Ave & Pike St	3	339
228th Ave NE & NE 25th Way	0	1	4th Ave & Stewart St	0	210
NE Redmond Fall City & 185th Ave NE	0	3	4th Ave & Lenora St	0	0
Eastbound Total	*2,202*	*2,202*	*Westbound Total*	*1,968*	*1,968*
			Total	4,170	4,170

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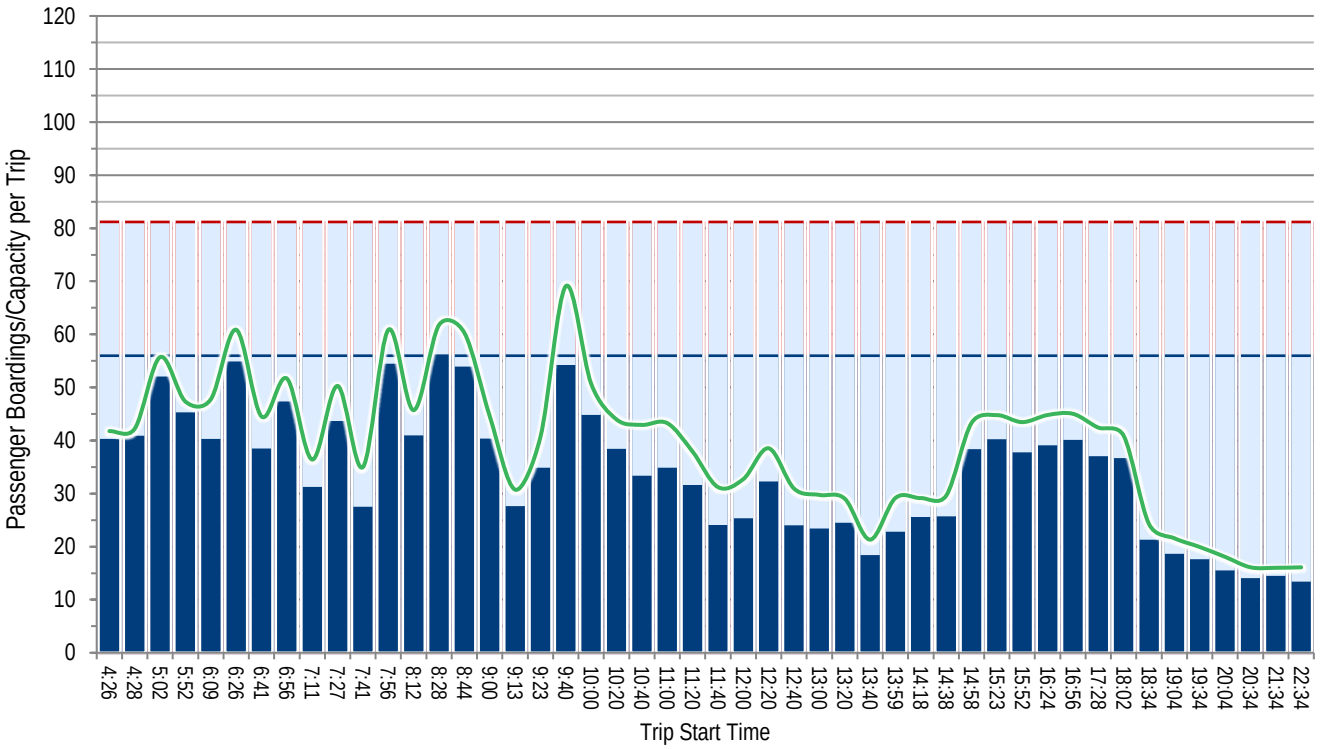
Westbound Average Trip Ridership & Maximum Passenger Loads — *Weekday*

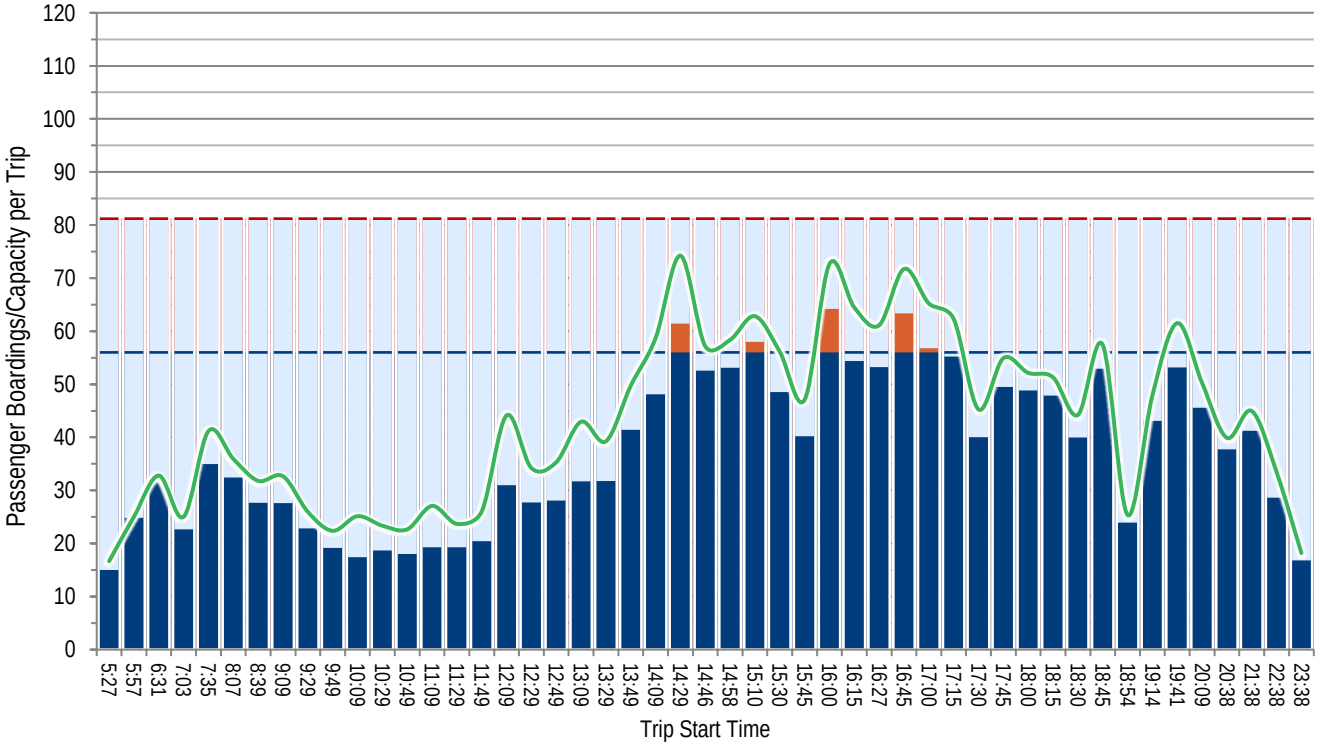


Average Maximum Passenger Load
Orange/Red: standing passengers
Blue: seated passengers

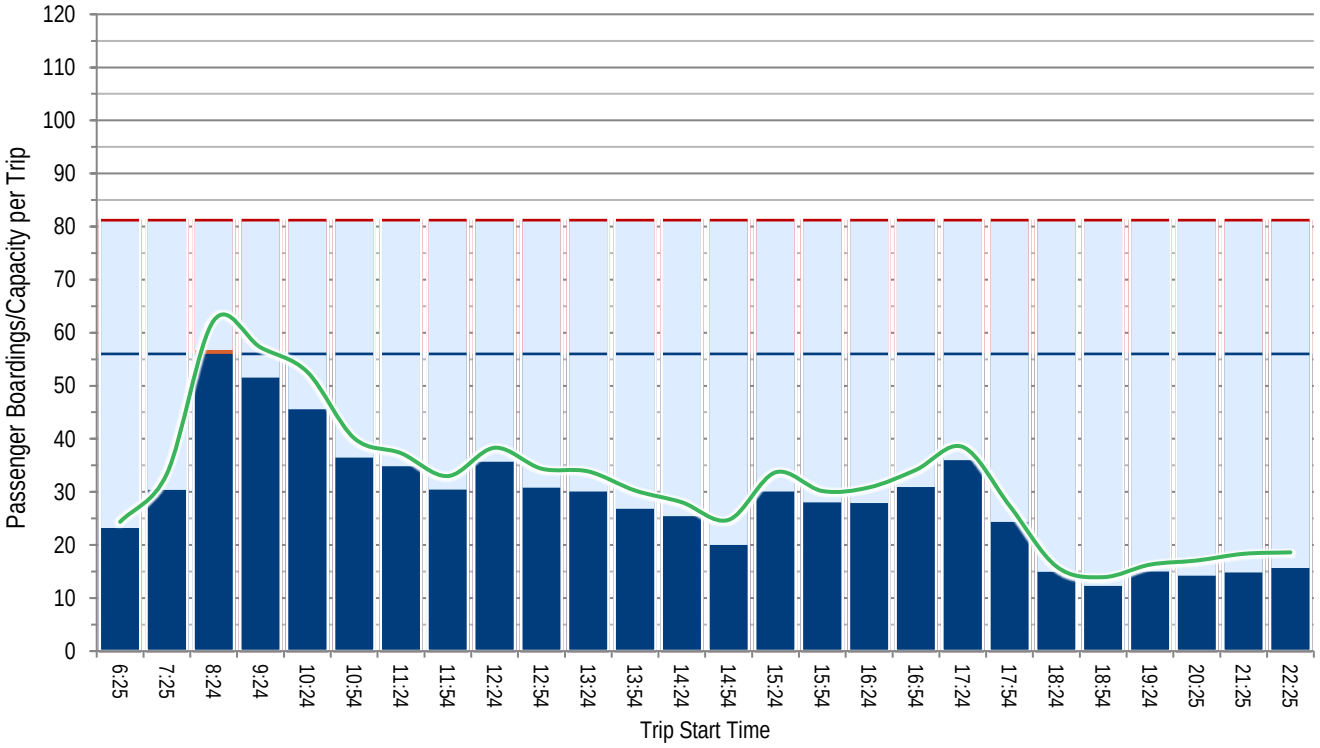
Average Passenger Boardings

Available Capacity
Red: seats plus standing
Blue: seats

Weekday — **Eastbound** Average Trip Ridership & Maximum Passenger Loads



Westbound Average Trip Ridership & Maximum Passenger Loads — *Saturday*

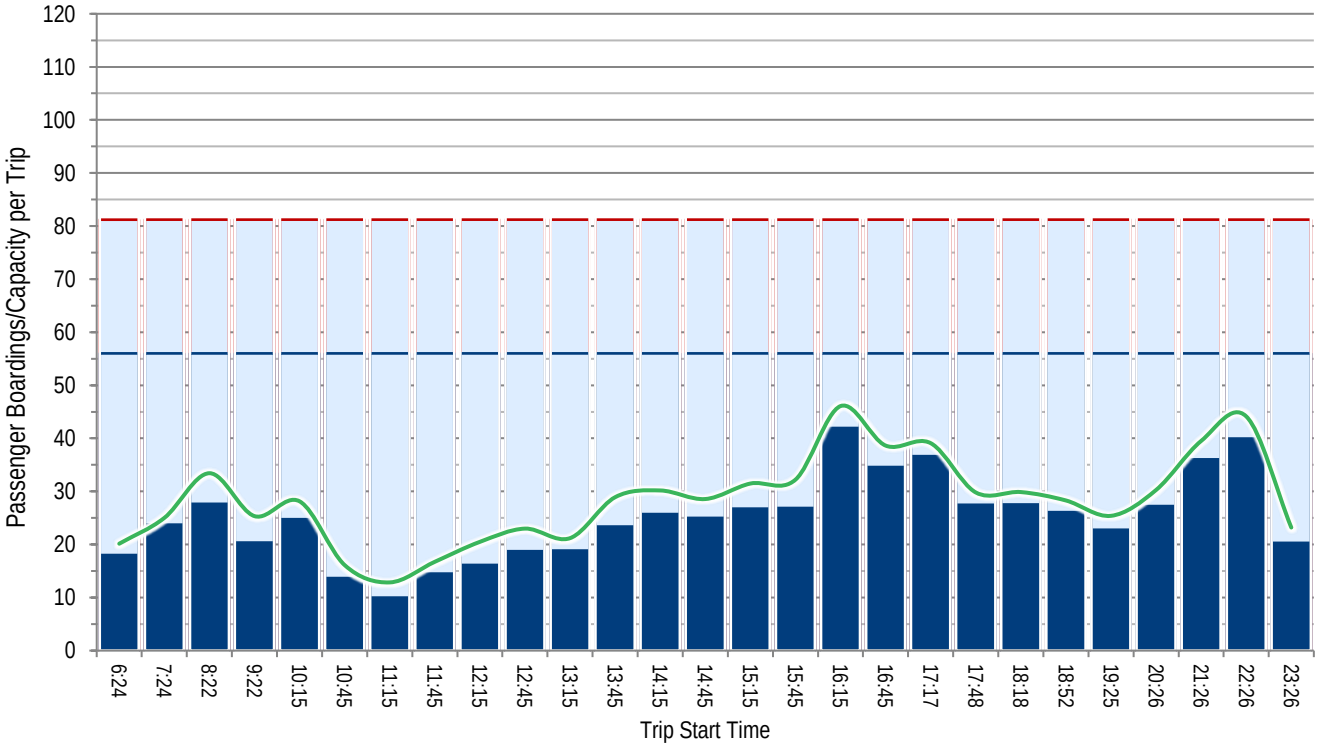


Average Maximum Passenger Load
Orange/Red: standing passengers
Blue: seated passengers

Average Passenger Boardings

Available Capacity
Red: seats plus standing
Blue: seats

Saturday — **Eastbound** Average Trip Ridership & Maximum Passenger Loads



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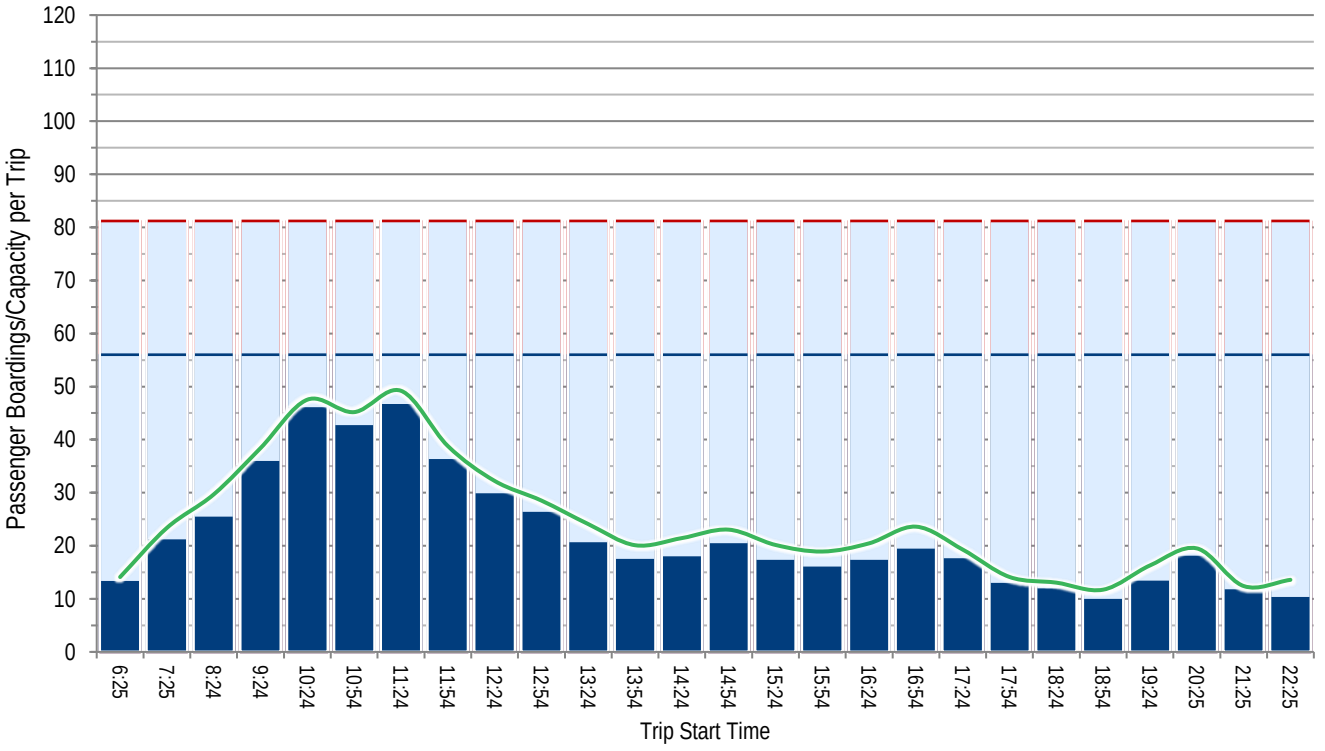
Westbound Average Trip Ridership & Maximum Passenger Loads — Sunday

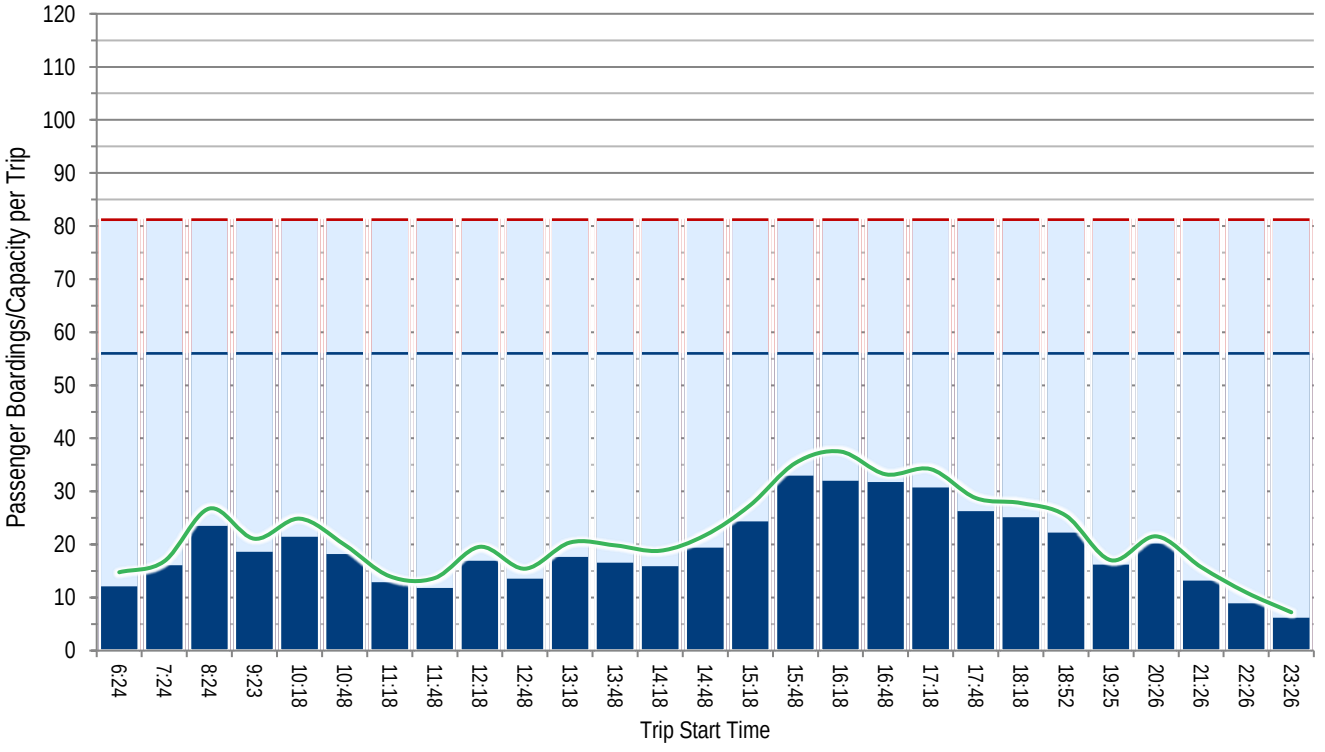


Average Maximum Passenger Load
Orange/Red: standing passengers
Blue: seated passengers

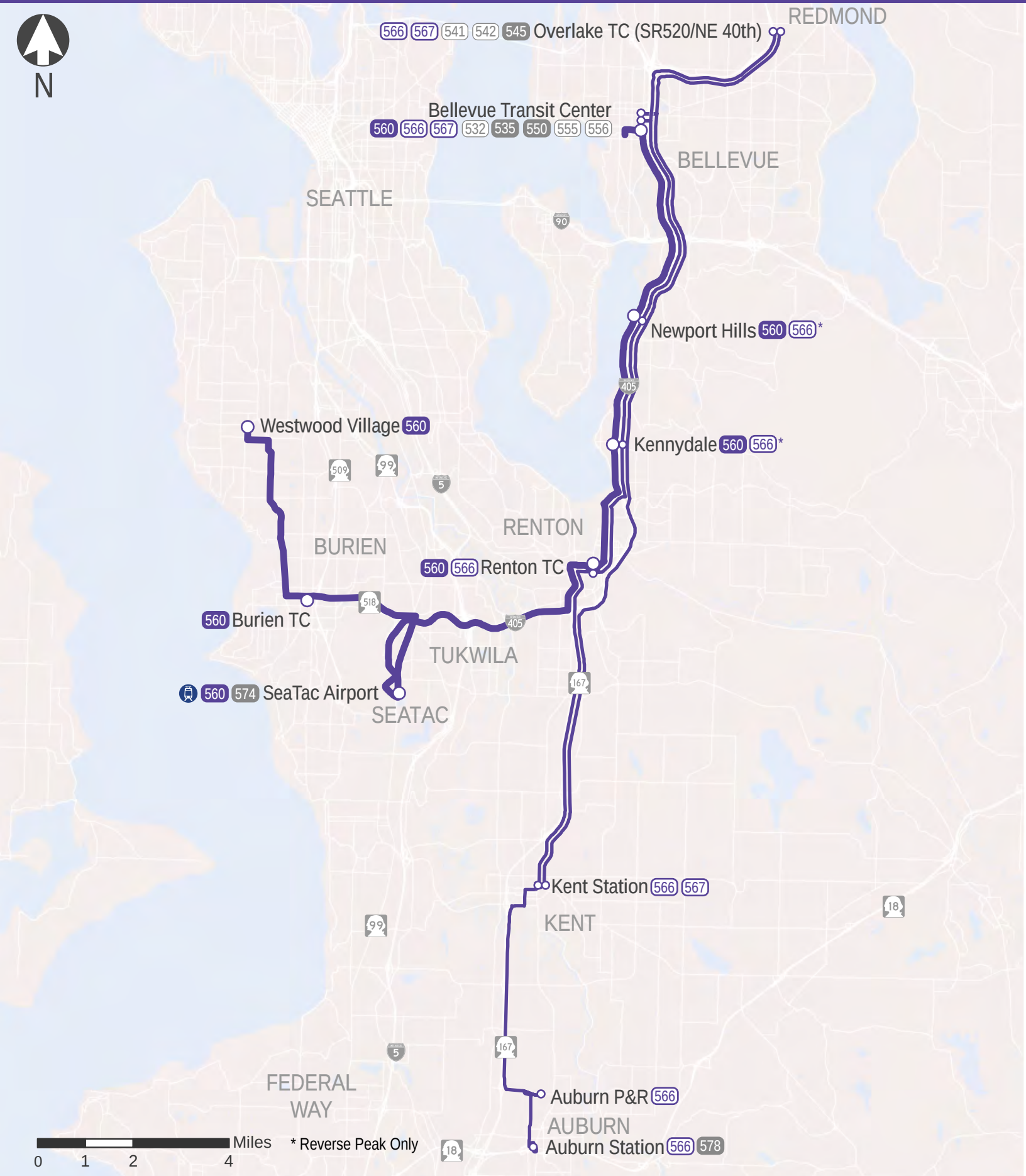
Average Passenger Boardings

Available Capacity
Red: seats plus standing
Blue: seats

Sunday — **Eastbound** Average Trip Ridership & Maximum Passenger Loads



I-405 South


N
REDMOND
566 567 541 542 545 Overlake TC (SR520/NE 40th)
Bellevue Transit Center
560 566 567 532 535 550 555 556
BELLEVUE
SEATTLE
90
Newport Hills 560 566*
405
Westwood Village 560
Kennydale 560 566*
509
99
5
RENTON
BURIEN
560 566 Renton TC
518
560 Burien TC
405
TUKWILA
167
560 574 SeaTac Airport
SEATAC
Kent Station 566 567
99
KENT
18
5
167
FEDERAL WAY
Auburn P&R 566
AUBURN
Auburn Station 566 578
18
Miles
0 1 2 4
* Reverse Peak Only

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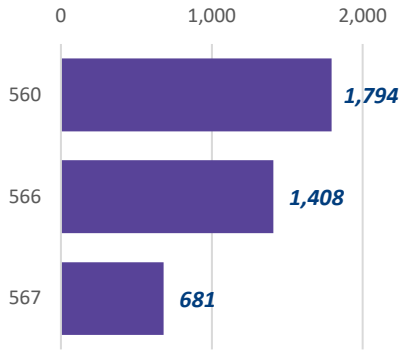
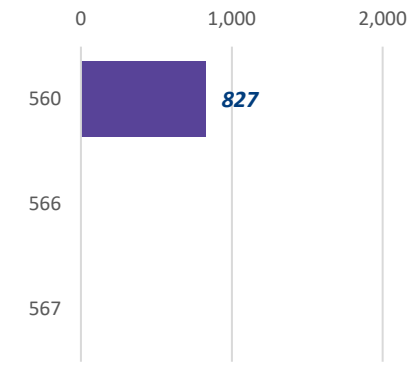
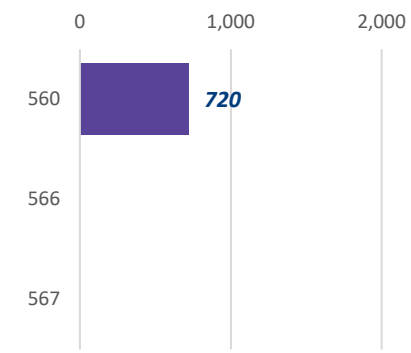
Weekday Ridership



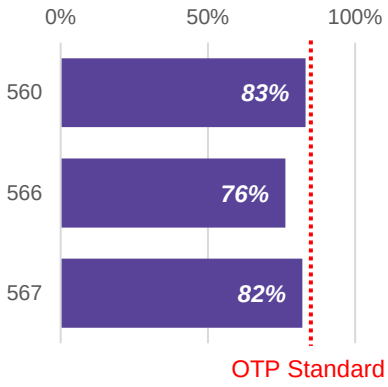
Saturday Ridership



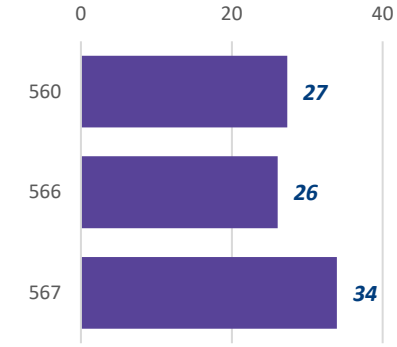
Sunday Ridership



OTP



Passengers per Trip

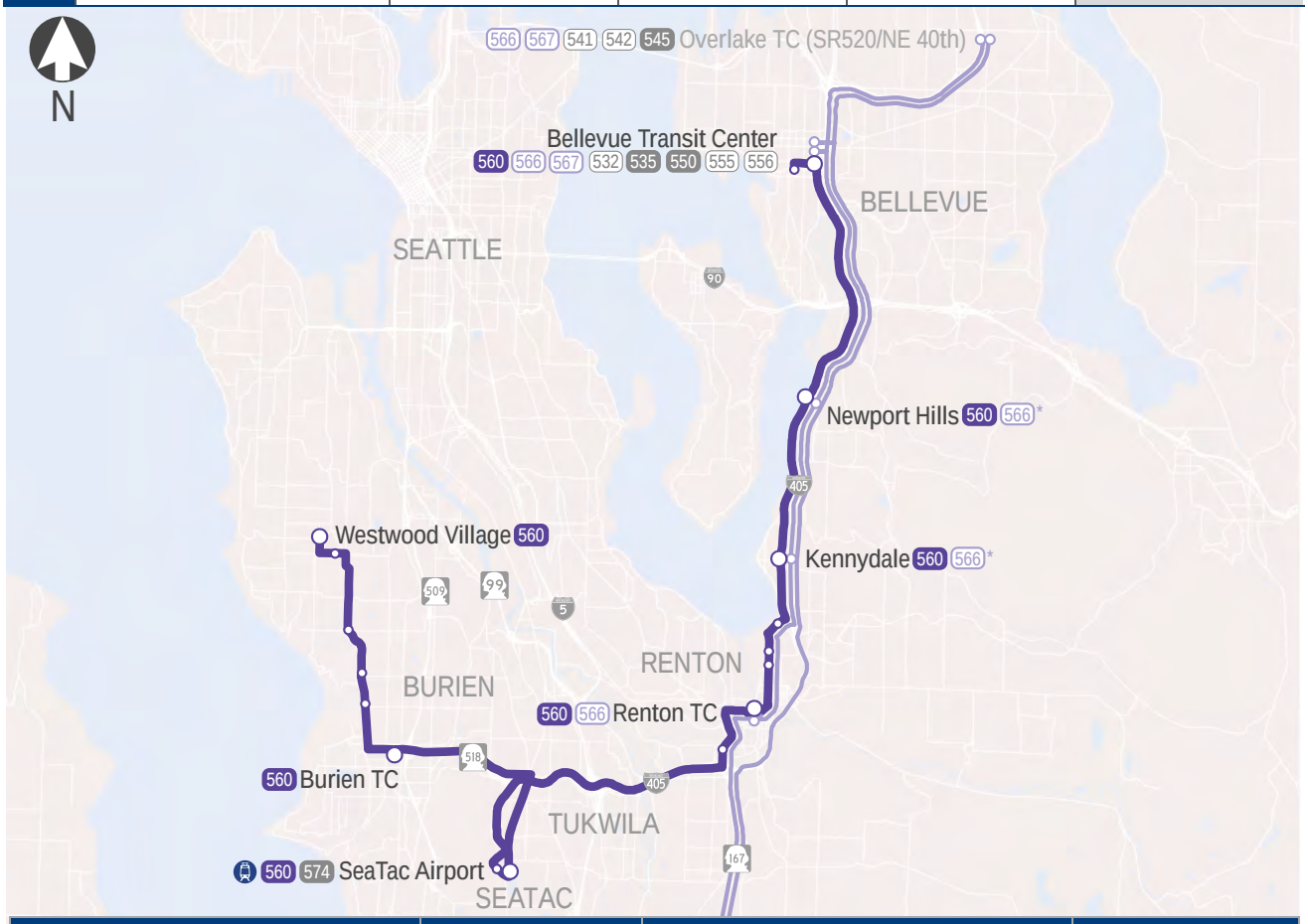


Corridor	I-405 South	Hour																							
Day Type	Direction	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Weekday	Northbound																								
Weekday	Southbound																								
Saturday	Northbound																								
Saturday	Southbound																								
Sunday	Northbound																								
Sunday	Southbound																								
Service Frequency Legend		Very Frequent (<10 min)						Frequent (10-20 min)						Moderate (20-30 min)					Minimum (30-60 min)						

I-405 S

Route 560 Westwood Village – Bellevue

Ridership		2015	2016	2017	SPRING 2018
	Average **Weekday** Boardings	**1,839**	**1,727**	**1,724**	**1,794**
	Average **Saturday** Boardings	**883**	**775**	**794**	**827**
	Average **Sunday** Boardings	**734**	**702**	**692**	**720**
	Annual Boardings	**557,406**	**522,058**	**519,992**	



EASTBOUND STOPS to BELLEVUE	Average Weekday		WESTBOUND STOPS to WESTWOOD VILLAGE	Average Weekday	
	Ons	Offs		Ons	Offs
25th Ave & Barton Pl (Westwood Village)	89	0	105th Ave & 2nd St	54	0
Roxbury St & 20th Ave	23	1	Bellevue Transit Center	481	11
16th Ave & 116th St	22	1	I-405/Lake Washington Blvd	2	3
Ambaum Blvd & 128th St	24	3	I-405/Kennydale Freeway Station	17	44
Ambaum Blvd & 136th St	47	5	Park Ave & Lake Washington Blvd	15	31
Burien Transit Center	91	57	Park Ave & 8th St	11	29
SeaTac Airport	135	95	Park Ave & 6th St	7	19
International Blvd & 176th St (Link)	124	29	Renton Transit Center	84	192
Rainier Ave & 7th St	45	43	Rainier Ave & 7th St	35	27
Renton Transit Center	171	66	SeaTac Airport	53	197
Park Ave & 6th St	18	7	International Blvd & 176th St (Link)	43	61
Park Ave & 8th St	23	13	Burien Transit Center	36	78
Park Ave & Garden Ave	29	13	Ambaum Blvd & 136th St	4	31
I-405/Kennydale Freeway Station	49	17	Ambaum Blvd & 128th St	3	15
I-405/Lake Washington Blvd	59	10	Ambaum Blvd & 116th St	1	13
Bellevue Transit Center	50	590	Roxbury St & 20th Ave	0	25
105th Ave & 2nd St	0	49	26th Ave & Barton Pl (Westwood Village)	0	70
Eastbound Total	*998*	*998*	*Westbound Total*	*847*	*847*
			Total	*1,845*	*1,845*

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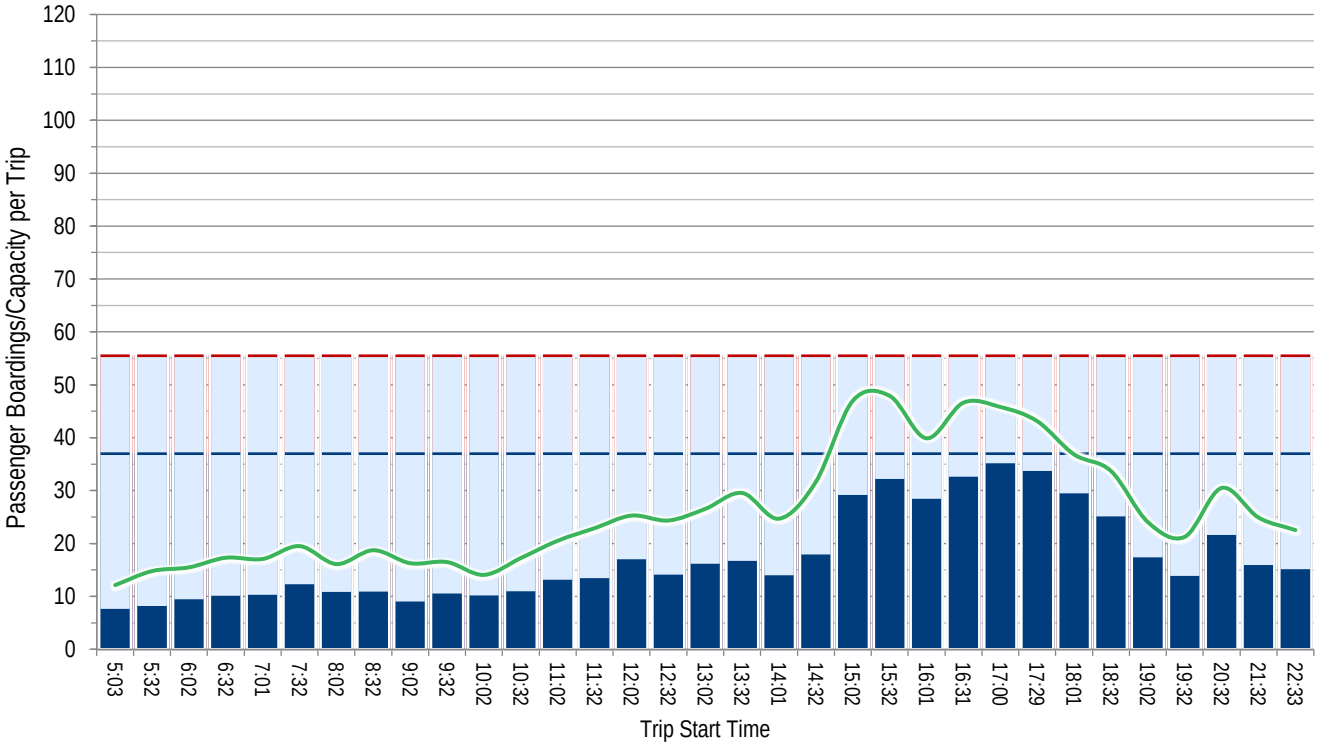
Westbound Average Trip Ridership & Maximum Passenger Loads — *Weekday*

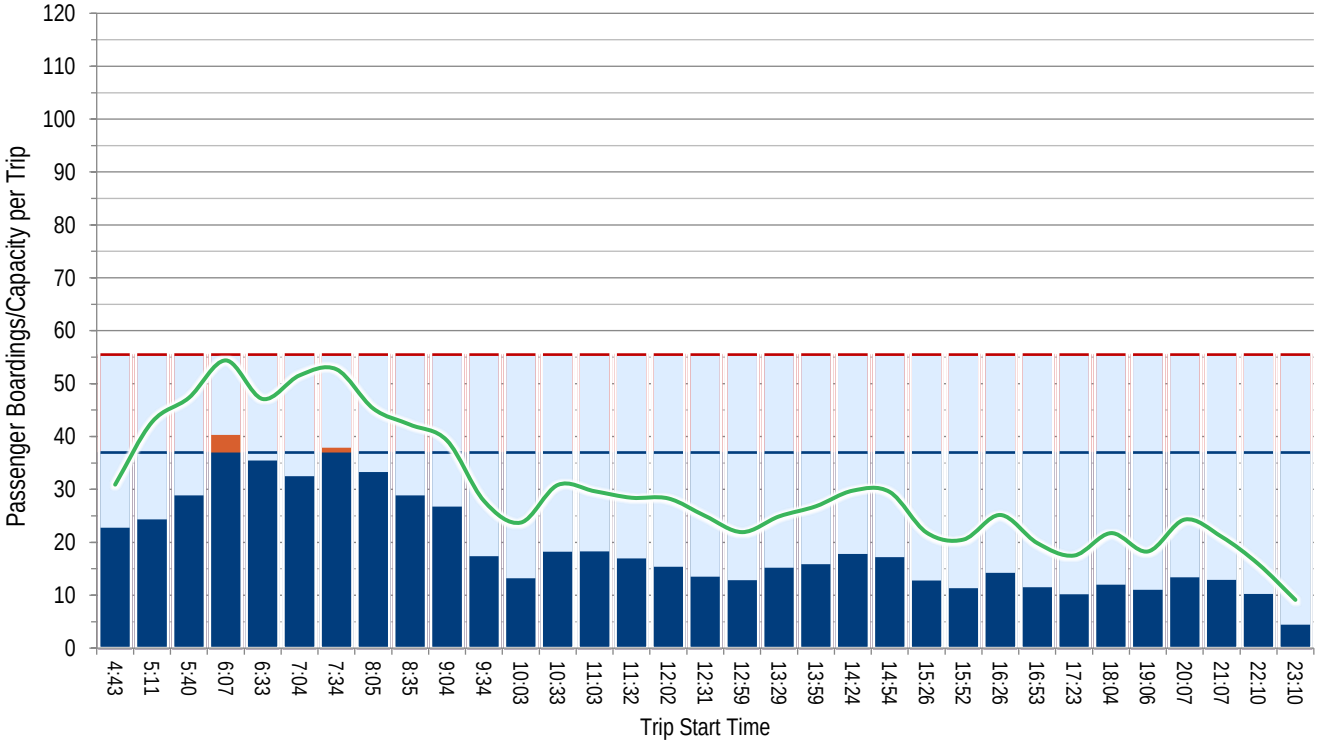


Average Maximum Passenger Load
Orange/Red: standing passengers
Blue: seated passengers

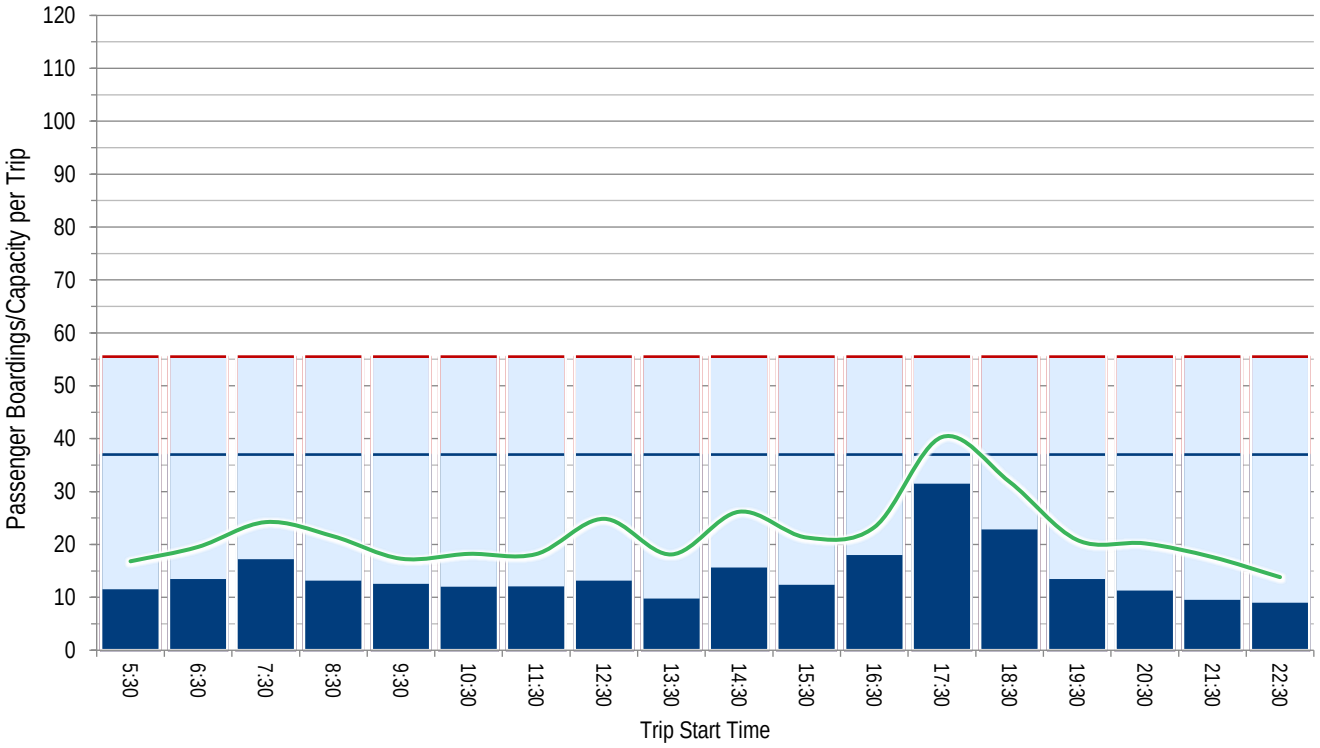
Average Passenger Boardings

Available Capacity
Red: seats plus standing
Blue: seats

Weekday — **Eastbound** Average Trip Ridership & Maximum Passenger Loads



Westbound Average Trip Ridership & Maximum Passenger Loads — *Saturday*

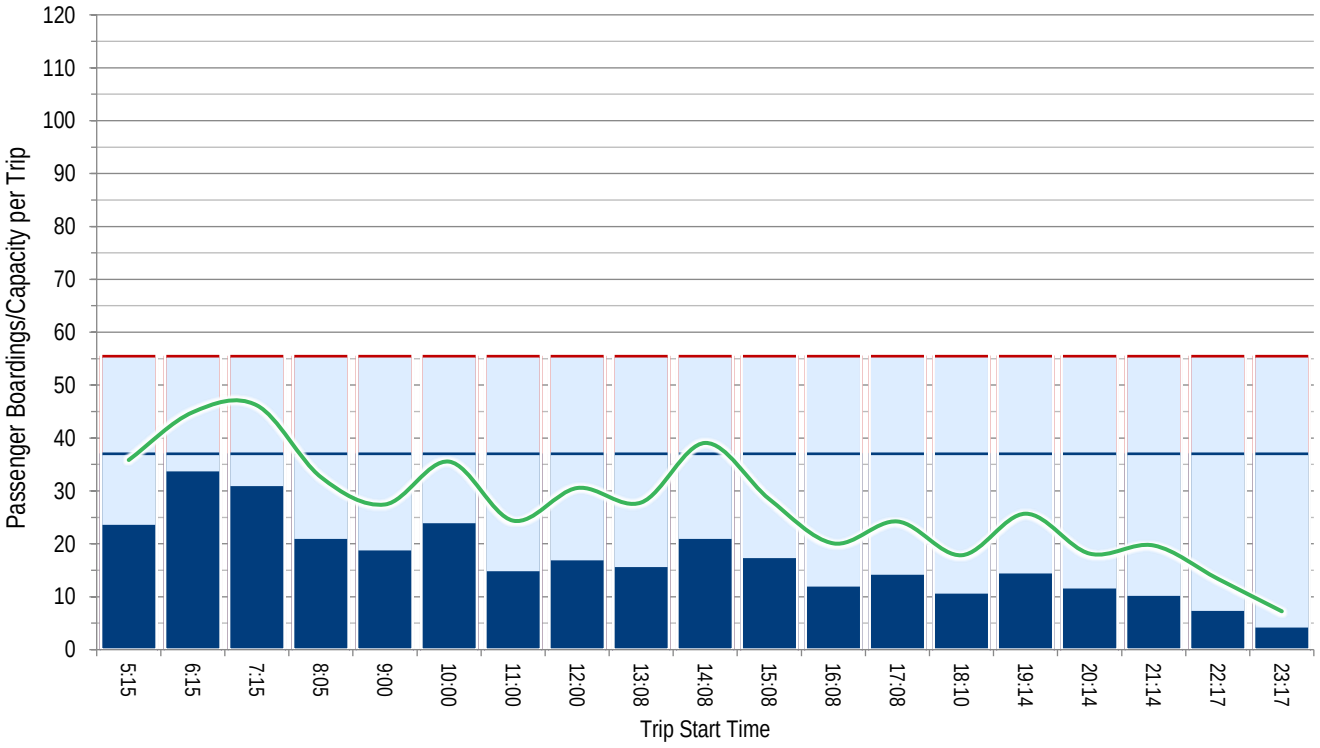


Average Maximum Passenger Load
Orange/Red: standing passengers
Blue: seated passengers

Average Passenger Boardings

Available Capacity
Red: seats plus standing
Blue: seats

Saturday — **Eastbound** Average Trip Ridership & Maximum Passenger Loads



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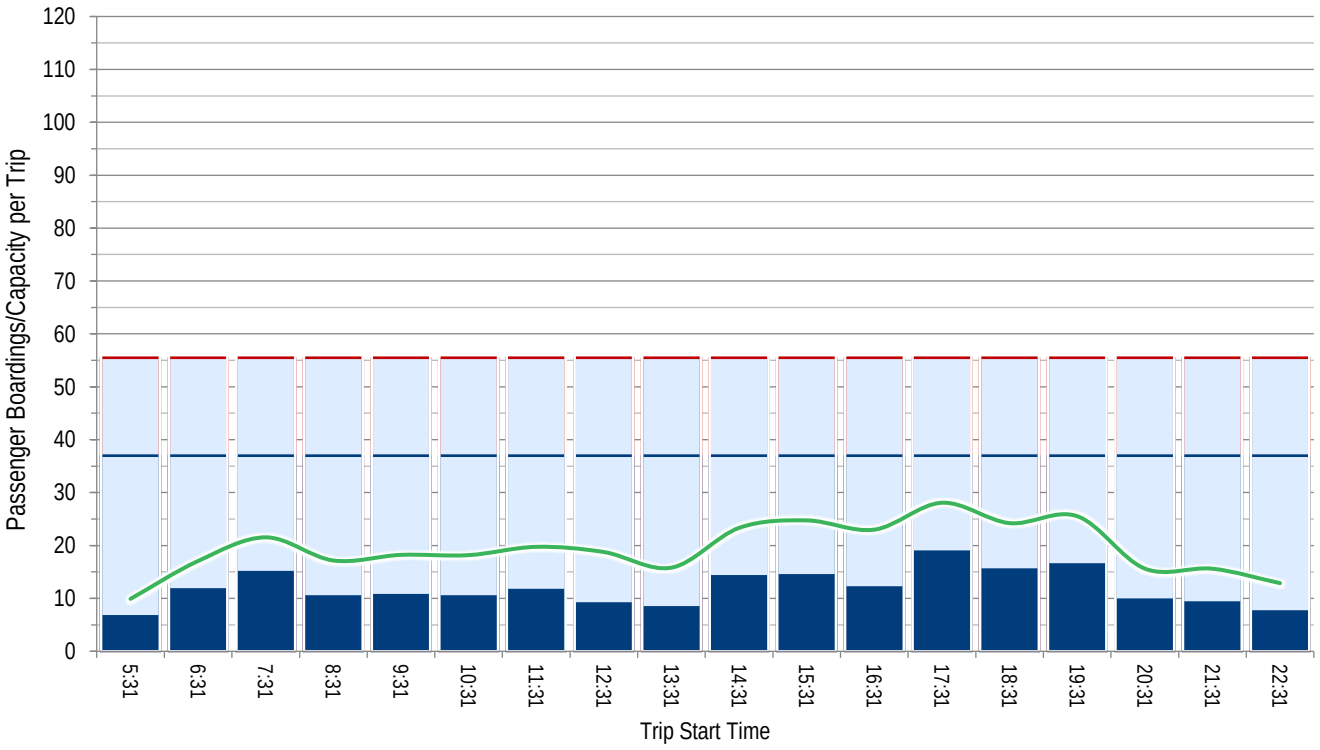
Westbound Average Trip Ridership & Maximum Passenger Loads — Sunday

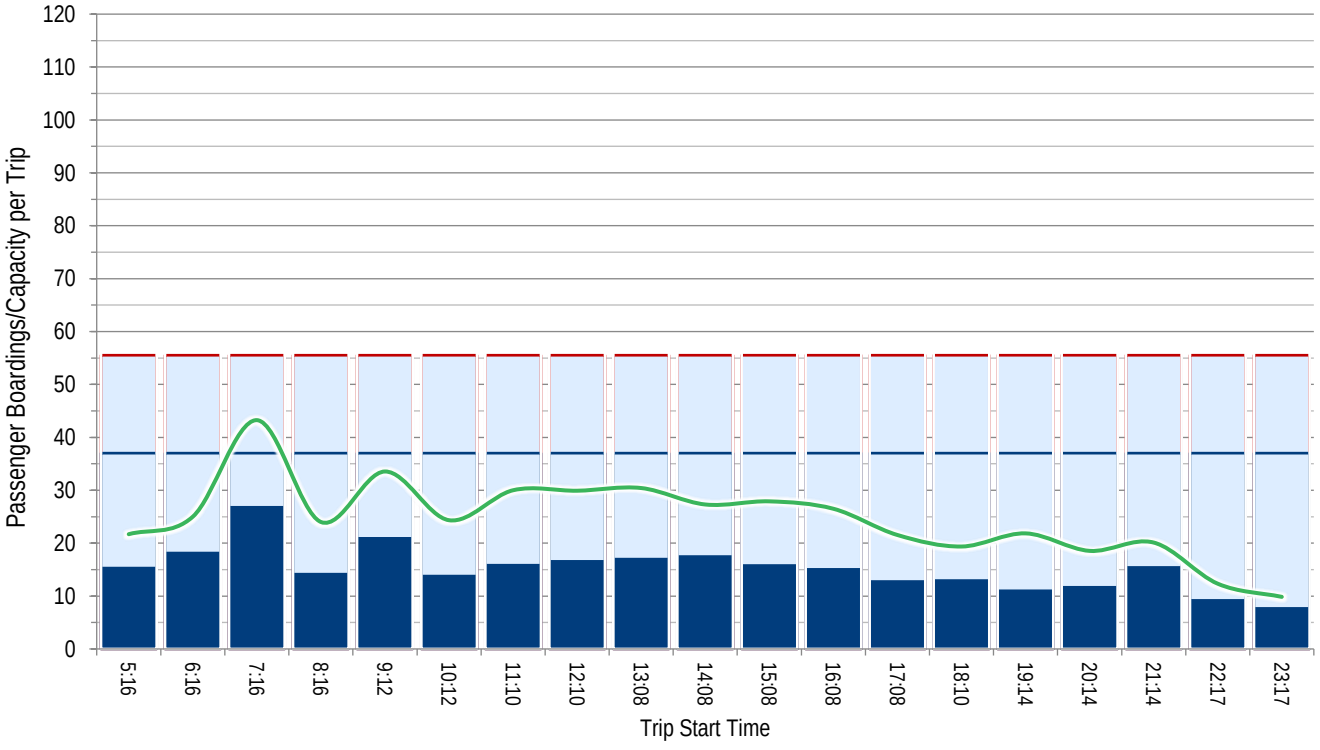


Average Maximum Passenger Load
Orange/Red: standing passengers
Blue: seated passengers

Average Passenger Boardings

Available Capacity
Red: seats plus standing
Blue: seats

Sunday — **Eastbound** Average Trip Ridership & Maximum Passenger Loads



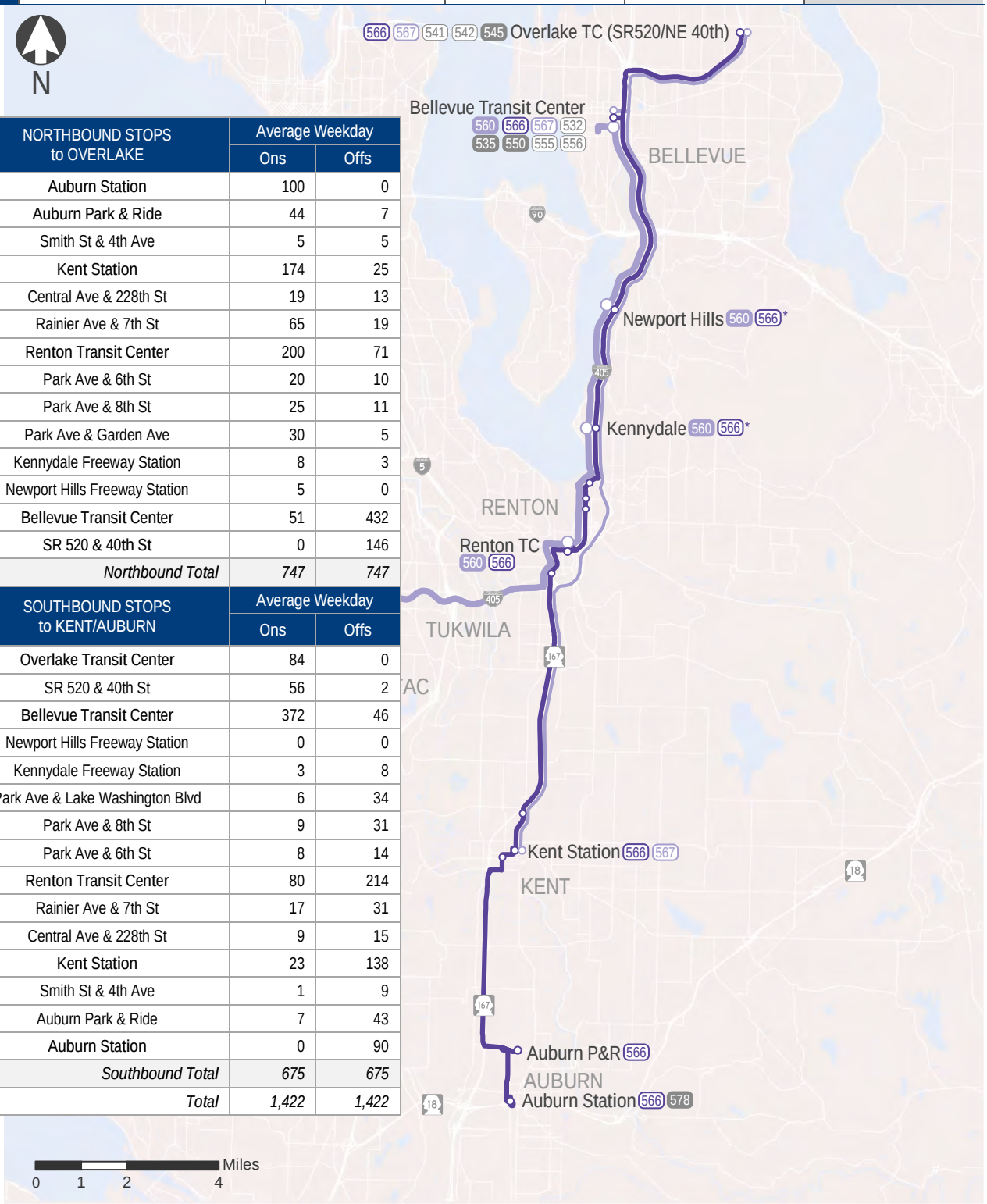
I-405 S

Route 566 Auburn – Overlake

Ridership	2015	2016	2017	SPRING 2018
Average **Weekday** Boardings	**1,653**	**1,516**	**1,401**	**1,408**
Average **Saturday** Boardings	**N/A**	**N/A**	**N/A**	**N/A**
Average **Sunday** Boardings	**N/A**	**N/A**	**N/A**	**N/A**
Annual Boardings	**421,642**	**386,674**	**355,782**	

NORTHBOUND STOPS to OVERLAKE	Average Weekday	
	Ons	Offs
Auburn Station	100	0
Auburn Park & Ride	44	7
Smith St & 4th Ave	5	5
Kent Station	174	25
Central Ave & 228th St	19	13
Rainier Ave & 7th St	65	19
Renton Transit Center	200	71
Park Ave & 6th St	20	10
Park Ave & 8th St	25	11
Park Ave & Garden Ave	30	5
Kennydale Freeway Station	8	3
Newport Hills Freeway Station	5	0
Bellevue Transit Center	51	432
SR 520 & 40th St	0	146
Northbound Total	*747*	*747*

SOUTHBOUND STOPS to KENT/AUBURN	Average Weekday	
	Ons	Offs
Overlake Transit Center	84	0
SR 520 & 40th St	56	2
Bellevue Transit Center	372	46
Newport Hills Freeway Station	0	0
Kennydale Freeway Station	3	8
Park Ave & Lake Washington Blvd	6	34
Park Ave & 8th St	9	31
Park Ave & 6th St	8	14
Renton Transit Center	80	214
Rainier Ave & 7th St	17	31
Central Ave & 228th St	9	15
Kent Station	23	138
Smith St & 4th Ave	1	9
Auburn Park & Ride	7	43
Auburn Station	0	90
Southbound Total	*675*	*675*
Total	*1,422*	*1,422*



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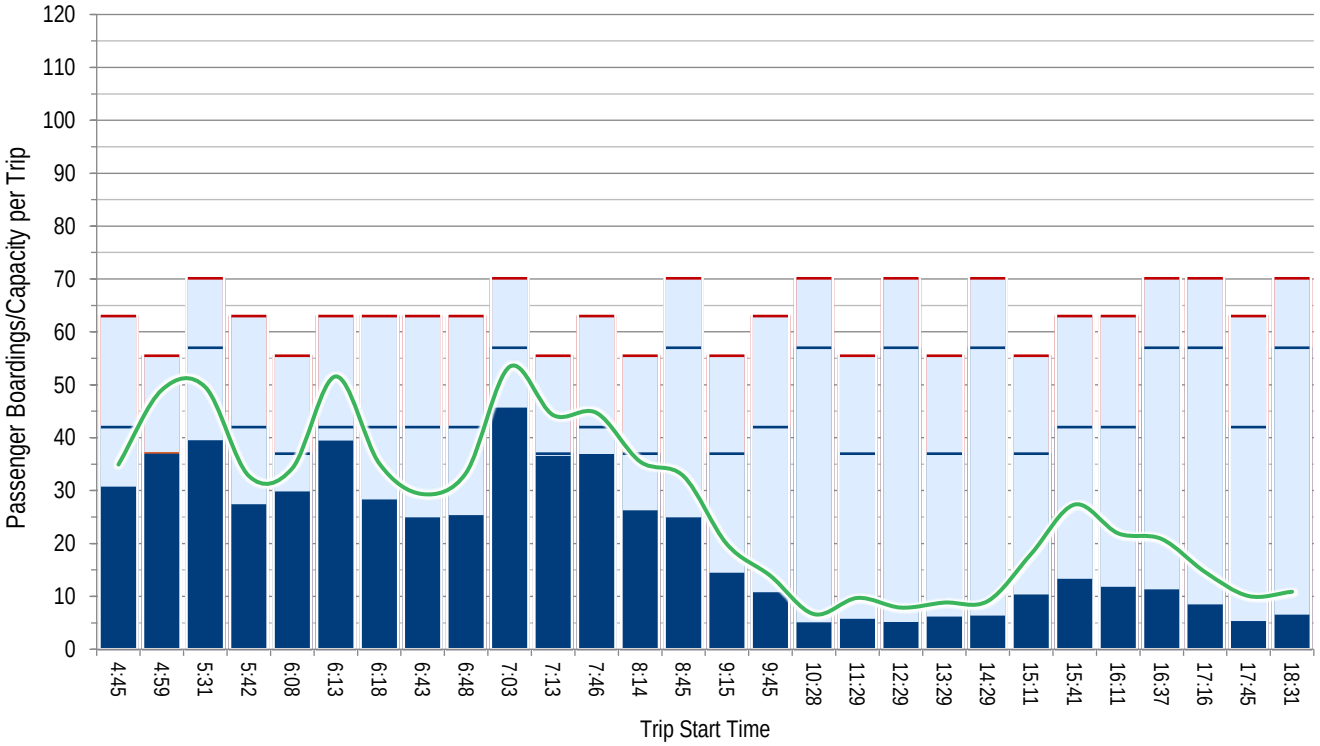
Northbound Average Trip Ridership & Maximum Passenger Loads — *Weekday*

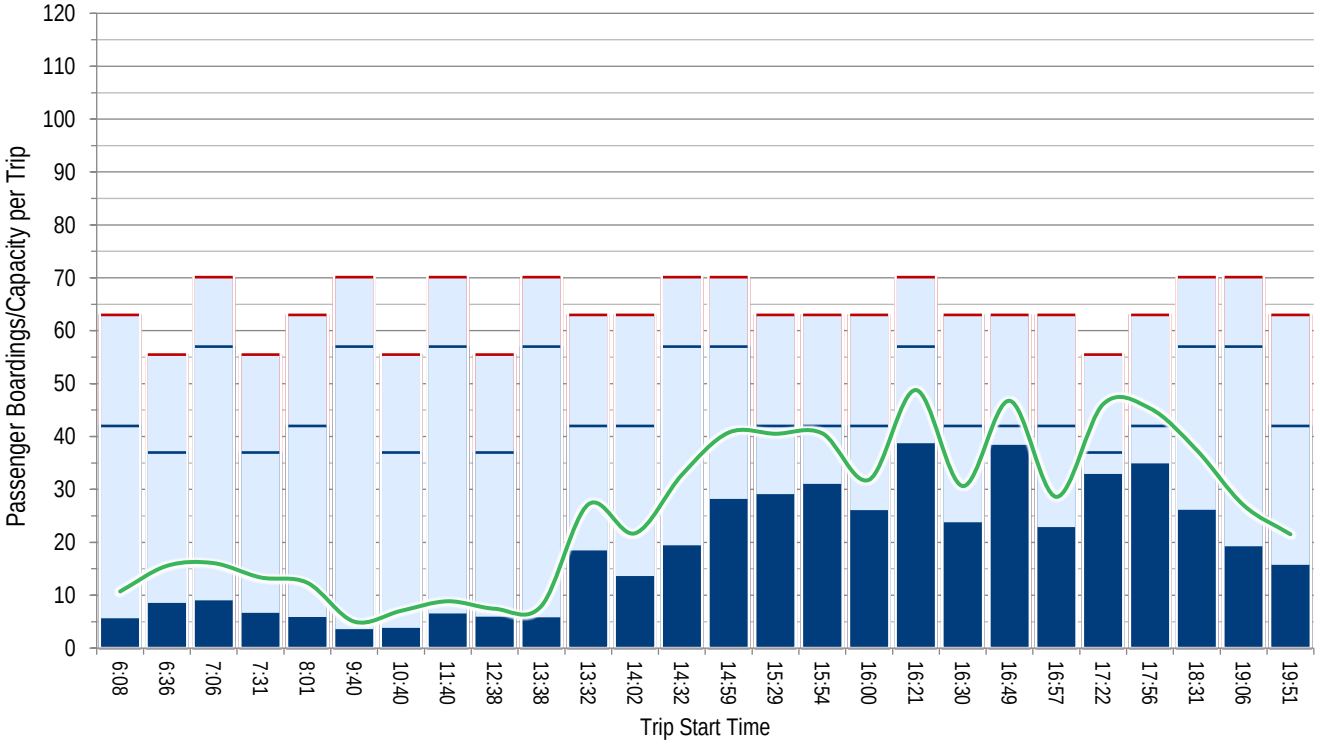


Average Maximum Passenger Load
Orange/Red: standing passengers
Blue: seated passengers

Average Passenger Boardings

Available Capacity
Red: seats plus standing
Blue: seats

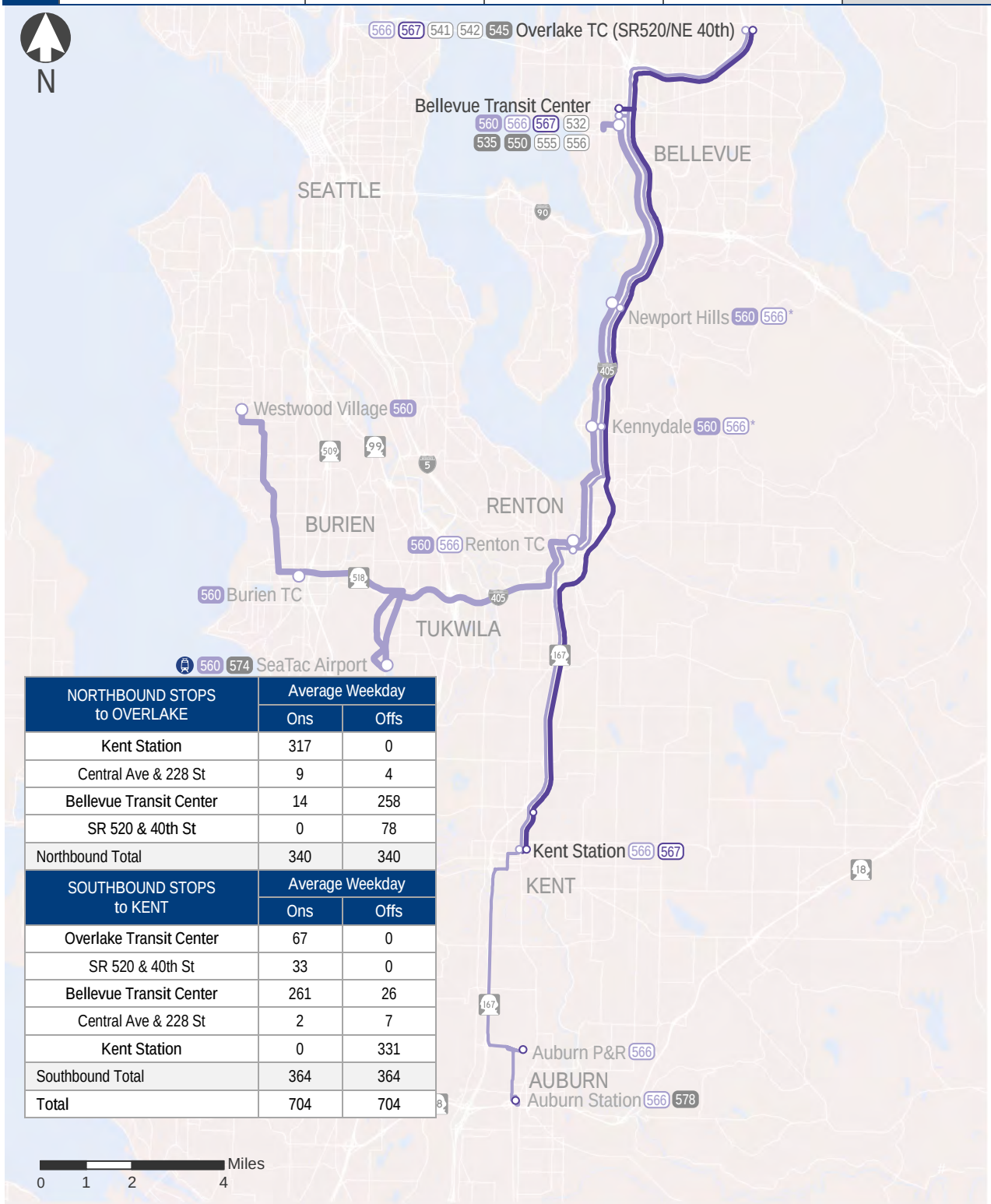
Weekday — **Southbound** Average Trip Ridership & Maximum Passenger Loads



I-405 S

Route 567 Kent – Overlake

Ridership		2015	2016	2017	SPRING 2018
	Average **Weekday** Boardings	**586**	**596**	**624**	**681**
	Average **Saturday** Boardings	**N/A**	**N/A**	**N/A**	**N/A**
	Average **Sunday** Boardings	**N/A**	**N/A**	**N/A**	**N/A**
	Annual Boardings	**149,318**	**151,971**	**158,455**	



NORTHBOUND STOPS to OVERLAKE	Average Weekday	
	Ons	Offs
Kent Station	317	0
Central Ave & 228 St	9	4
Bellevue Transit Center	14	258
SR 520 & 40th St	0	78
Northbound Total	340	340
SOUTHBOUND STOPS to KENT	**Average Weekday**	
	Ons	Offs
Overlake Transit Center	67	0
SR 520 & 40th St	33	0
Bellevue Transit Center	261	26
Central Ave & 228 St	2	7
Kent Station	0	331
Southbound Total	364	364
Total	704	704

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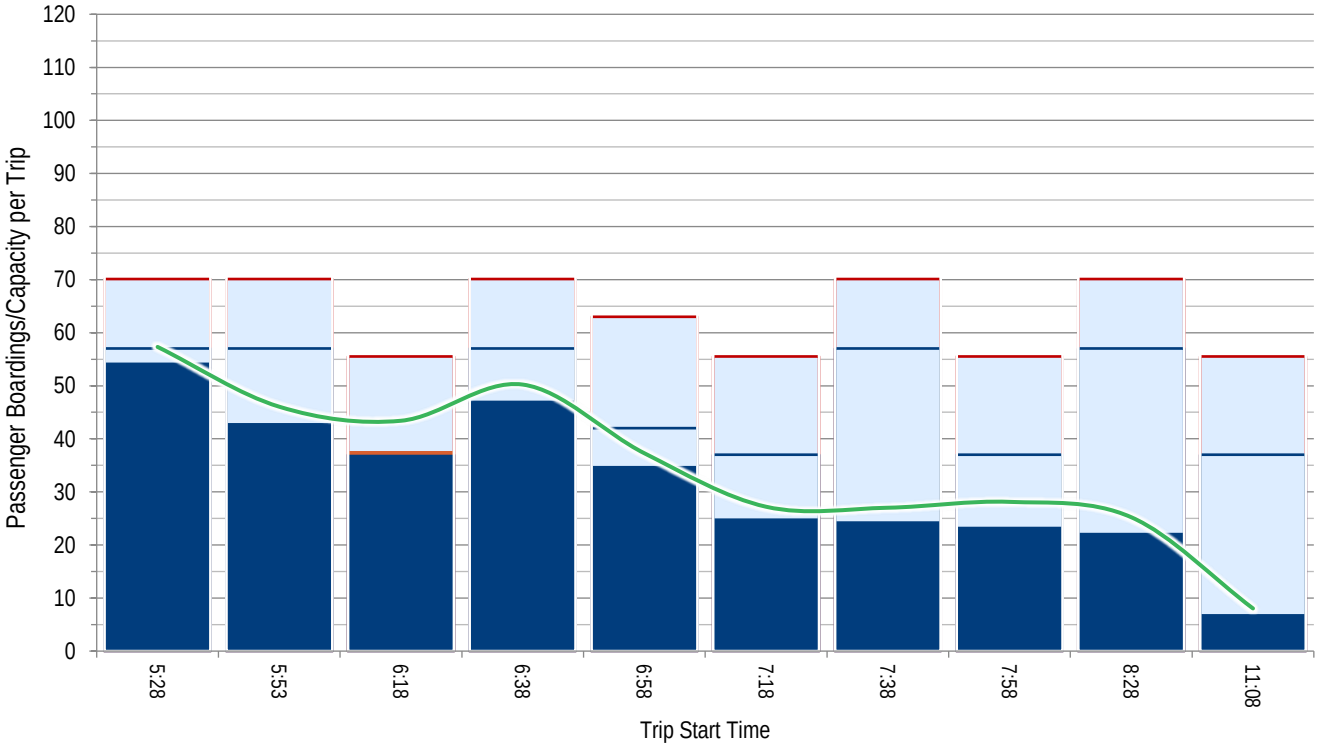
Northbound Average Trip Ridership & Maximum Passenger Loads — *Weekday*

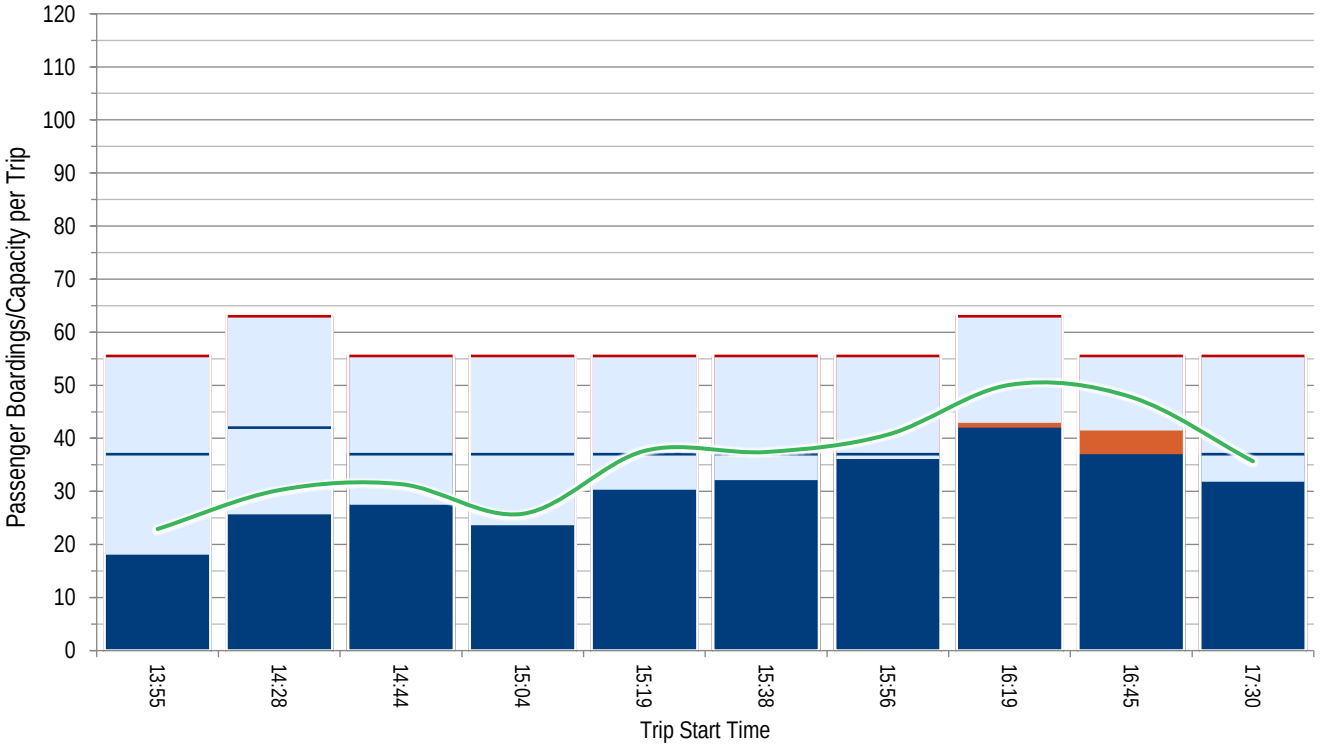


Average Maximum Passenger Load
Orange/Red: standing passengers
Blue: seated passengers

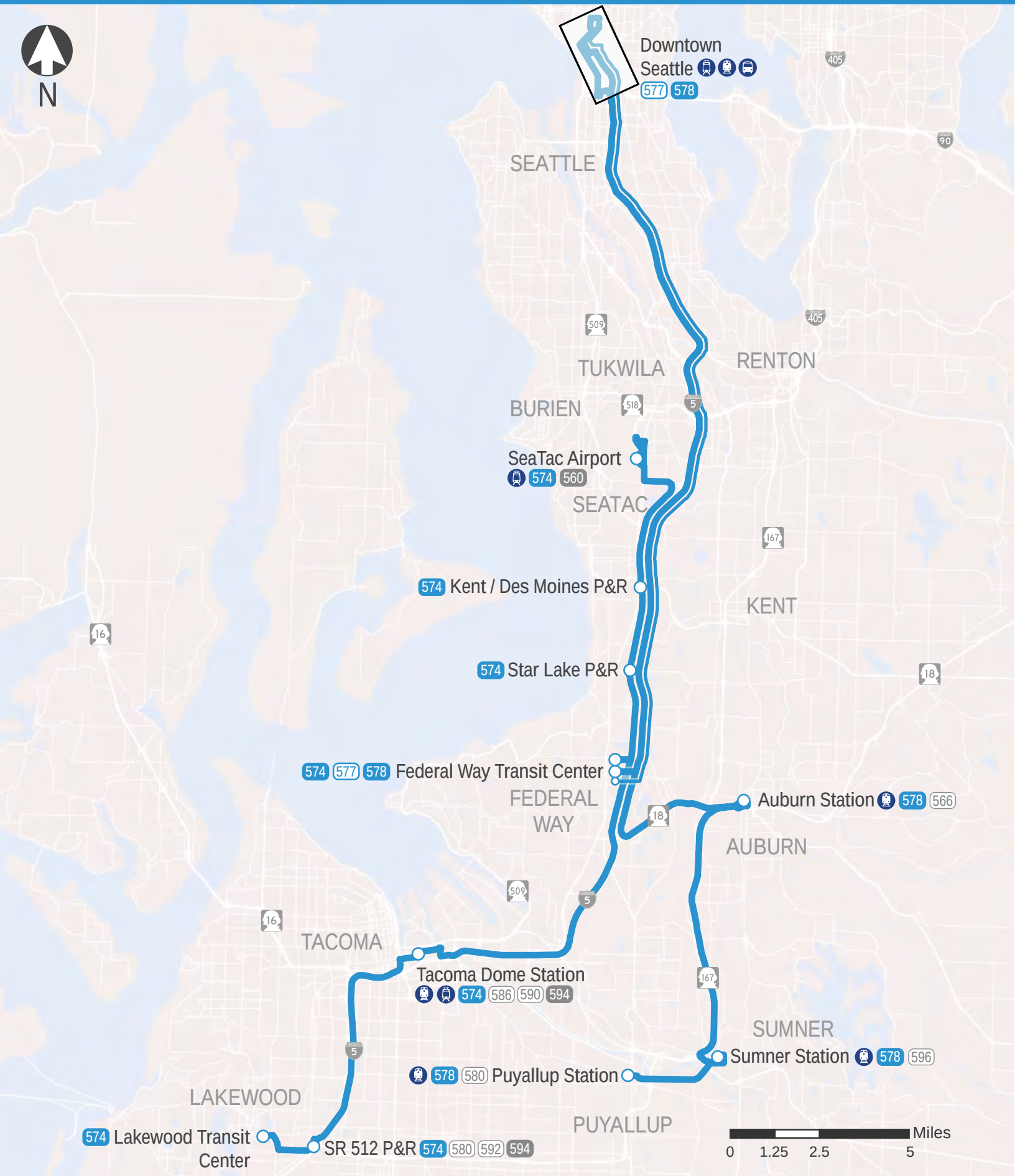
Average Passenger Boardings

Available Capacity
Red: seats plus standing
Blue: seats

Weekday — **Southbound** Average Trip Ridership & Maximum Passenger Loads



I-5 South – S. King



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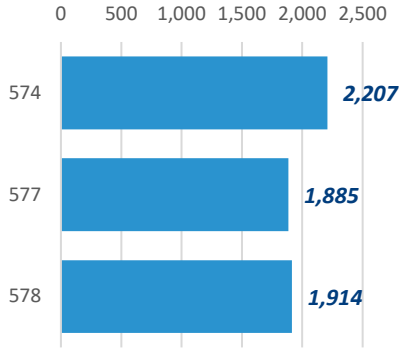
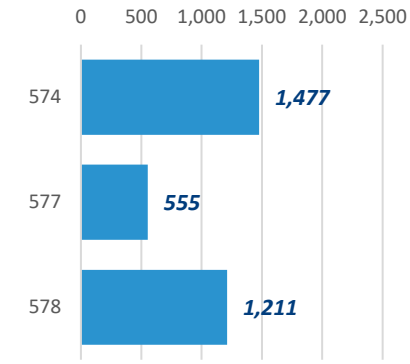
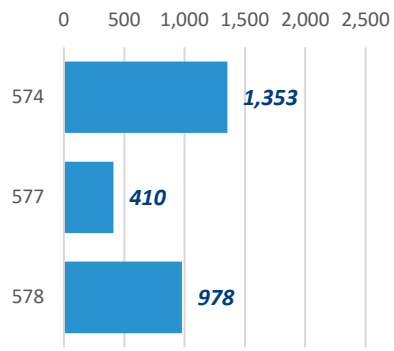
Weekday Ridership



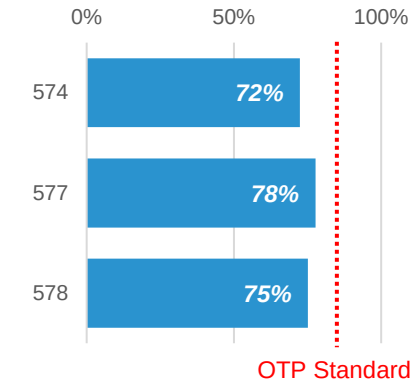
Saturday Ridership



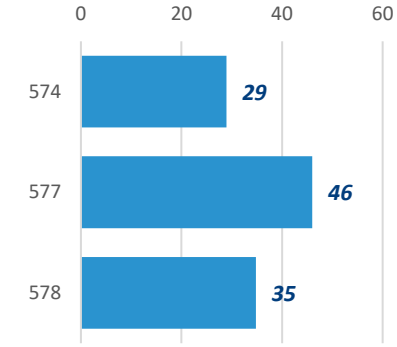
Sunday Ridership



OTP



Passengers per Trip



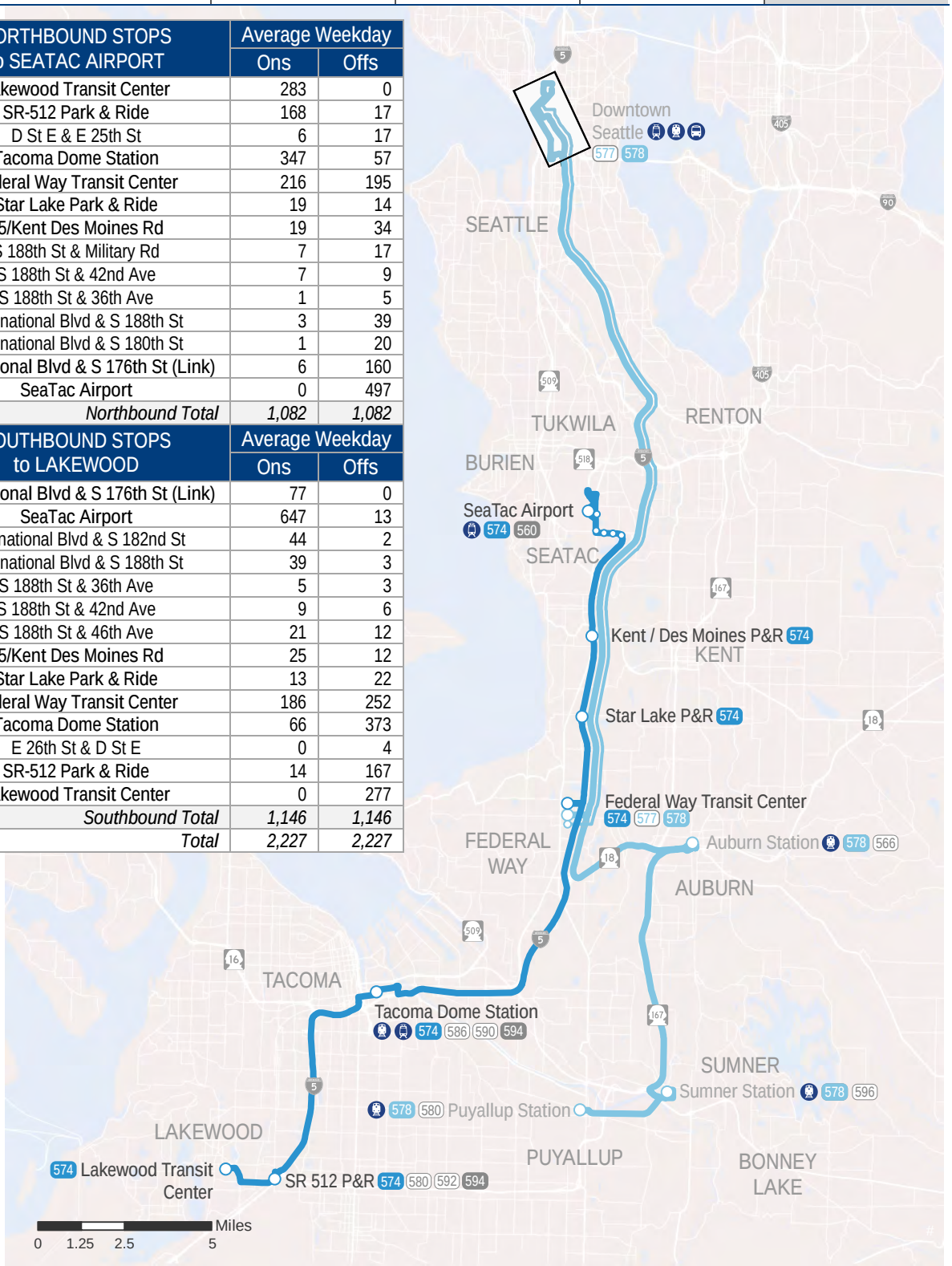
Corridor	I-5 South King	Hour																						
Day Type	Direction	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Weekday	Northbound																								
Weekday	Southbound																								
Saturday	Northbound																								
Saturday	Southbound																								
Sunday	Northbound																								
Sunday	Southbound																								
Service Frequency Legend		Very Frequent (<10 min)						Frequent (10-20 min)							Moderate (20-30 min)							Minimum (30-60 min)			

Route 574 Lakewood – SeaTac

Ridership	2015	2016	2017	SPRING 2018
Average **Weekday** Boardings	**2,402**	**2,309**	**2,236**	**2,207**
Average **Saturday** Boardings	**1,755**	**1,686**	**1,611**	**1,477**
Average **Sunday** Boardings	**1,511**	**1,517**	**1,428**	**1,353**
Annual Boardings	**791,421**	**766,163**	**735,955**	

NORTHBOUND STOPS to SEATAC AIRPORT	Average Weekday	
	Ons	Offs
Lakewood Transit Center	283	0
SR-512 Park & Ride	168	17
D St E & E 25th St	6	17
Tacoma Dome Station	347	57
Federal Way Transit Center	216	195
Star Lake Park & Ride	19	14
I-5/Kent Des Moines Rd	19	34
S 188th St & Military Rd	7	17
S 188th St & 42nd Ave	7	9
S 188th St & 36th Ave	1	5
International Blvd & S 188th St	3	39
International Blvd & S 180th St	1	20
International Blvd & S 176th St (Link)	6	160
SeaTac Airport	0	497
Northbound Total	*1,082*	*1,082*

SOUTHBOUND STOPS to LAKEWOOD	Average Weekday	
	Ons	Offs
International Blvd & S 176th St (Link)	77	0
SeaTac Airport	647	13
International Blvd & S 182nd St	44	2
International Blvd & S 188th St	39	3
S 188th St & 36th Ave	5	3
S 188th St & 42nd Ave	9	6
S 188th St & 46th Ave	21	12
I-5/Kent Des Moines Rd	25	12
Star Lake Park & Ride	13	22
Federal Way Transit Center	186	252
Tacoma Dome Station	66	373
E 26th St & D St E	0	4
SR-512 Park & Ride	14	167
Lakewood Transit Center	0	277
Southbound Total	*1,146*	*1,146*
Total	*2,227*	*2,227*



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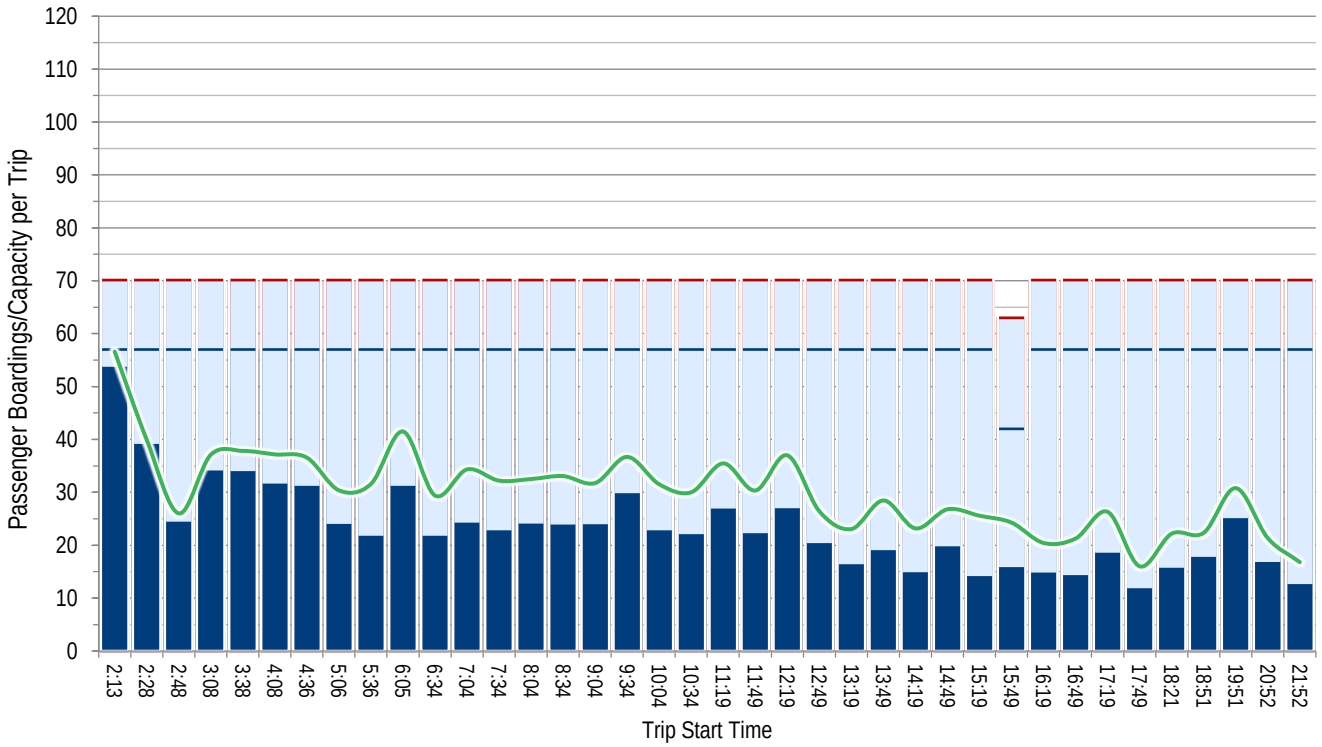
Northbound Average Trip Ridership & Maximum Passenger Loads — *Weekday*

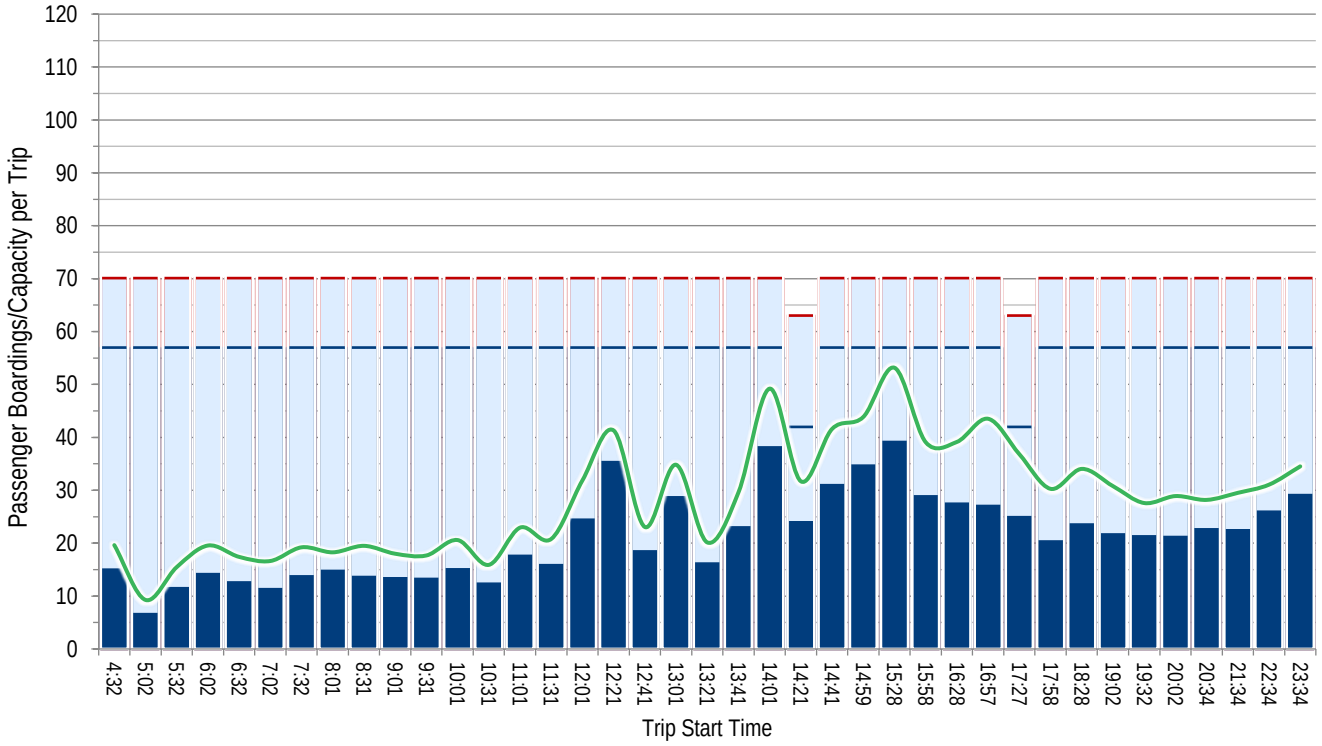


Average Maximum Passenger Load
Orange/Red: standing passengers
Blue: seated passengers

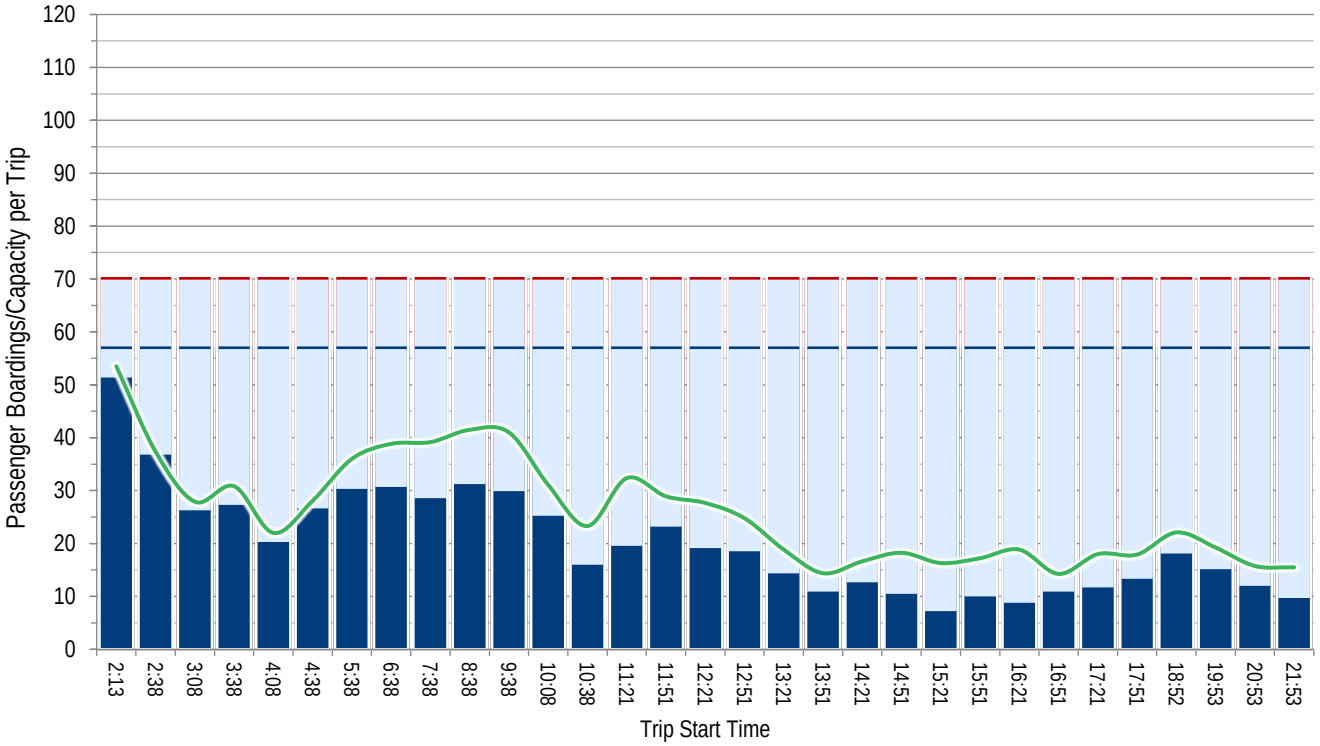
Average Passenger Boardings

Available Capacity
Red: seats plus standing
Blue: seats

Weekday — **Southbound** Average Trip Ridership & Maximum Passenger Loads



Northbound Average Trip Ridership & Maximum Passenger Loads — *Saturday*

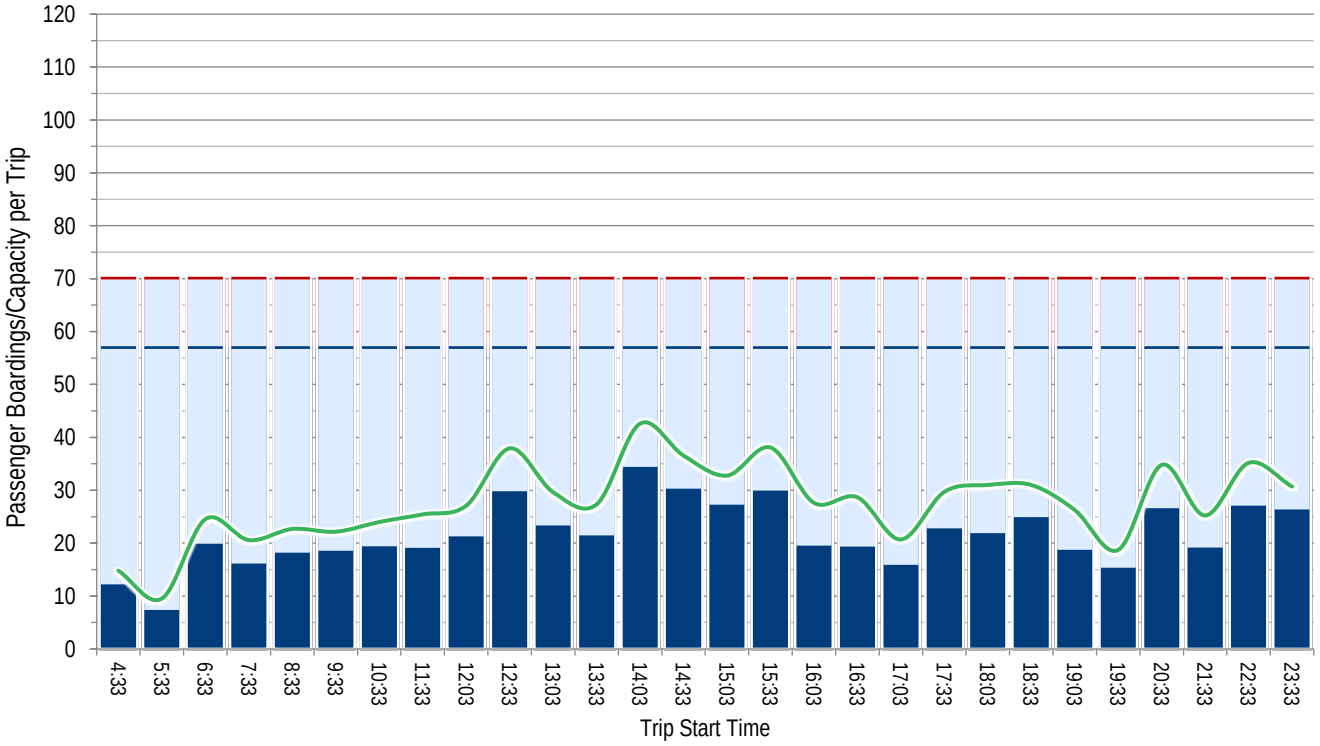


Average Maximum Passenger Load
Orange/Red: standing passengers
Blue: seated passengers

Average Passenger Boardings

Available Capacity
Red: seats plus standing
Blue: seats

Saturday — **Southbound** Average Trip Ridership & Maximum Passenger Loads



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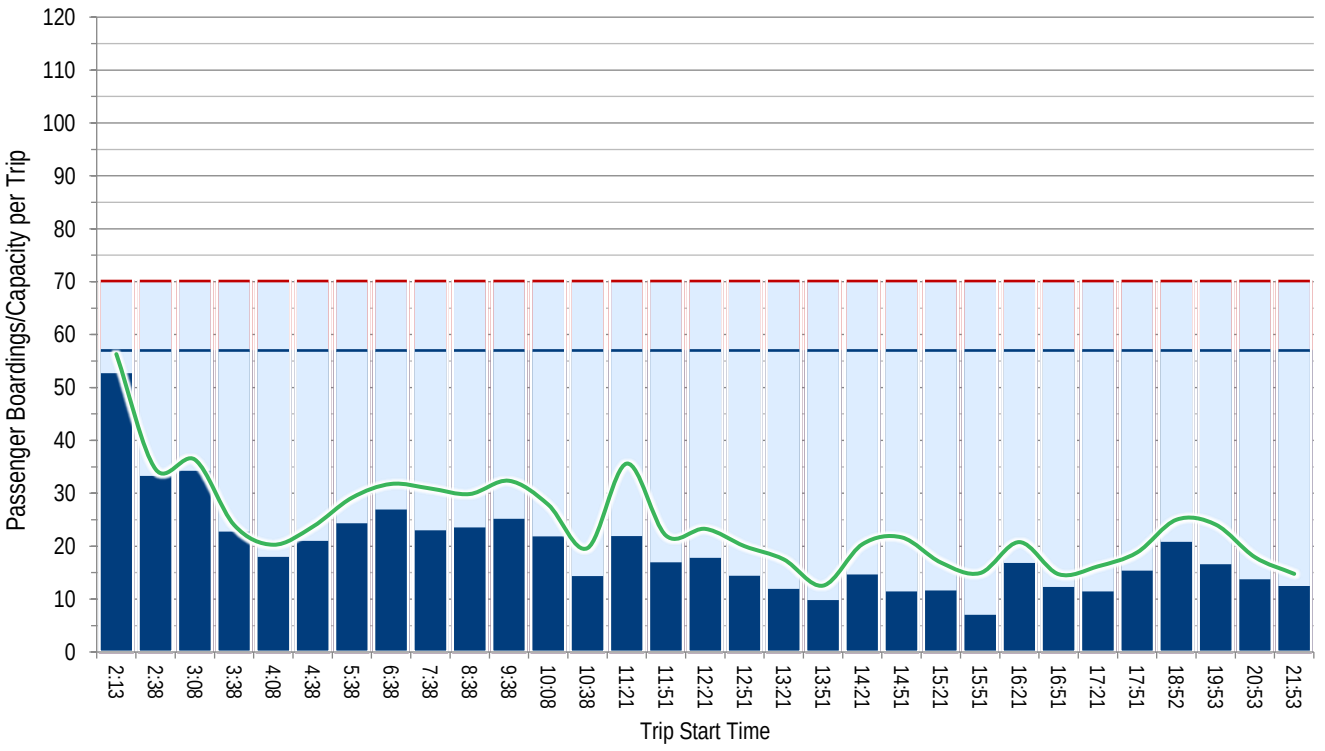
Northbound Average Trip Ridership & Maximum Passenger Loads — Sunday

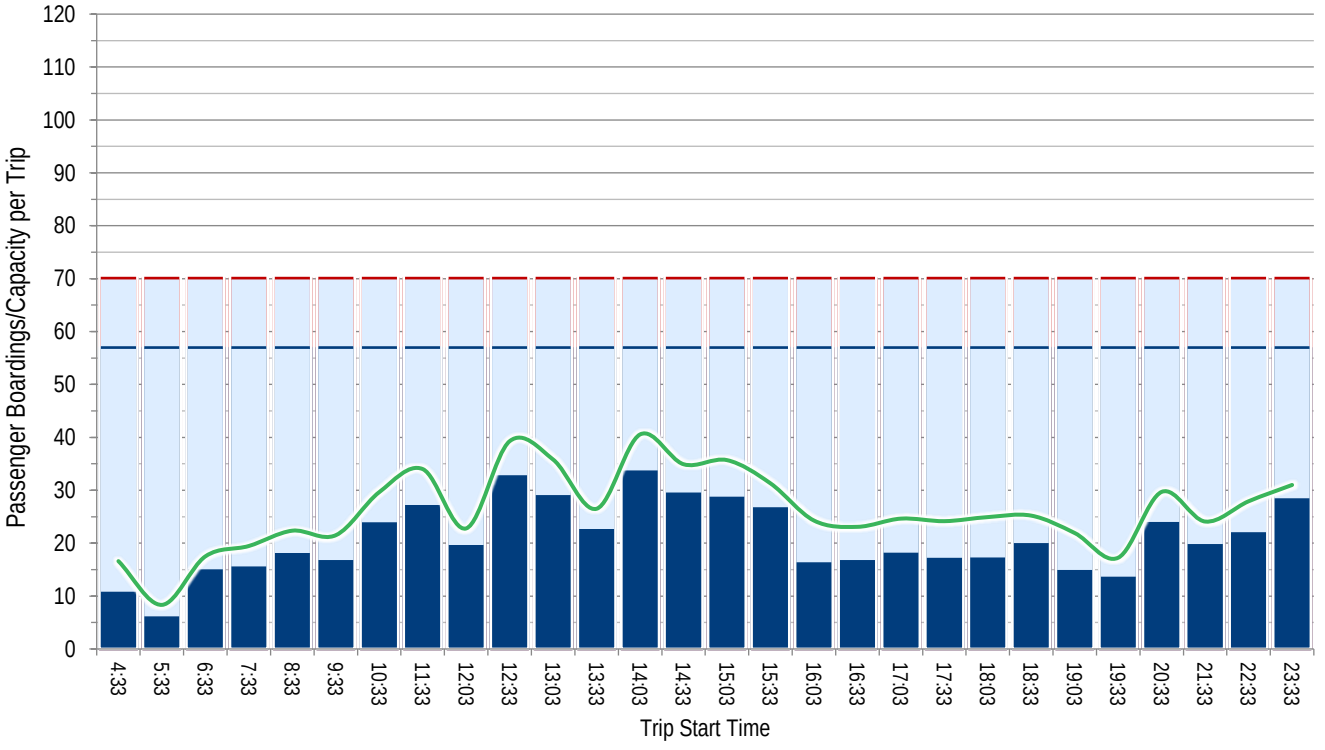


Average Maximum Passenger Load
Orange/Red: standing passengers
Blue: seated passengers

Average Passenger Boardings

Available Capacity
Red: seats plus standing
Blue: seats

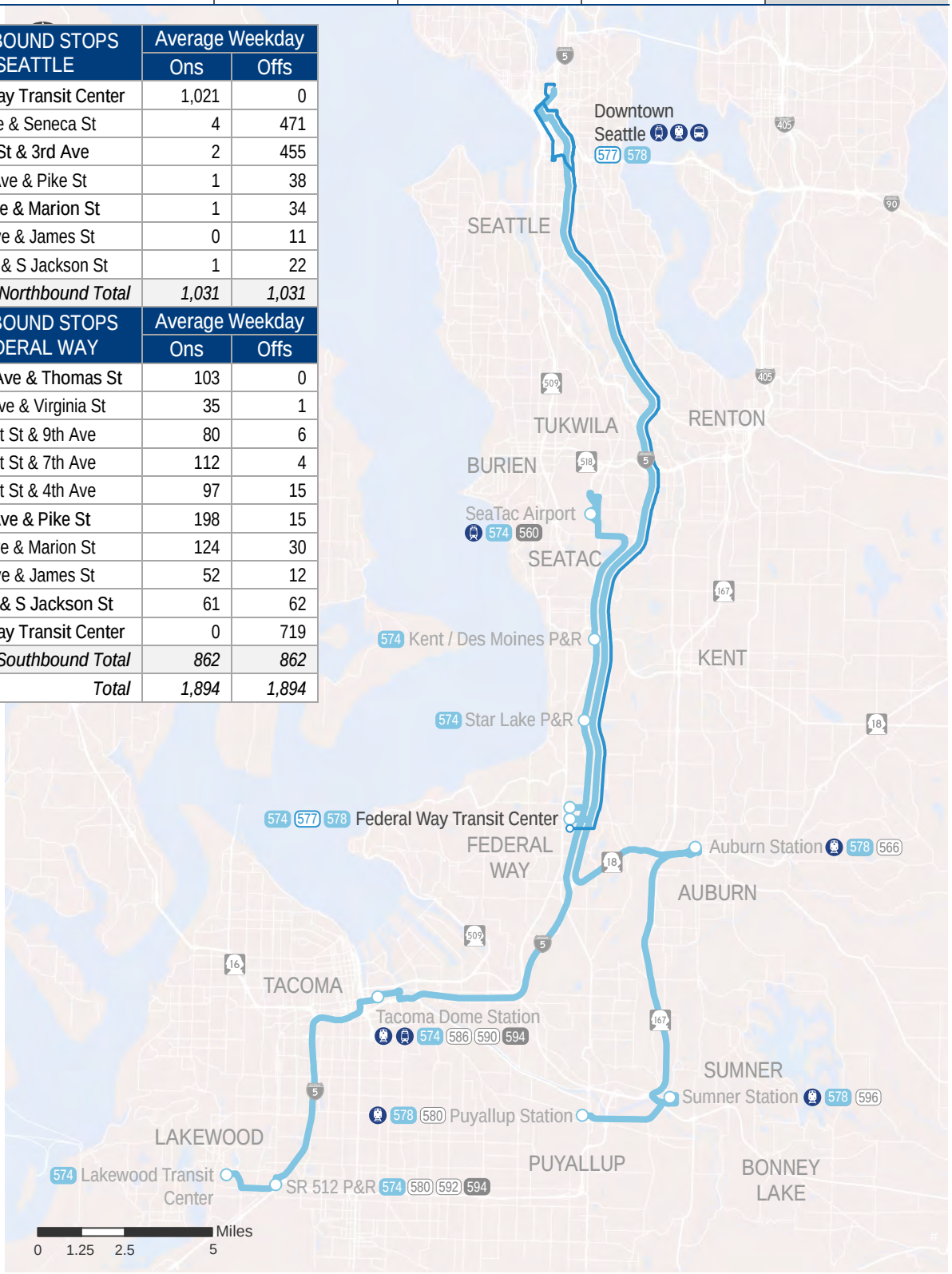
Sunday — **Southbound** Average Trip Ridership & Maximum Passenger Loads



Route 577 Federal Way – Seattle

		2015	2016	2017	SPRING 2018
Ridership	Average **Weekday** Boardings	**1,631**	**1,694**	**1,761**	**1,885**
	Average **Saturday** Boardings	**641**	**588**	**558**	**555**
	Average **Sunday** Boardings	**405**	**405**	**377**	**410**
	Annual Boardings	**472,732**	**486,572**	**498,657**	

NORTHBOUND STOPS to SEATTLE	Average Weekday	
	Ons	Offs
Federal Way Transit Center	1,021	0
5th Ave & Seneca St	4	471
Pine St & 3rd Ave	2	455
2nd Ave & Pike St	1	38
2nd Ave & Marion St	1	34
2nd Ave & James St	0	11
2nd Ave & S Jackson St	1	22
Northbound Total	*1,031*	*1,031*
SOUTHBOUND STOPS to FEDERAL WAY	**Average Weekday**	
	Ons	Offs
Fairview Ave & Thomas St	103	0
Boren Ave & Virginia St	35	1
Stewart St & 9th Ave	80	6
Stewart St & 7th Ave	112	4
Stewart St & 4th Ave	97	15
2nd Ave & Pike St	198	15
2nd Ave & Marion St	124	30
2nd Ave & James St	52	12
2nd Ave & S Jackson St	61	62
Federal Way Transit Center	0	719
Southbound Total	*862*	*862*
Total	*1,894*	*1,894*



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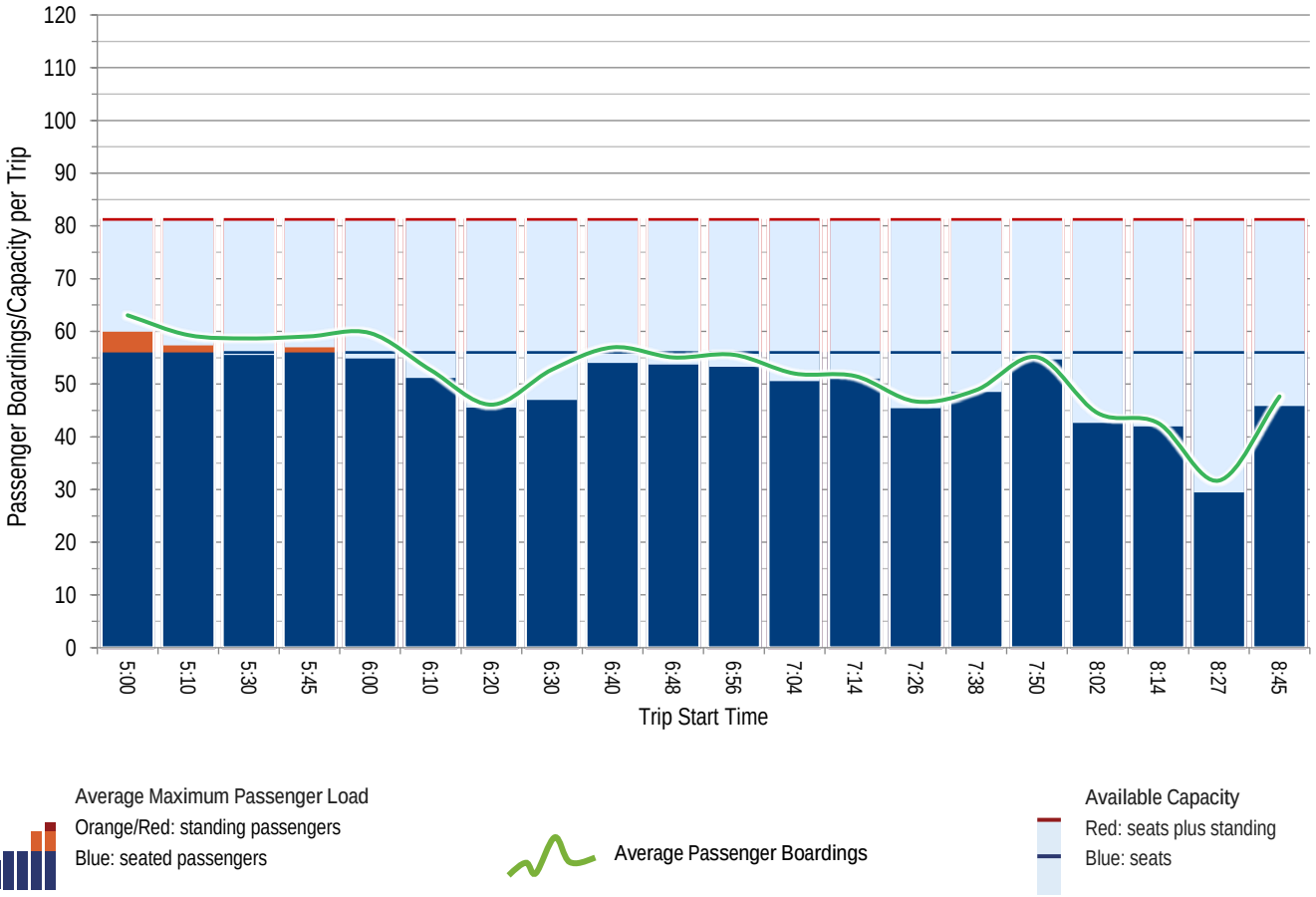
Northbound Average Trip Ridership & Maximum Passenger Loads — *Weekday*

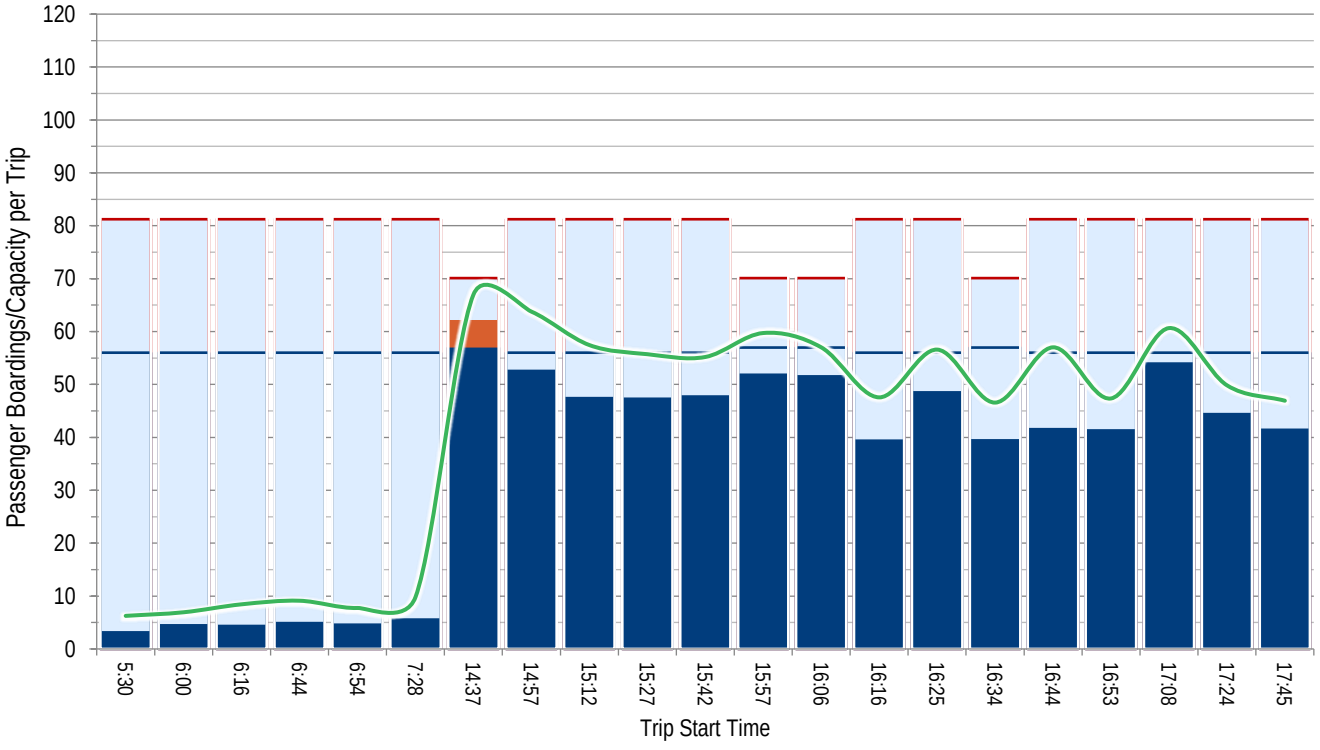


Average Maximum Passenger Load
Orange/Red: standing passengers
Blue: seated passengers

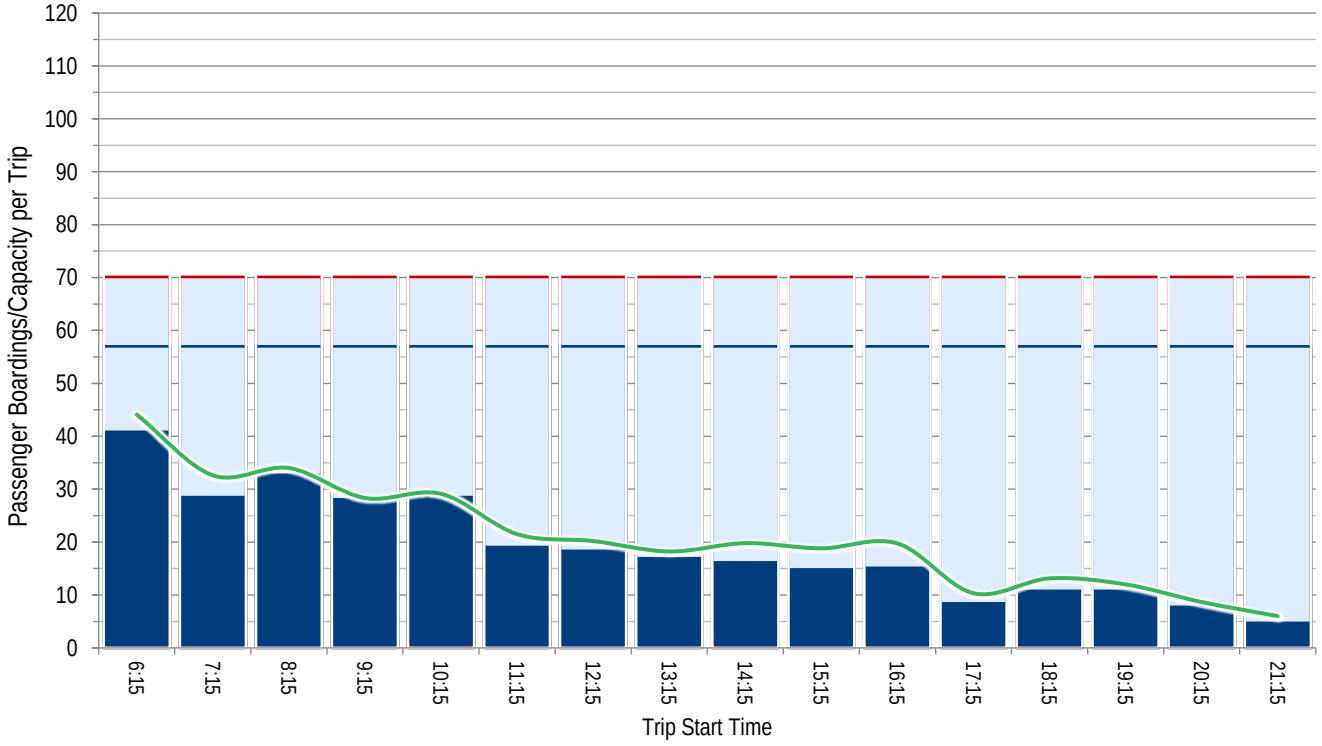
Average Passenger Boardings

Available Capacity
Red: seats plus standing
Blue: seats

Weekday — **Southbound** Average Trip Ridership & Maximum Passenger Loads



Northbound Average Trip Ridership & Maximum Passenger Loads — *Saturday*

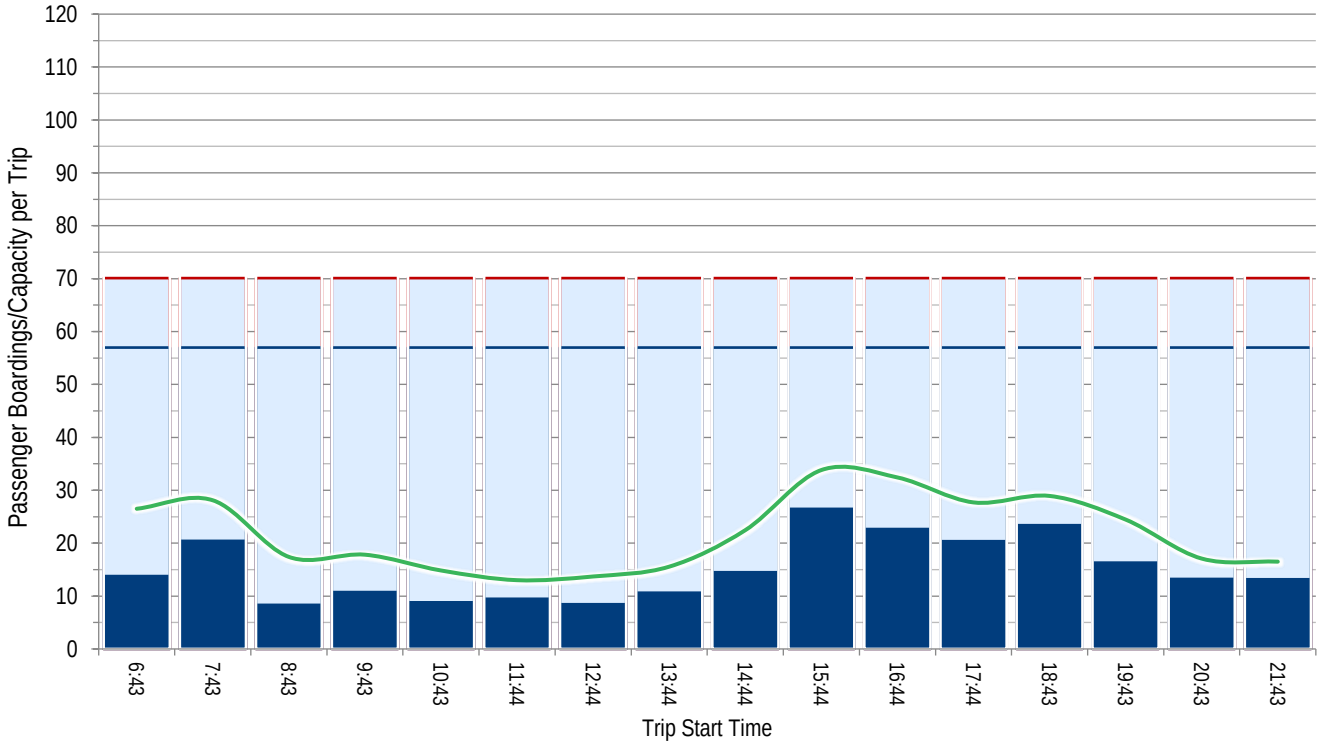


Average Maximum Passenger Load
Orange/Red: standing passengers
Blue: seated passengers

Average Passenger Boardings

Available Capacity
Red: seats plus standing
Blue: seats

Saturday — **Southbound** Average Trip Ridership & Maximum Passenger Loads



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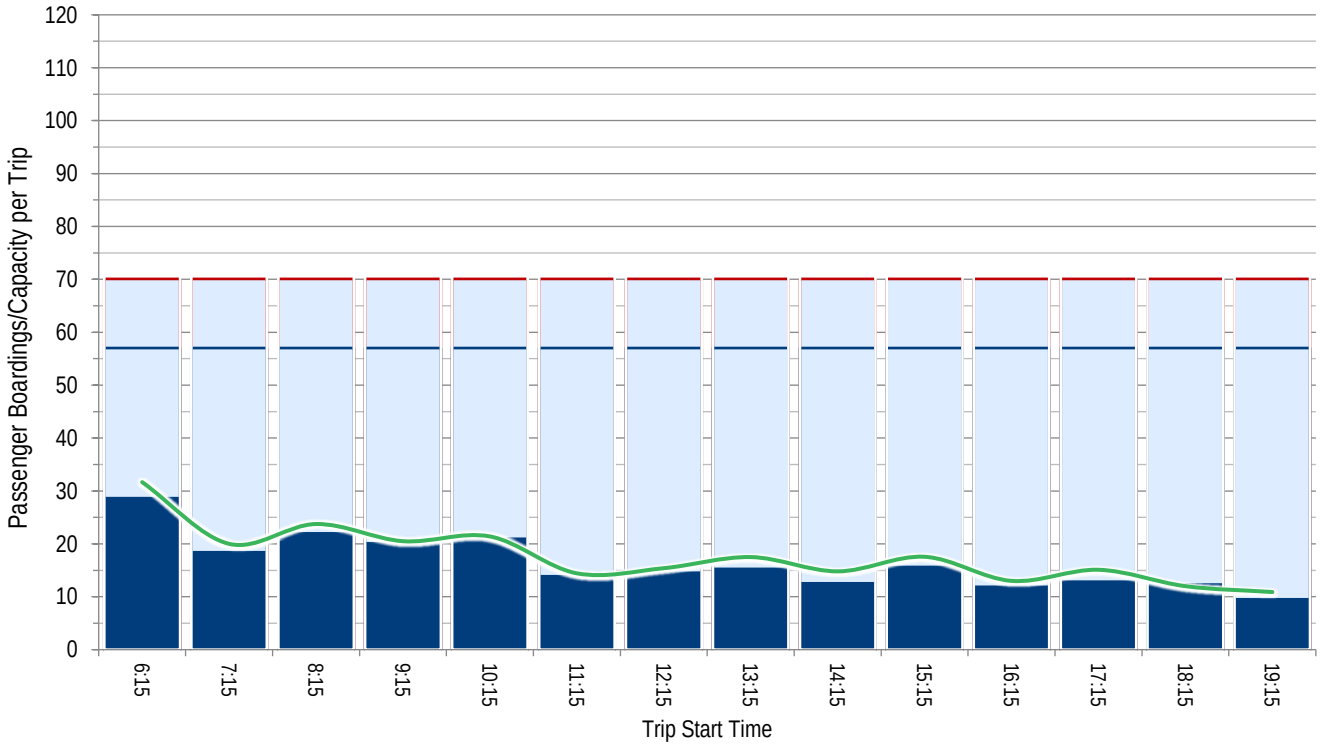
Northbound Average Trip Ridership & Maximum Passenger Loads — *Sunday*

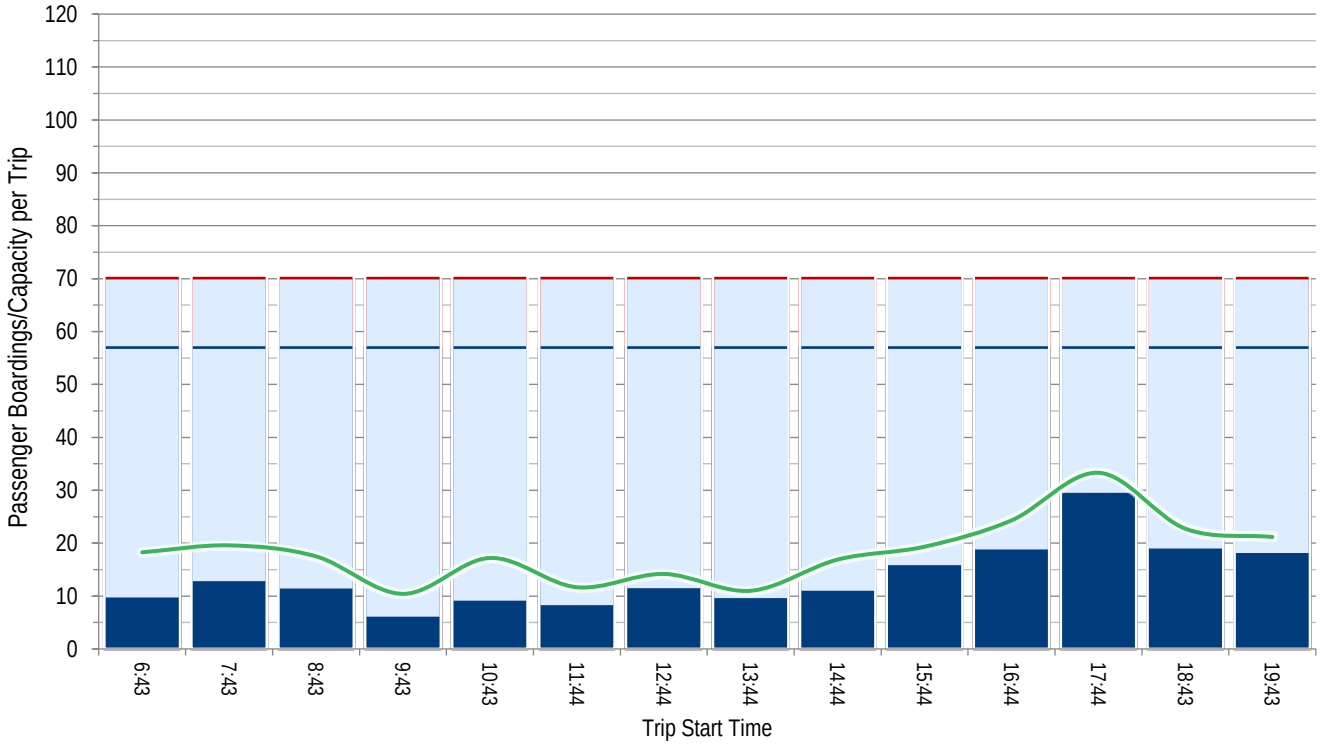


Average Maximum Passenger Load
Orange/Red: standing passengers
Blue: seated passengers

Average Passenger Boardings

Available Capacity
Red: seats plus standing
Blue: seats

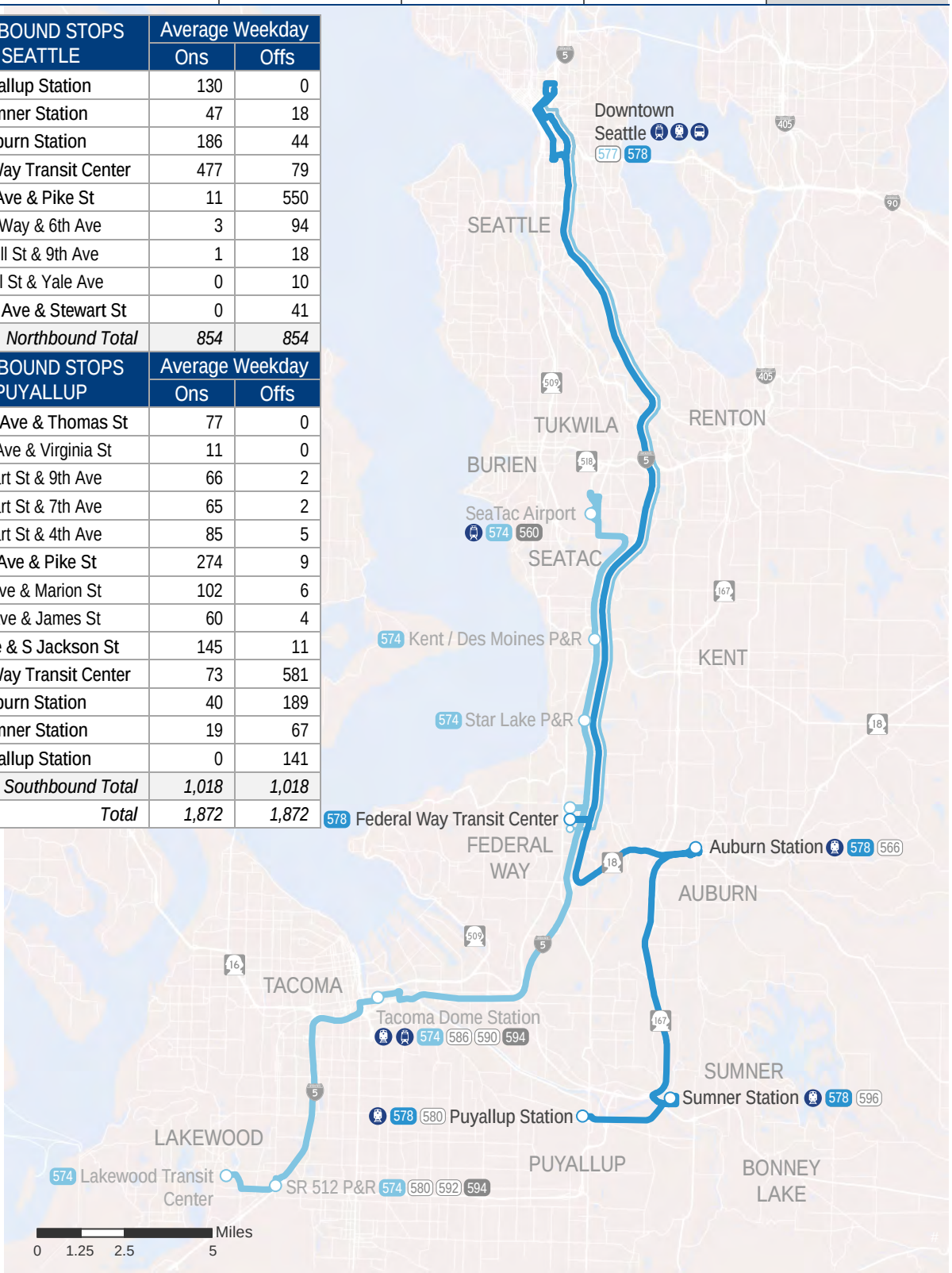
Sunday — **Southbound** Average Trip Ridership & Maximum Passenger Loads



Route 578 Puyallup – Seattle

Ridership	2015	2016	2017	SPRING 2018
Average **Weekday** Boardings	**1,813**	**1,796**	**1,848**	**1,914**
Average **Saturday** Boardings	**1,311**	**1,168**	**1,220**	**1,211**
Average **Sunday** Boardings	**968**	**944**	**979**	**978**
Annual Boardings	**586,487**	**574,684**	**590,546**	

NORTHBOUND STOPS to SEATTLE	Average Weekday	
	Ons	Offs
Puyallup Station	130	0
Sumner Station	47	18
Auburn Station	186	44
Federal Way Transit Center	477	79
4th Ave & Pike St	11	550
Olive Way & 6th Ave	3	94
Howell St & 9th Ave	1	18
Howell St & Yale Ave	0	10
Eastlake Ave & Stewart St	0	41
Northbound Total	*854*	*854*
SOUTHBOUND STOPS to PUYALLUP	**Average Weekday**	
	Ons	**Offs**
Fairview Ave & Thomas St	77	0
Boren Ave & Virginia St	11	0
Stewart St & 9th Ave	66	2
Stewart St & 7th Ave	65	2
Stewart St & 4th Ave	85	5
2nd Ave & Pike St	274	9
2nd Ave & Marion St	102	6
2nd Ave & James St	60	4
2nd Ave & S Jackson St	145	11
Federal Way Transit Center	73	581
Auburn Station	40	189
Sumner Station	19	67
Puyallup Station	0	141
Southbound Total	*1,018*	*1,018*
Total	*1,872*	*1,872*



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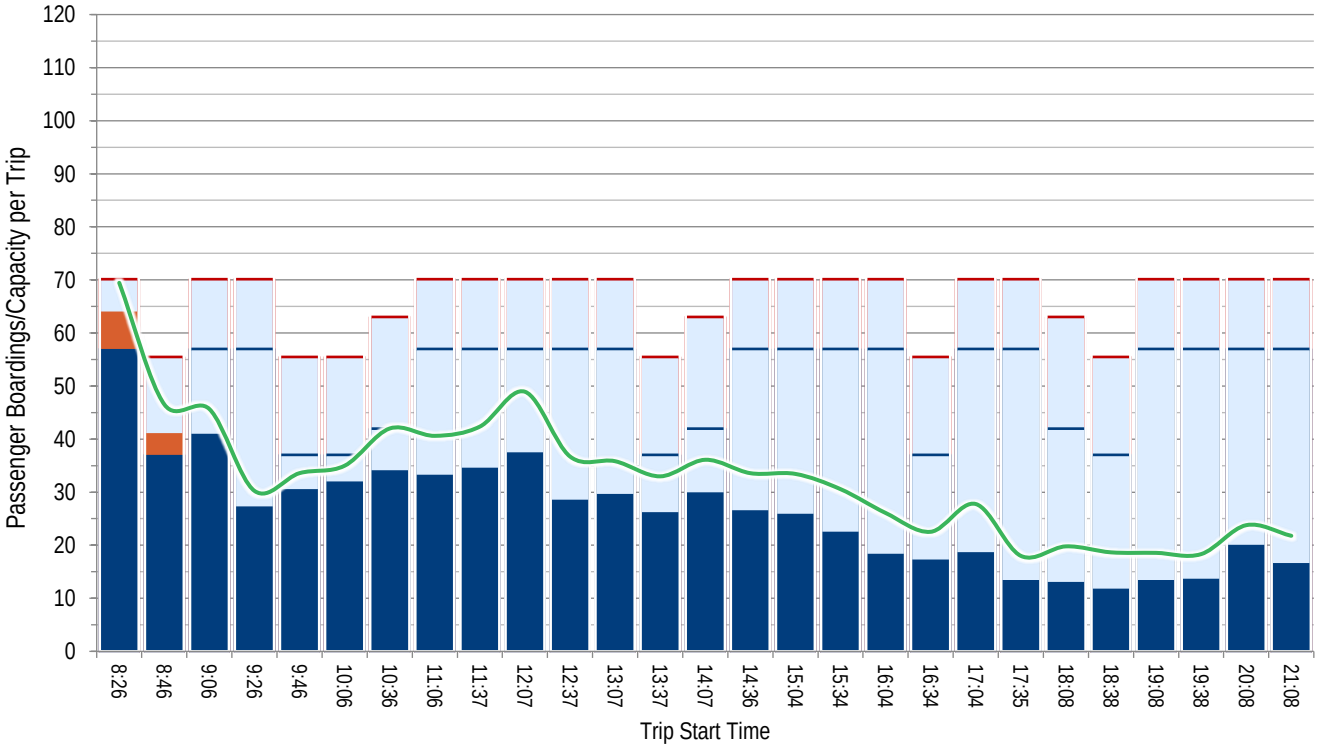
Northbound Average Trip Ridership & Maximum Passenger Loads — *Weekday*

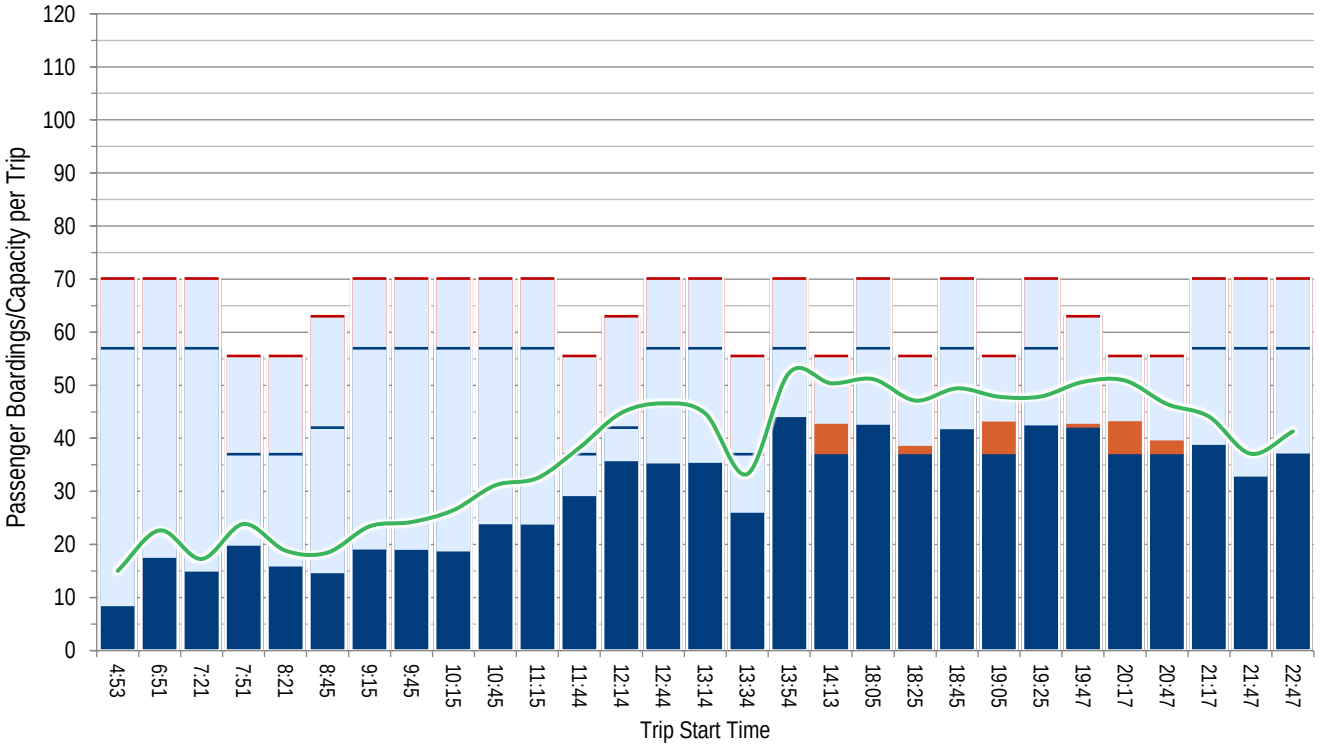


Average Maximum Passenger Load
Orange/Red: standing passengers
Blue: seated passengers

Average Passenger Boardings

Available Capacity
Red: seats plus standing
Blue: seats

Weekday — **Southbound** Average Trip Ridership & Maximum Passenger Loads



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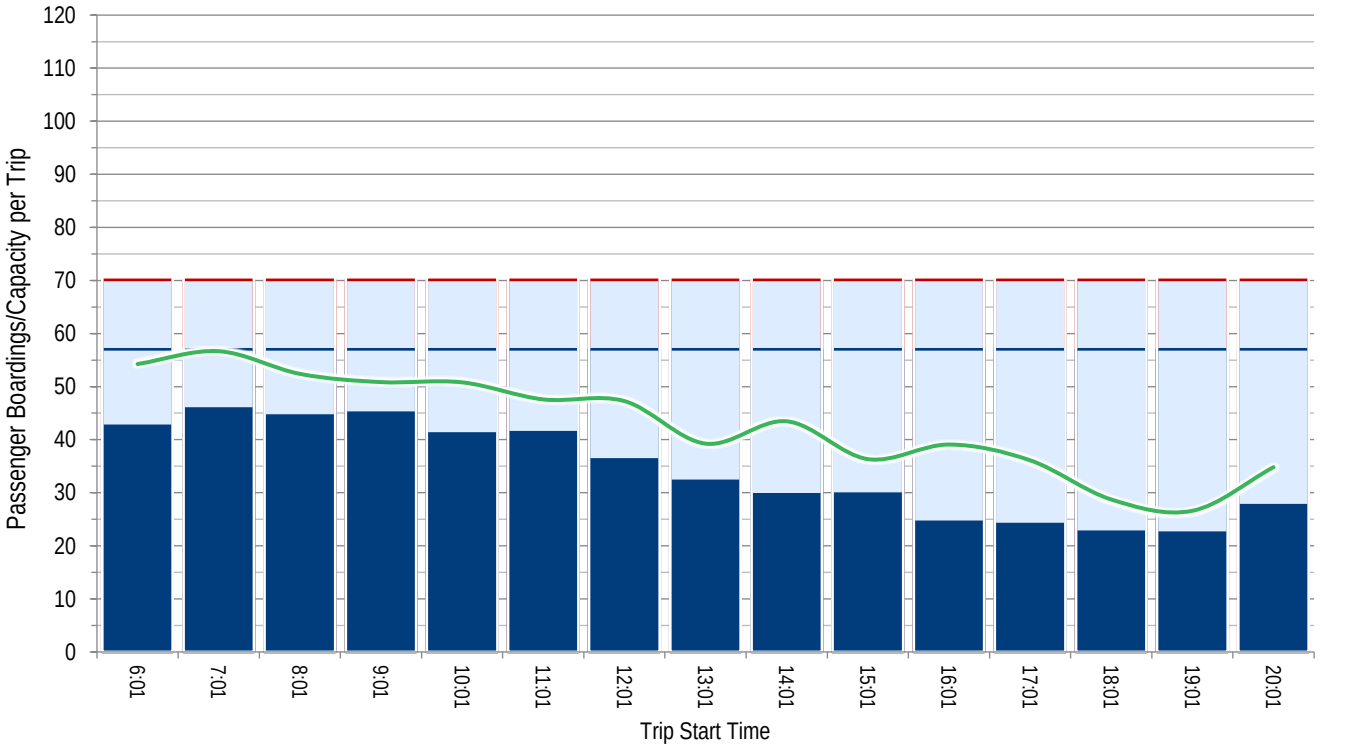
Northbound Average Trip Ridership & Maximum Passenger Loads — *Saturday*

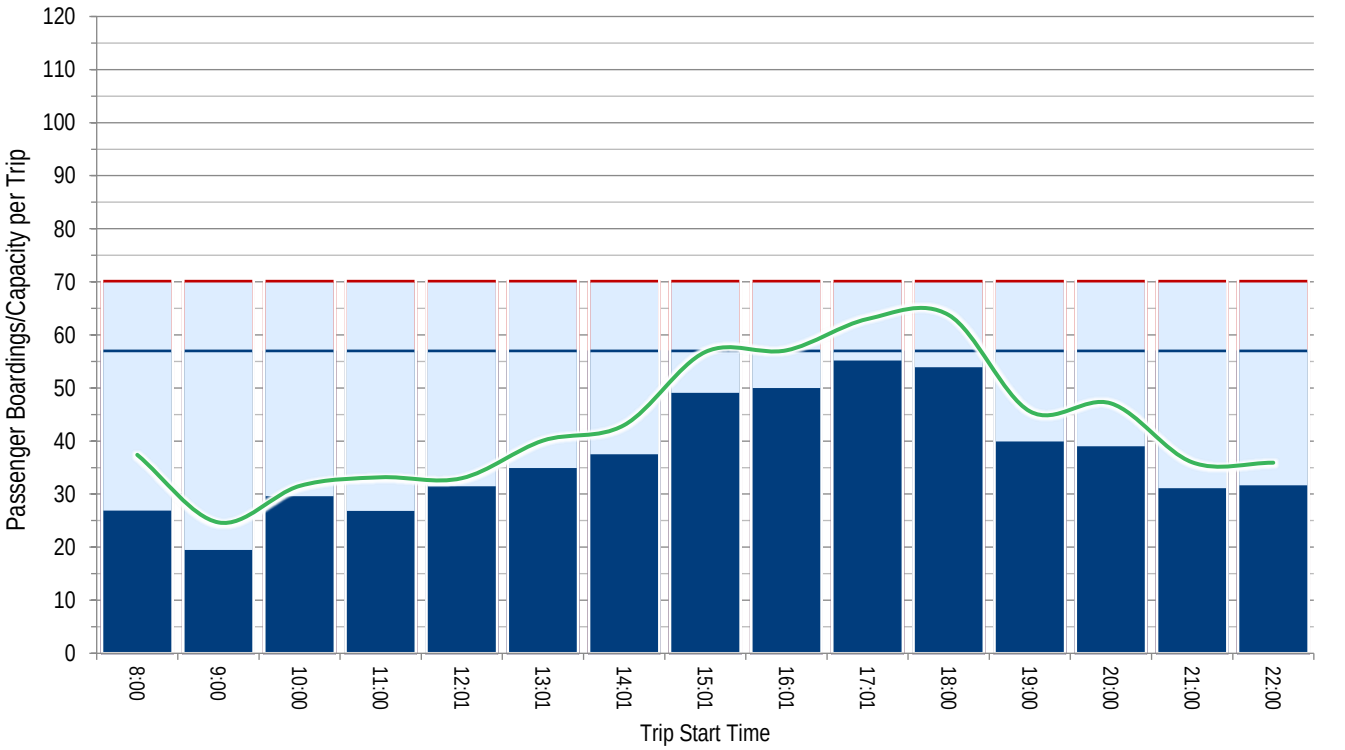


Average Maximum Passenger Load
Orange/Red: standing passengers
Blue: seated passengers

Average Passenger Boardings

Available Capacity
Red: seats plus standing
Blue: seats

Saturday — **Southbound** Average Trip Ridership & Maximum Passenger Loads



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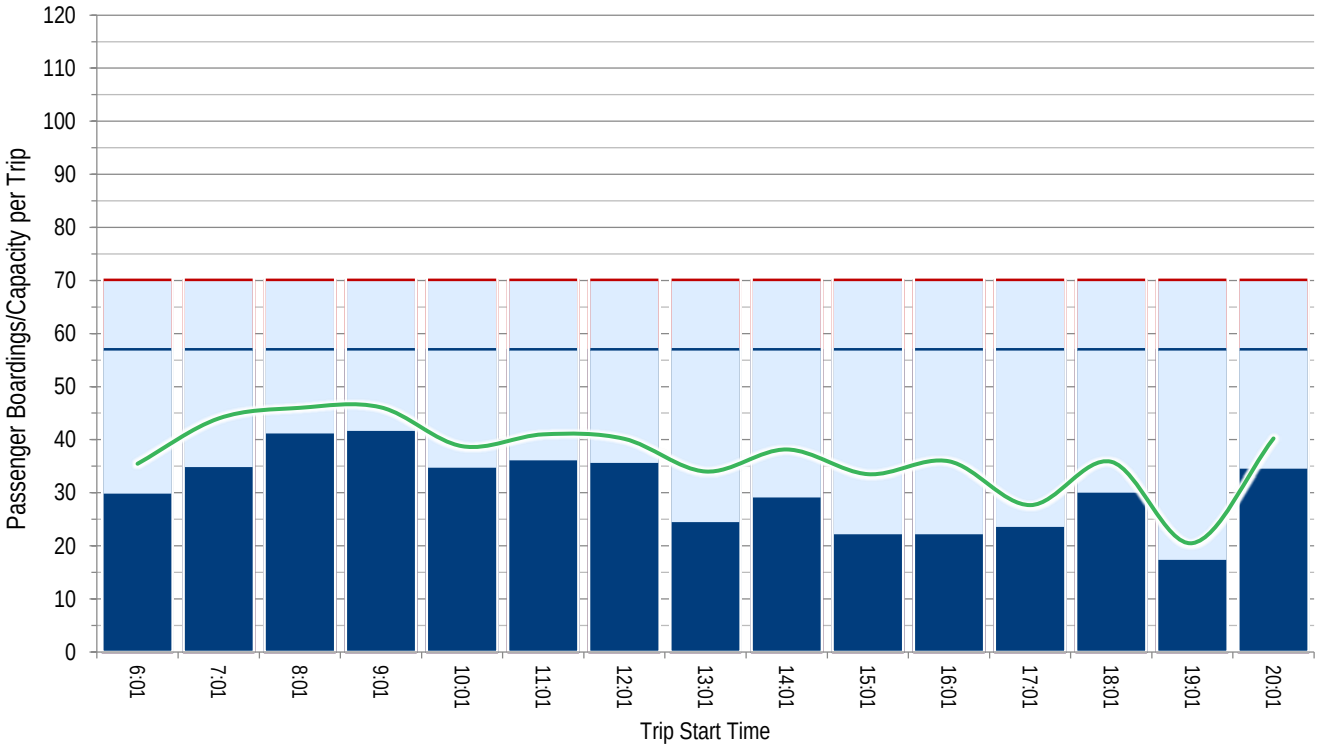
Northbound Average Trip Ridership & Maximum Passenger Loads — Sunday

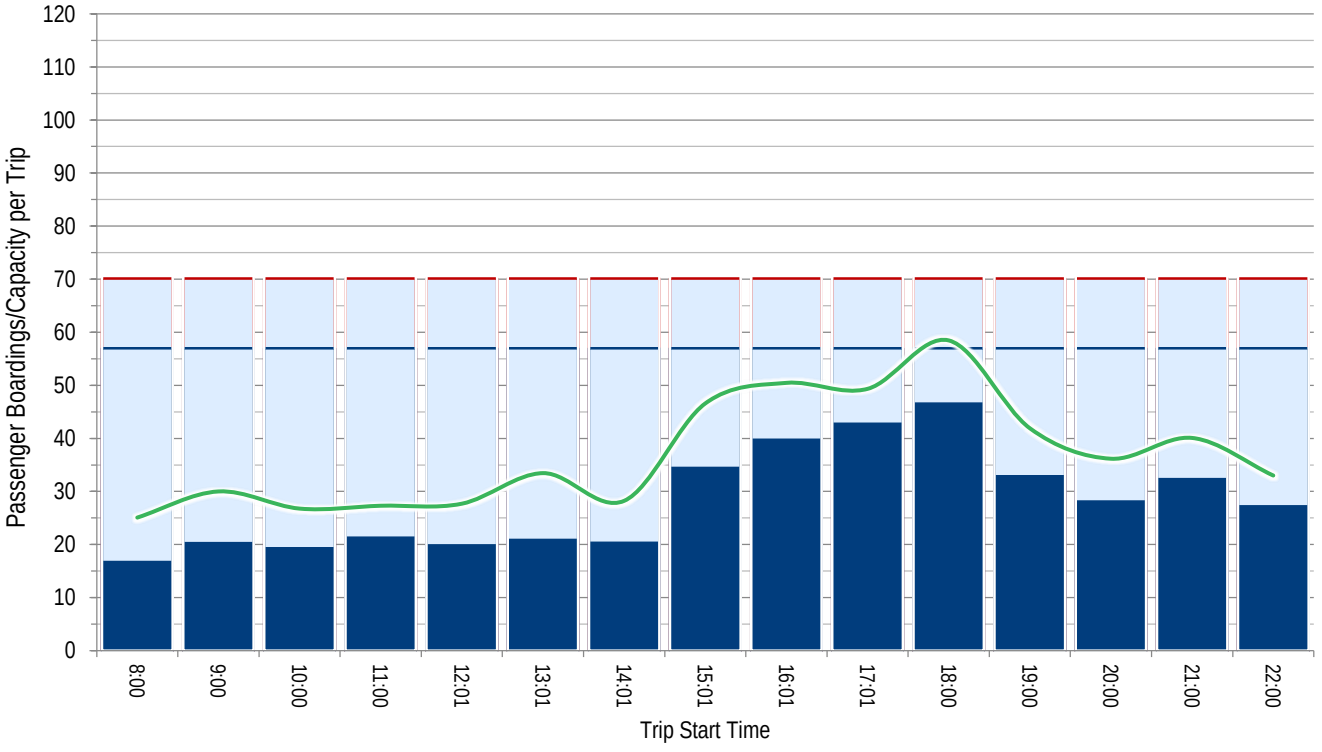


Average Maximum Passenger Load
Orange/Red: standing passengers
Blue: seated passengers

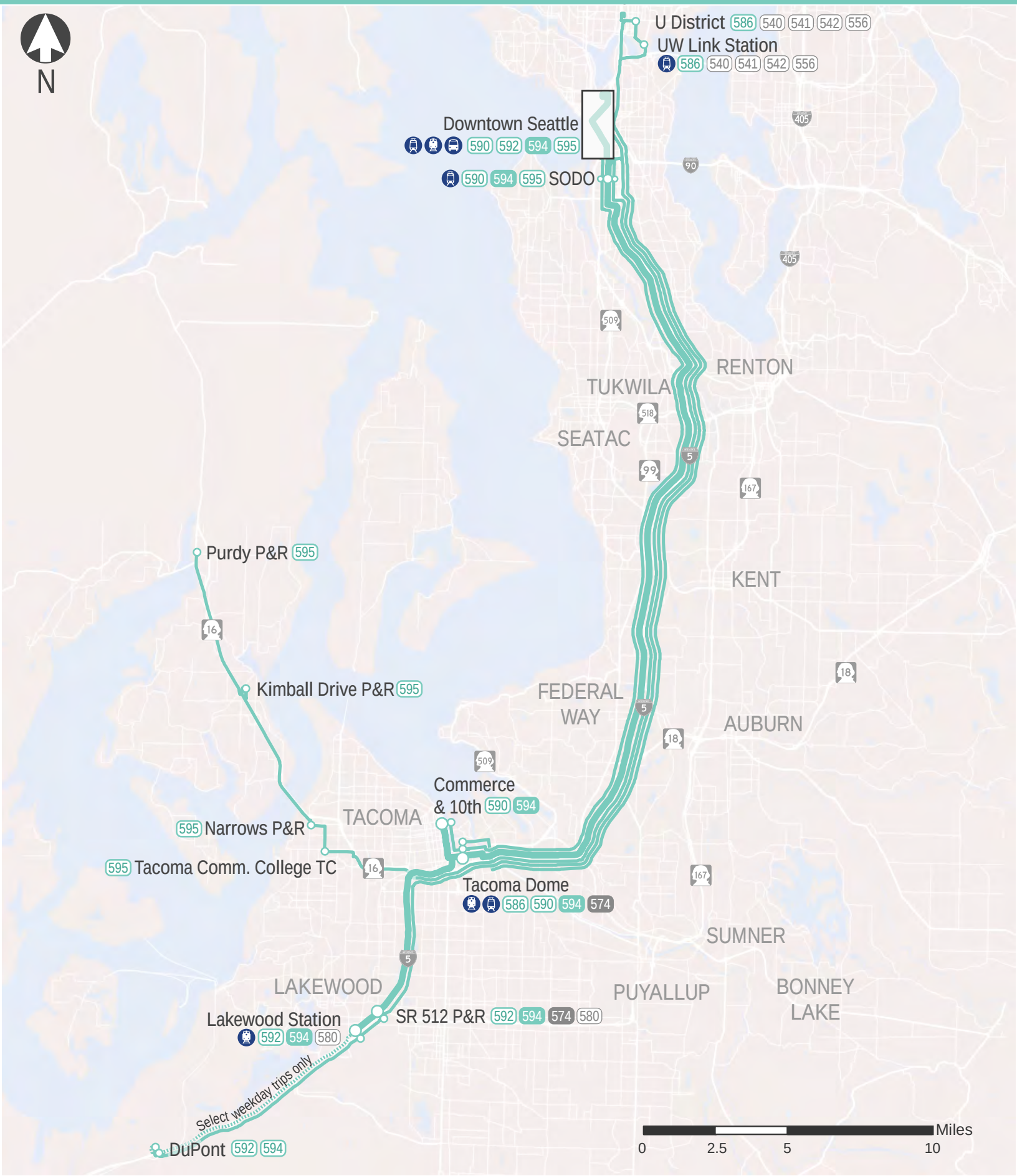
Average Passenger Boardings

Available Capacity
Red: seats plus standing
Blue: seats

Sunday — **Southbound** Average Trip Ridership & Maximum Passenger Loads



I-5 South - Pierce



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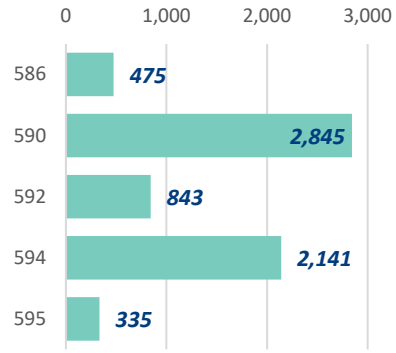
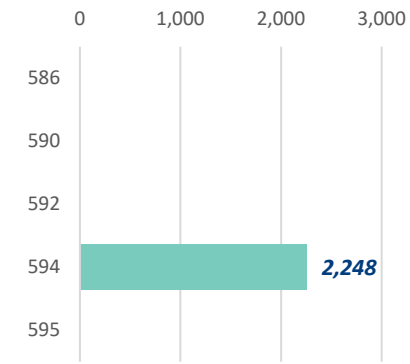
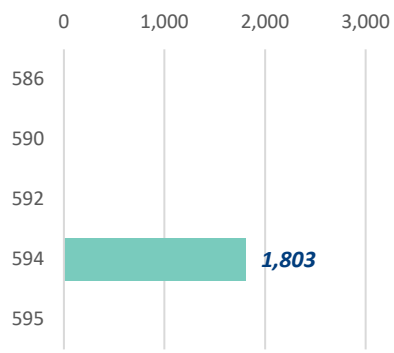
Weekday Ridership



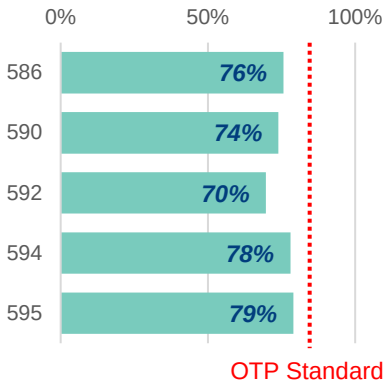
Saturday Ridership



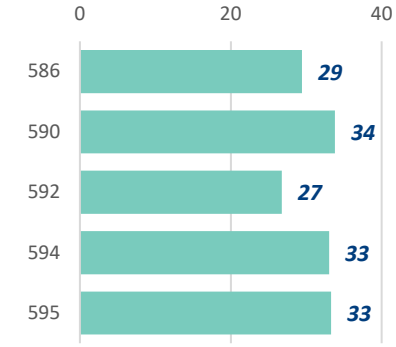
Sunday Ridership



OTP



Passengers per Trip



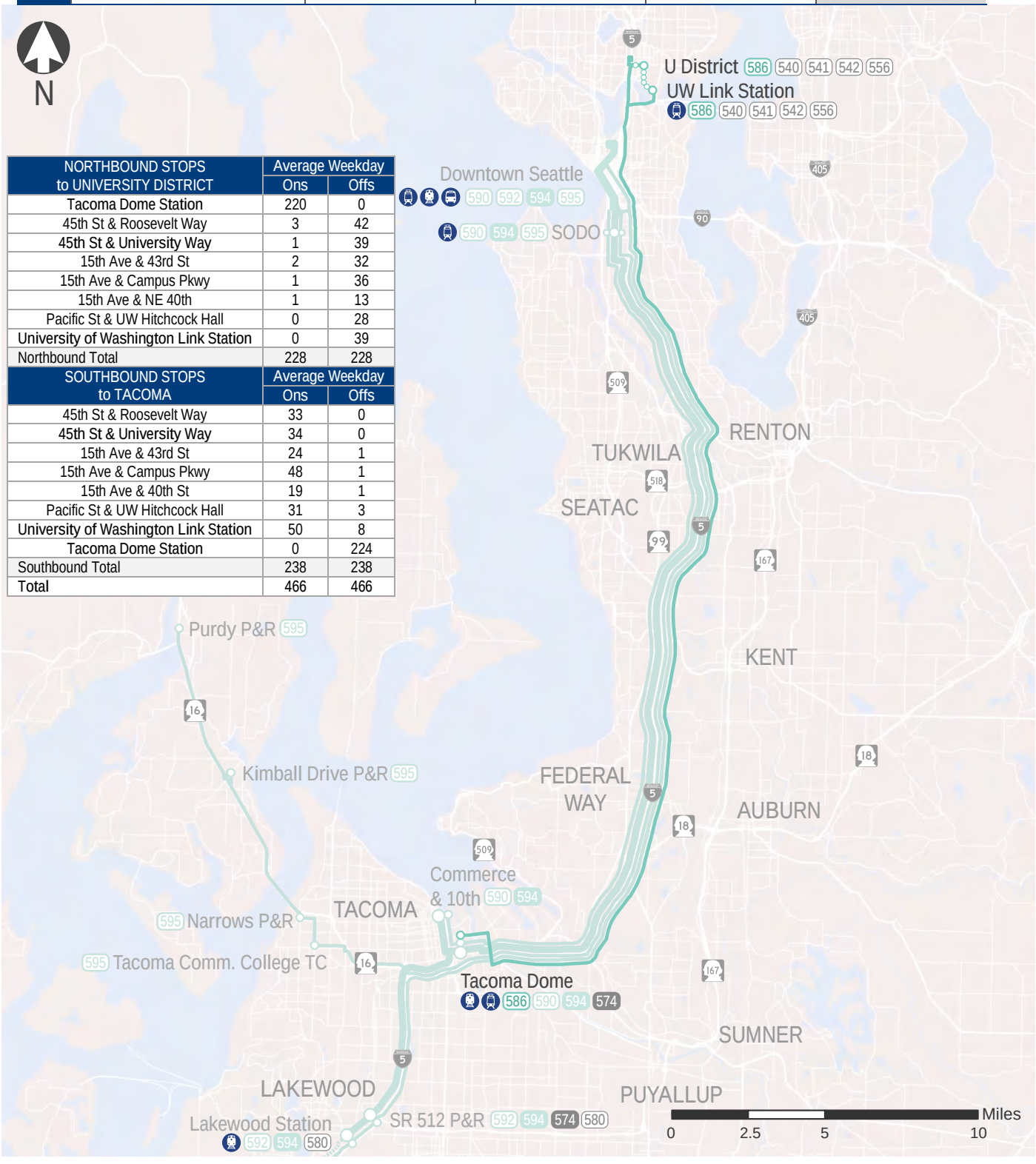
Corridor	I-5 Pierce	Hour																						
Day Type	Direction	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Weekday	Northbound																								
Weekday	Southbound																								
Saturday	Northbound																								
Saturday	Southbound																								
Sunday	Northbound																								
Sunday	Southbound																								
Service Frequency Legend		Very Frequent (<10 min)						Frequent (10-20 min)						Moderate (20-30 min)						Minimum (30-60 min)				

I-5 S Pierce

Route 586 Tacoma – U. District

Ridership	2015	2016	2017	SPRING 2018
Average **Weekday** Boardings	**559**	**446**	**458**	**475**
Average **Saturday** Boardings	**N/A**	**N/A**	**N/A**	**N/A**
Average **Sunday** Boardings	**N/A**	**N/A**	**N/A**	**N/A**
Annual Boardings	**142,624**	**113,823**	**116,249**	

NORTHBOUND STOPS to UNIVERSITY DISTRICT	Average Weekday	
	Ons	Offs
Tacoma Dome Station	220	0
45th St & Roosevelt Way	3	42
45th St & University Way	1	39
15th Ave & 43rd St	2	32
15th Ave & Campus Pkwy	1	36
15th Ave & NE 40th	1	13
Pacific St & UW Hitchcock Hall	0	28
University of Washington Link Station	0	39
Northbound Total	228	228
SOUTHBOUND STOPS to TACOMA	**Average Weekday**	
	Ons	Offs
45th St & Roosevelt Way	33	0
45th St & University Way	34	0
15th Ave & 43rd St	24	1
15th Ave & Campus Pkwy	48	1
15th Ave & 40th St	19	1
Pacific St & UW Hitchcock Hall	31	3
University of Washington Link Station	50	8
Tacoma Dome Station	0	224
Southbound Total	238	238
Total	466	466



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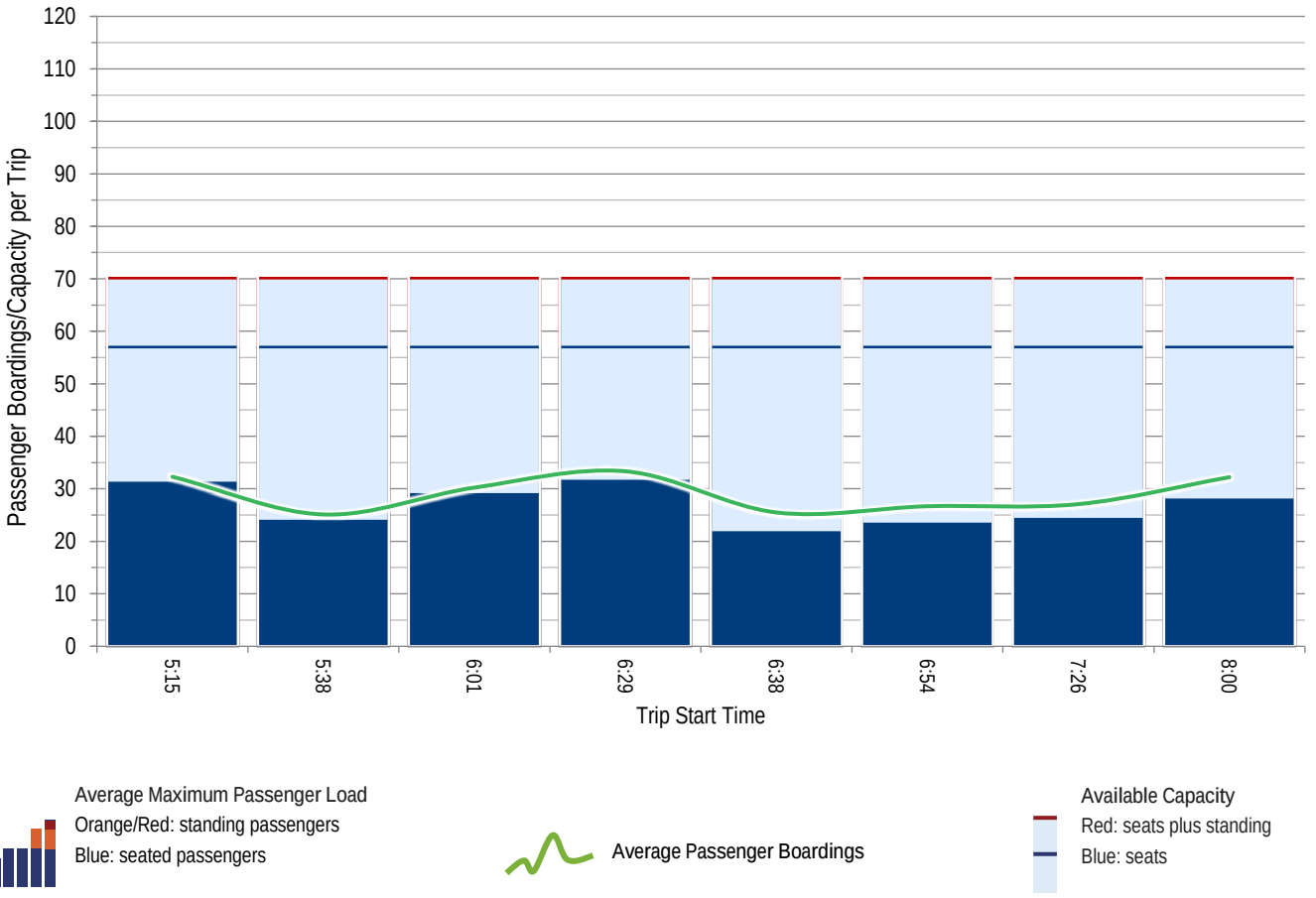
Northbound Average Trip Ridership & Maximum Passenger Loads — *Weekday*

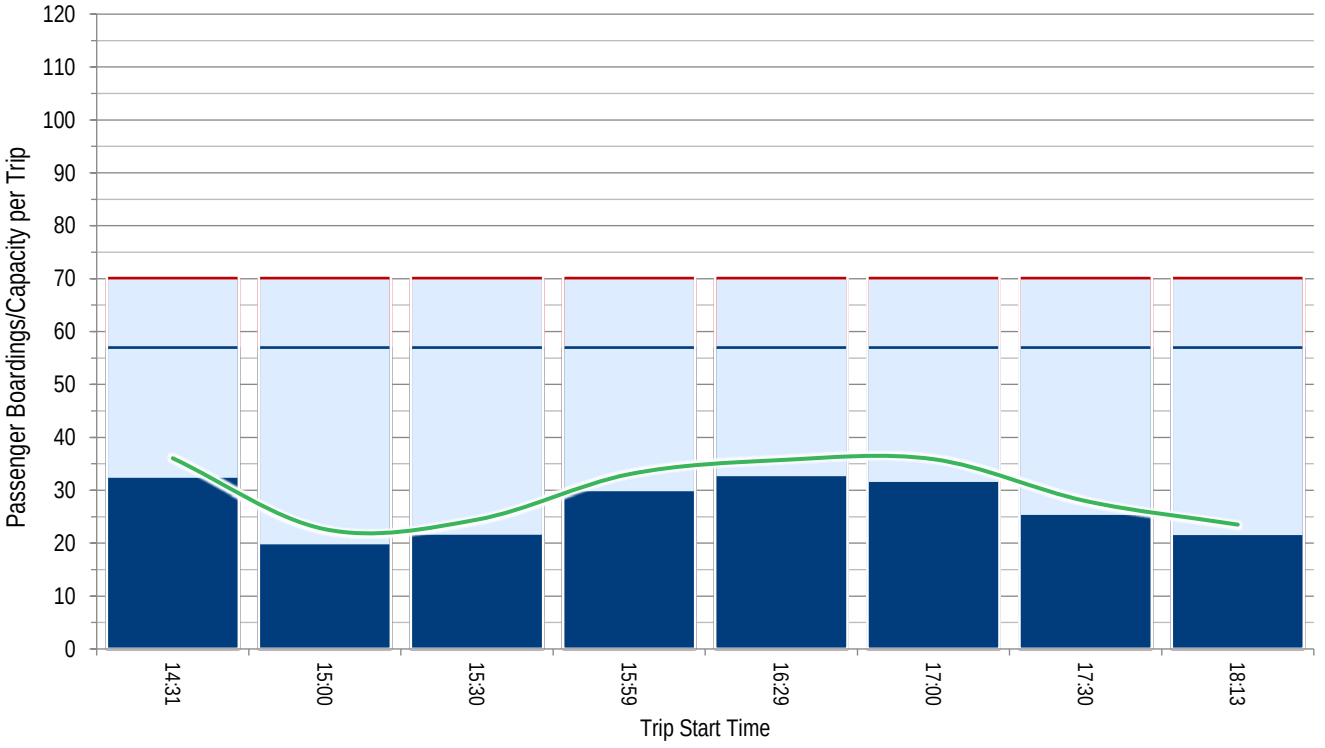


Average Maximum Passenger Load
Orange/Red: standing passengers
Blue: seated passengers

Average Passenger Boardings

Available Capacity
Red: seats plus standing
Blue: seats

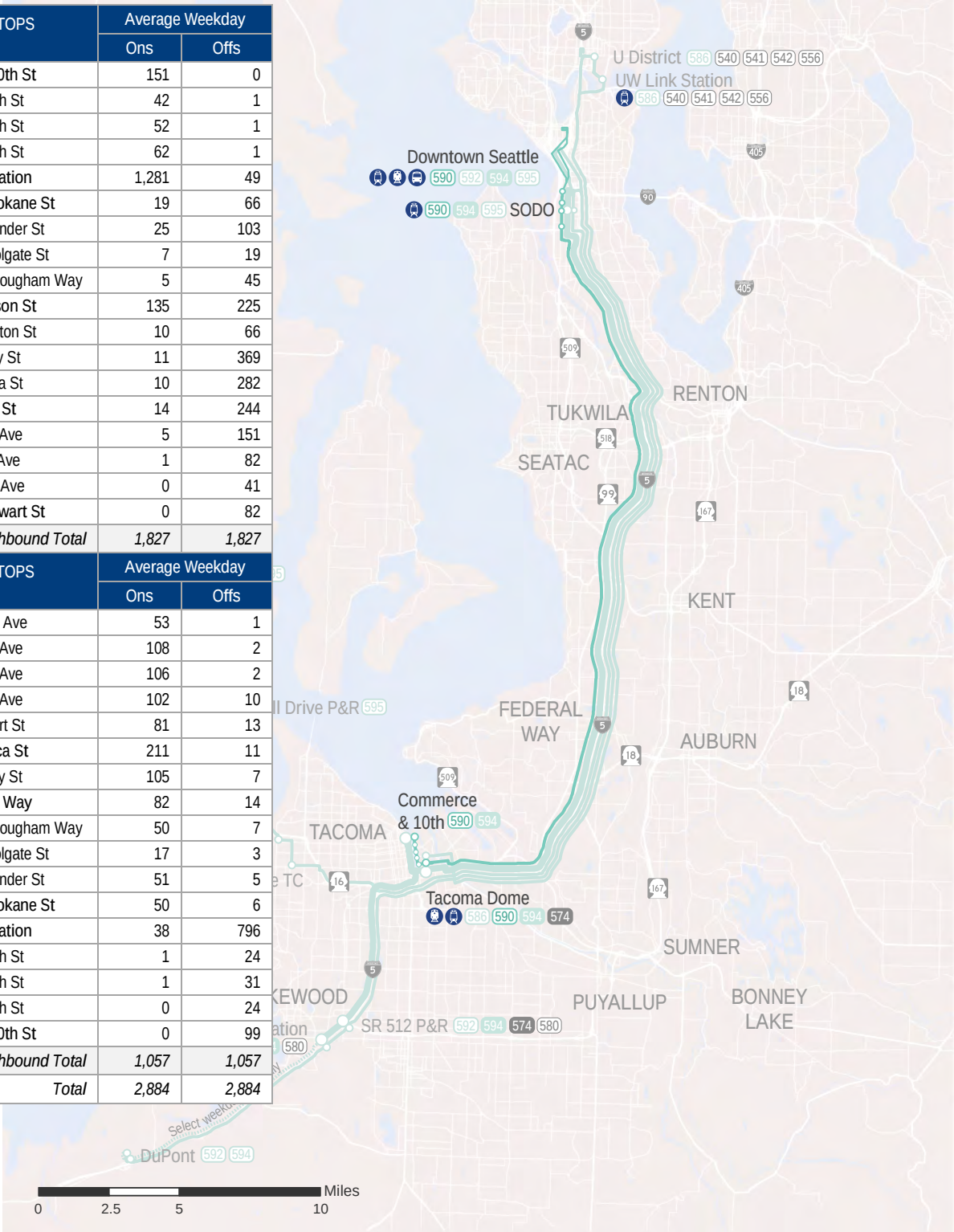
Weekday **Southbound** Average Trip Ridership & Maximum Passenger Loads



Route 590 Tacoma – Seattle

Ridership	2015	2016	2017	SPRING 2018
Average **Weekday** Boardings	**2,870**	**2,789**	**2,853**	**2,845**
Average **Saturday** Boardings	**N/A**	**N/A**	**N/A**	**N/A**
Average **Sunday** Boardings	**N/A**	**N/A**	**N/A**	**N/A**
Annual Boardings	**731,746**	**711,131**	**724,644**	

NORTHBOUND STOPS to SEATTLE	Average Weekday	
	Ons	Offs
Commerce St & 10th St	151	0
Pacific Ave & 14th St	42	1
Pacific Ave & 19th St	52	1
Pacific Ave & 24th St	62	1
Tacoma Dome Station	1,281	49
SODO Busway & Spokane St	19	66
SODO Busway & Lander St	25	103
SODO Busway & Holgate St	7	19
SODO Busway & Royal Brougham Way	5	45
4th Ave & S Jackson St	135	225
4th Ave & Washington St	10	66
4th Ave & Cherry St	11	369
4th Ave & Seneca St	10	282
4th Ave & Pike St	14	244
Olive Way & 6th Ave	5	151
Howell St & 9th Ave	1	82
Howell St & Yale Ave	0	41
Eastlake Ave & Stewart St	0	82
Northbound Total	*1,827*	*1,827*
SOUTHBOUND STOPS to TACOMA	**Average Weekday**	
	Ons	Offs
Stewart St & Yale Ave	53	1
Stewart St & 9th Ave	108	2
Stewart St & 7th Ave	106	2
Stewart St & 4th Ave	102	10
2nd Ave & Stewart St	81	13
2nd Ave & Seneca St	211	11
2nd Ave & Cherry St	105	7
2nd Ave & Yesler Way	82	14
SODO Busway & Royal Brougham Way	50	7
SODO Busway & Holgate St	17	3
SODO Busway & Lander St	51	5
SODO Busway & Spokane St	50	6
Tacoma Dome Station	38	796
Pacific Ave & 24th St	1	24
Pacific Ave & 19th St	1	31
Pacific Ave & 14th St	0	24
Commerce St & 10th St	0	99
Southbound Total	*1,057*	*1,057*
Total	*2,884*	*2,884*



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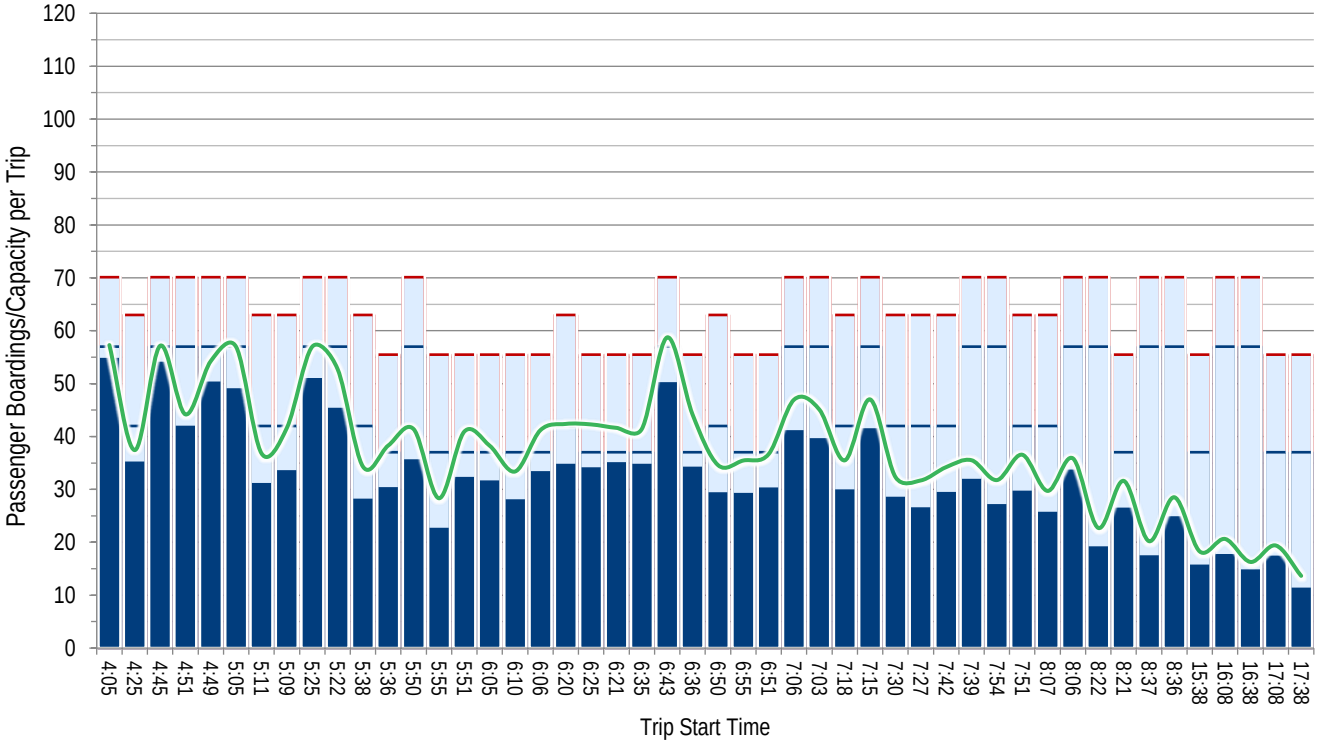
Northbound Average Trip Ridership & Maximum Passenger Loads — *Weekday*

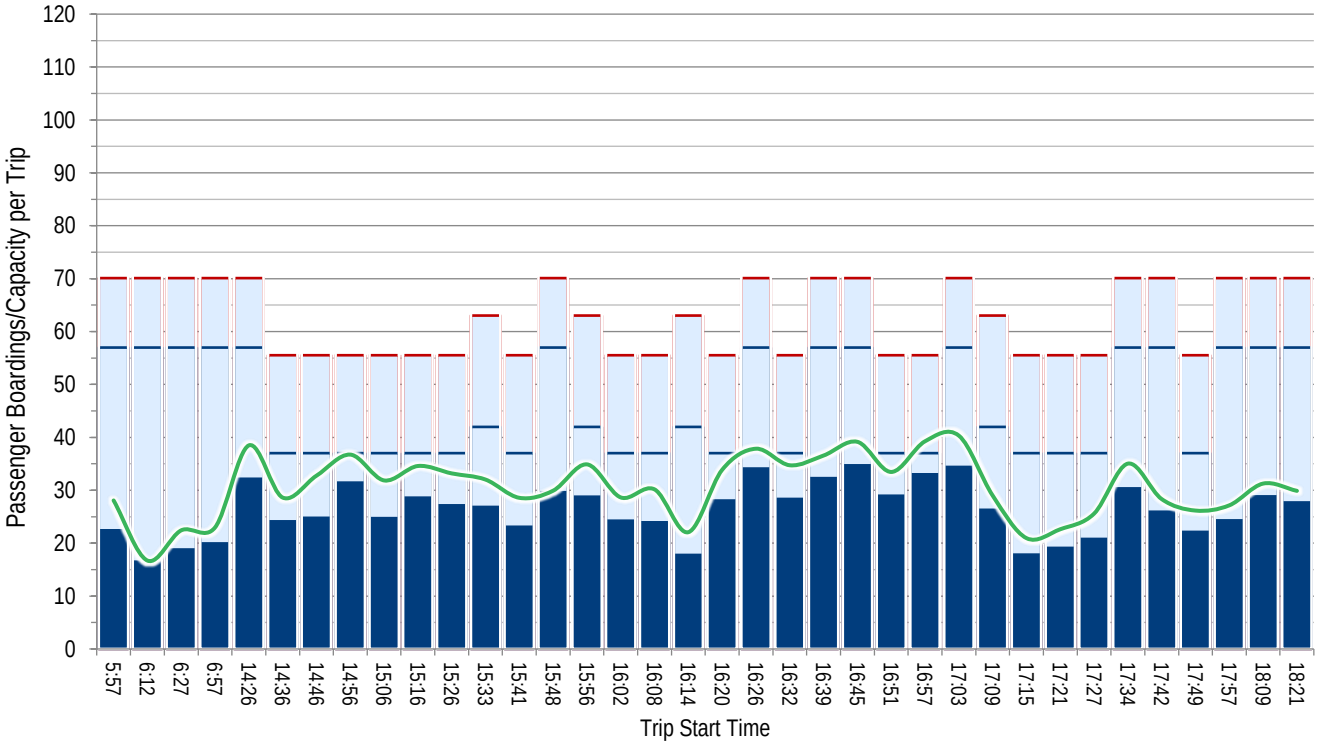


Average Maximum Passenger Load
Orange/Red: standing passengers
Blue: seated passengers

Average Passenger Boardings

Available Capacity
Red: seats plus standing
Blue: seats

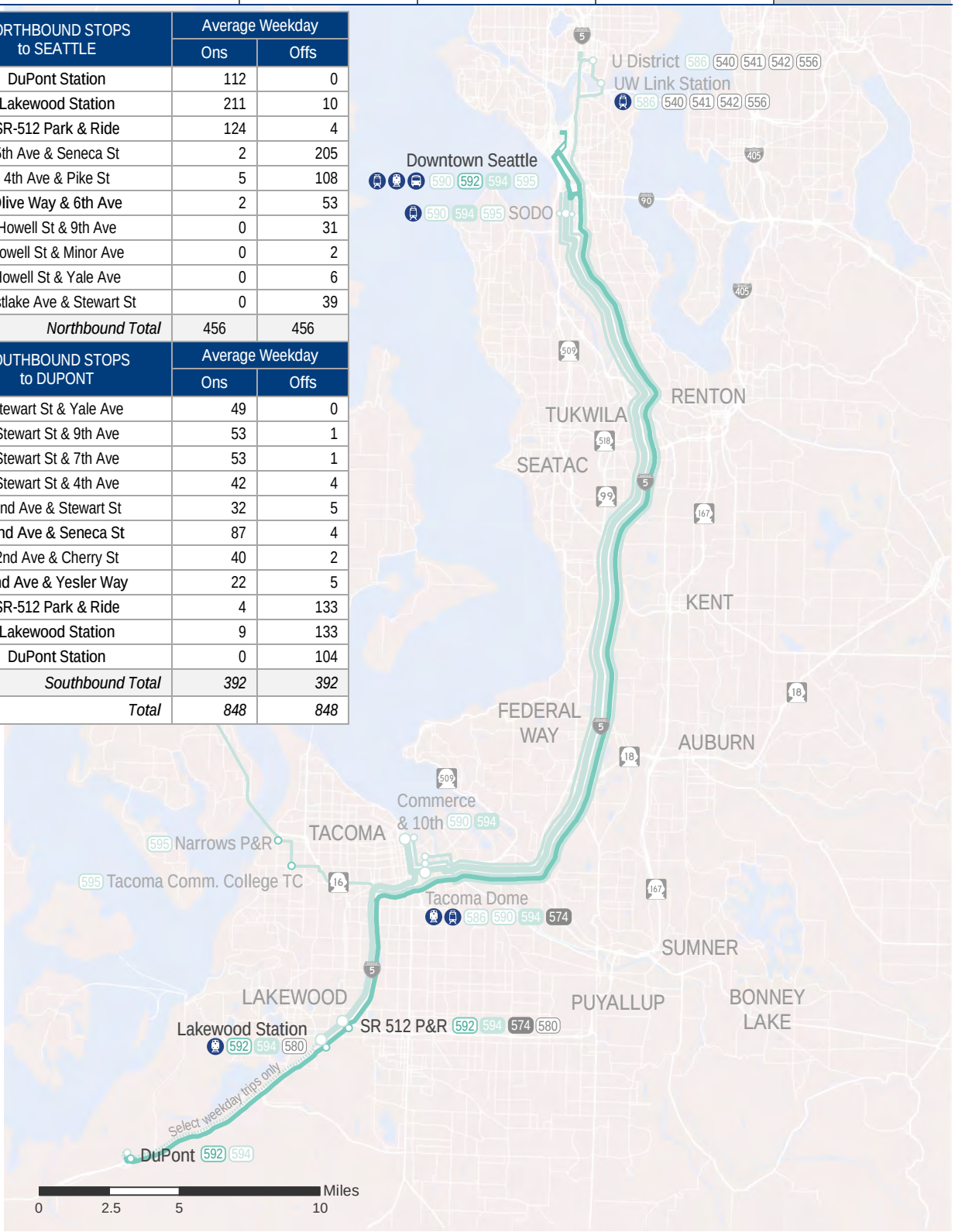
Weekday **Southbound** Average Trip Ridership & Maximum Passenger Loads



Route 592 DuPont – Lakewood – Seattle

Ridership	2015	2016	2017	SPRING 2018
Average **Weekday** Boardings	**1,021**	**971**	**940**	**843**
Average **Saturday** Boardings	**N/A**	**N/A**	**N/A**	**N/A**
Average **Sunday** Boardings	**N/A**	**N/A**	**N/A**	**N/A**
Annual Boardings	**260,337**	**247,527**	**238,773**	

NORTHBOUND STOPS to SEATTLE	Average Weekday	
	Ons	Offs
DuPont Station	112	0
Lakewood Station	211	10
SR-512 Park & Ride	124	4
5th Ave & Seneca St	2	205
4th Ave & Pike St	5	108
Olive Way & 6th Ave	2	53
Howell St & 9th Ave	0	31
Howell St & Minor Ave	0	2
Howell St & Yale Ave	0	6
Eastlake Ave & Stewart St	0	39
Northbound Total	456	456
SOUTHBOUND STOPS to DUPONT	**Average Weekday**	
	Ons	Offs
Stewart St & Yale Ave	49	0
Stewart St & 9th Ave	53	1
Stewart St & 7th Ave	53	1
Stewart St & 4th Ave	42	4
2nd Ave & Stewart St	32	5
2nd Ave & Seneca St	87	4
2nd Ave & Cherry St	40	2
2nd Ave & Yesler Way	22	5
SR-512 Park & Ride	4	133
Lakewood Station	9	133
DuPont Station	0	104
Southbound Total	*392*	*392*
Total	*848*	*848*



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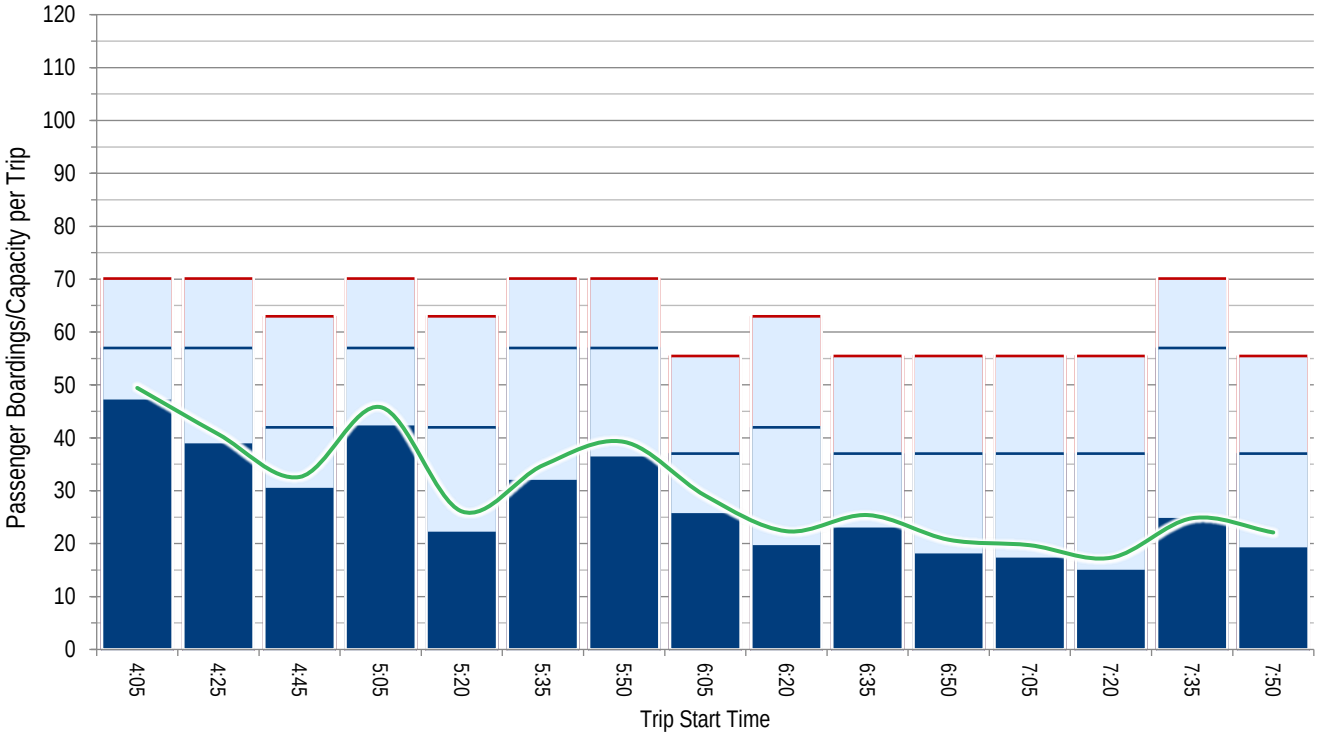
Northbound Average Trip Ridership & Maximum Passenger Loads — *Weekday*

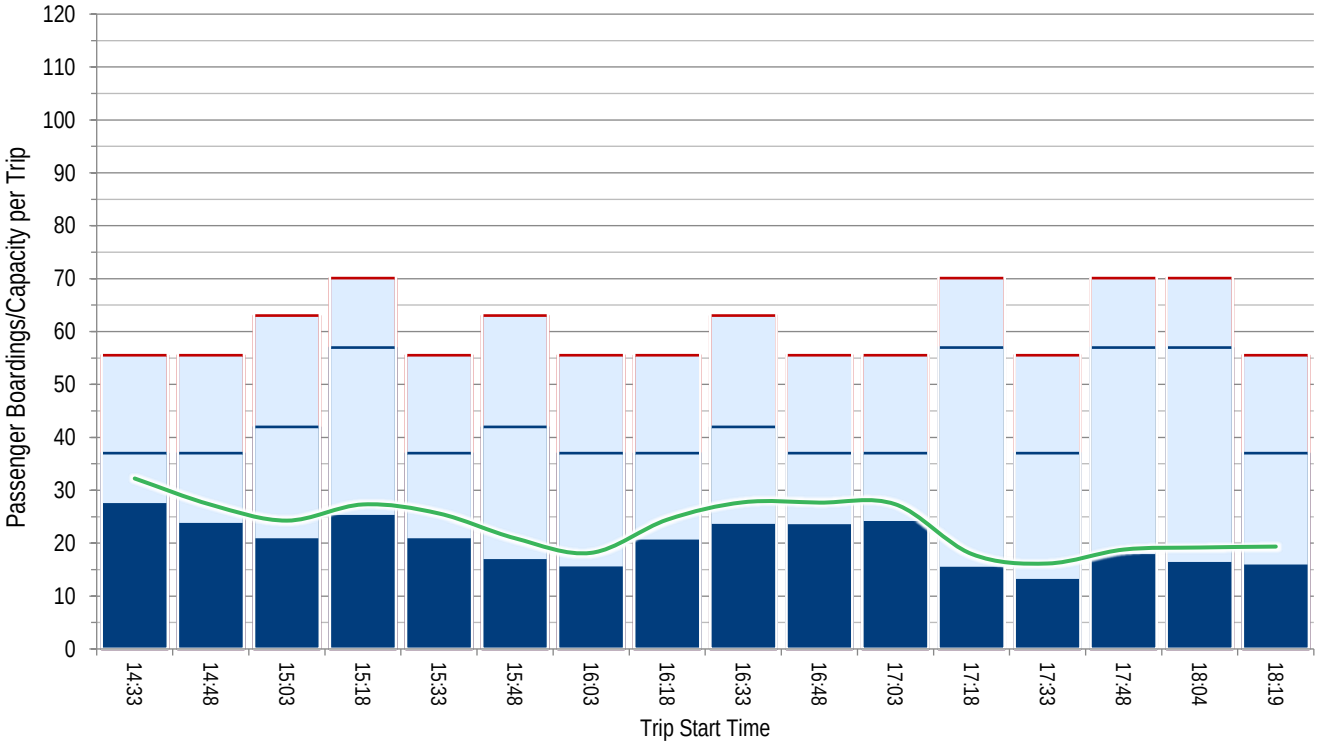


Average Maximum Passenger Load
Orange/Red: standing passengers
Blue: seated passengers

Average Passenger Boardings

Available Capacity
Red: seats plus standing
Blue: seats

Weekday — **Southbound** Average Trip Ridership & Maximum Passenger Loads

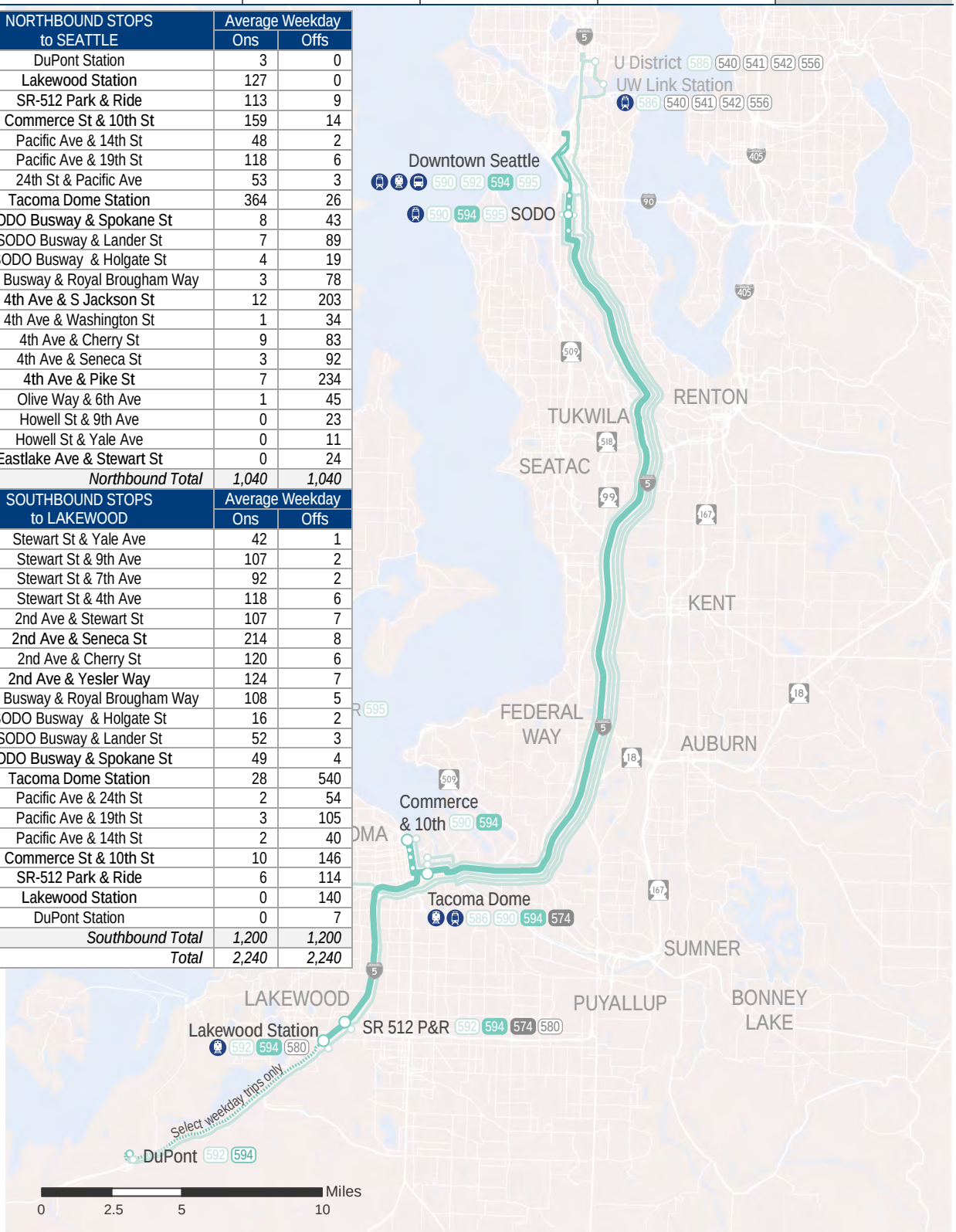


Route 594 Lakewood – Seattle

Ridership	2015	2016	2017	SPRING 2018
Average **Weekday** Boardings	**2,116**	**2,157**	**2,128**	**2,141**
Average **Saturday** Boardings	**2,460**	**2,214**	**2,294**	**2,248**
Average **Sunday** Boardings	**1,853**	**1,791**	**1,791**	**1,803**
Annual Boardings	**790,493**	**784,995**	**781,923**	

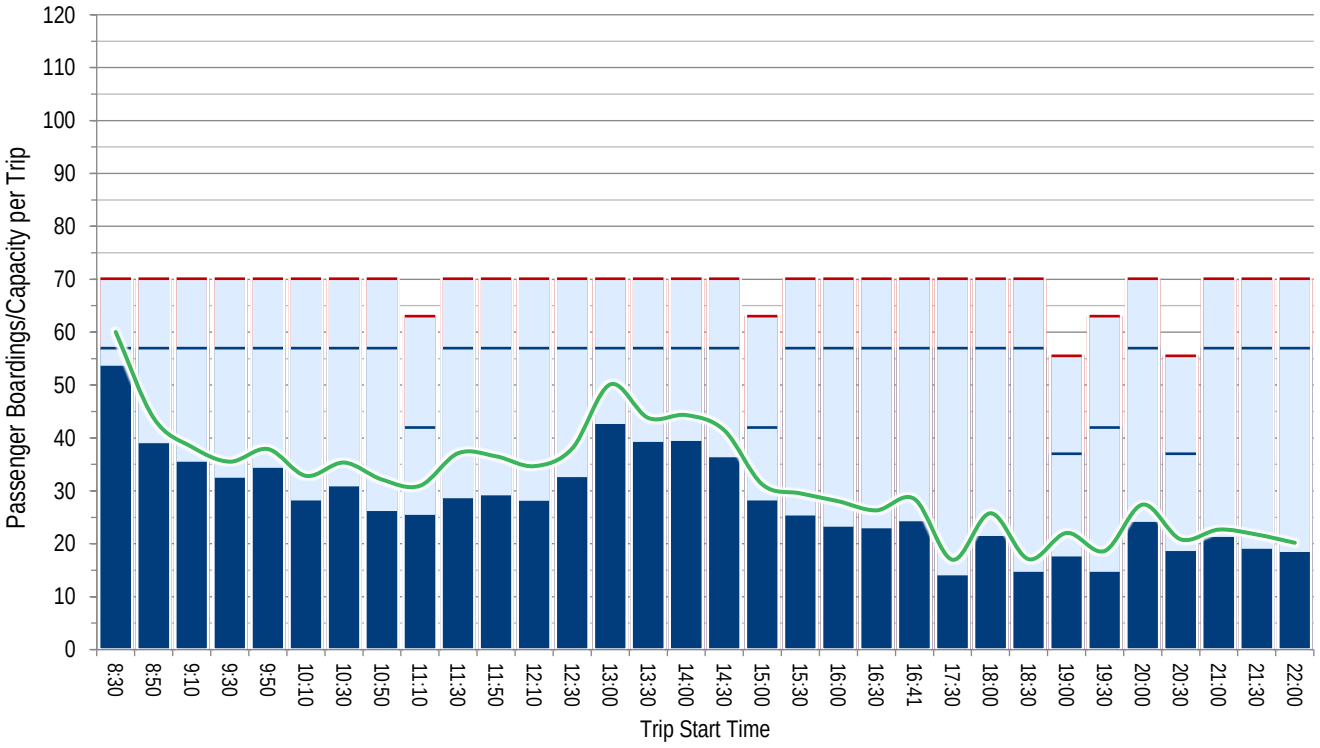
NORTHBOUND STOPS to SEATTLE	Average Weekday Ons	Offs
DuPont Station	3	0
Lakewood Station	127	0
SR-512 Park & Ride	113	9
Commerce St & 10th St	159	14
Pacific Ave & 14th St	48	2
Pacific Ave & 19th St	118	6
24th St & Pacific Ave	53	3
Tacoma Dome Station	364	26
SODO Busway & Spokane St	8	43
SODO Busway & Lander St	7	89
SODO Busway & Holgate St	4	19
SODO Busway & Royal Brougham Way	3	78
4th Ave & S Jackson St	12	203
4th Ave & Washington St	1	34
4th Ave & Cherry St	9	83
4th Ave & Seneca St	3	92
4th Ave & Pike St	7	234
Olive Way & 6th Ave	1	45
Howell St & 9th Ave	0	23
Howell St & Yale Ave	0	11
Eastlake Ave & Stewart St	0	24
Northbound Total	*1,040*	*1,040*

SOUTHBOUND STOPS to LAKEWOOD	Average Weekday Ons	Offs
Stewart St & Yale Ave	42	1
Stewart St & 9th Ave	107	2
Stewart St & 7th Ave	92	2
Stewart St & 4th Ave	118	6
2nd Ave & Stewart St	107	7
2nd Ave & Seneca St	214	8
2nd Ave & Cherry St	120	6
2nd Ave & Yesler Way	124	7
SODO Busway & Royal Brougham Way	108	5
SODO Busway & Holgate St	16	2
SODO Busway & Lander St	52	3
SODO Busway & Spokane St	49	4
Tacoma Dome Station	28	540
Pacific Ave & 24th St	2	54
Pacific Ave & 19th St	3	105
Pacific Ave & 14th St	2	40
Commerce St & 10th St	10	146
SR-512 Park & Ride	6	114
Lakewood Station	0	140
DuPont Station	0	7
Southbound Total	*1,200*	*1,200*
Total	*2,240*	*2,240*



DRAFT

Northbound Average Trip Ridership & Maximum Passenger Loads — *Weekday*

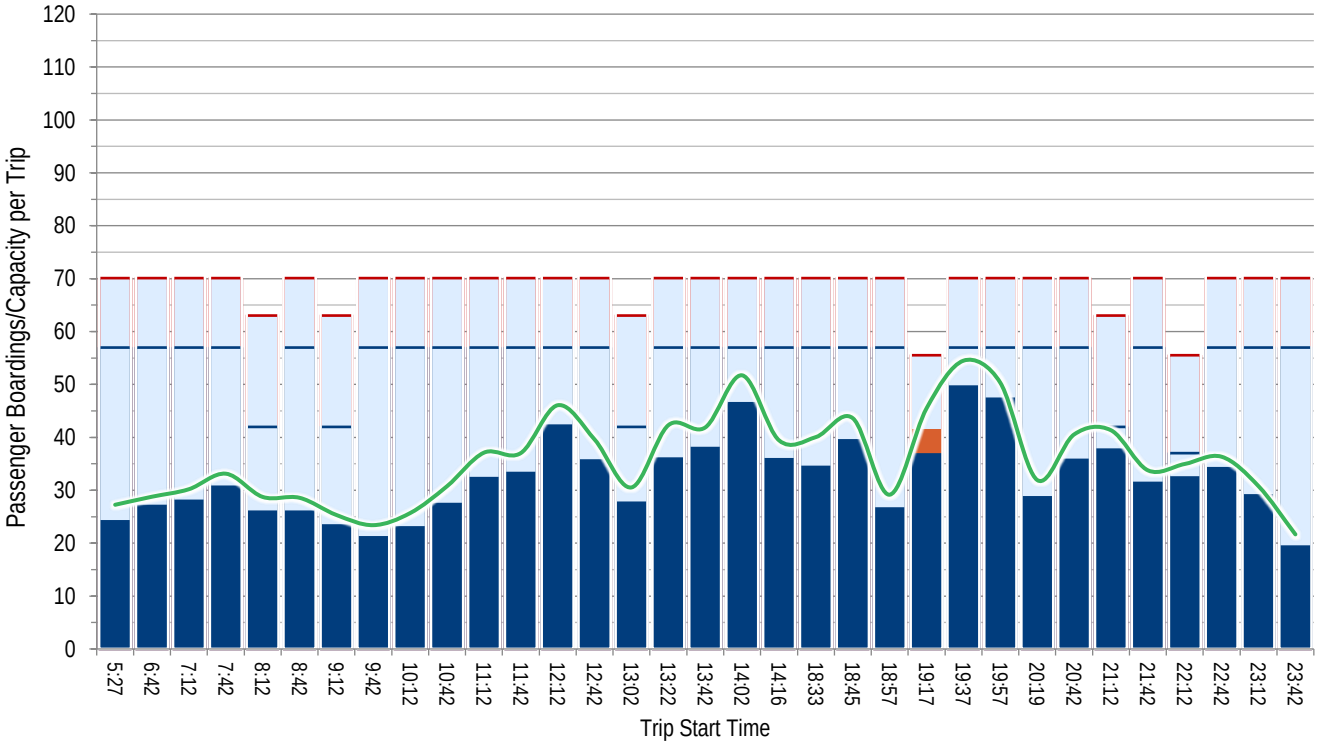


Average Maximum Passenger Load
Orange/Red: standing passengers
Blue: seated passengers

Average Passenger Boardings

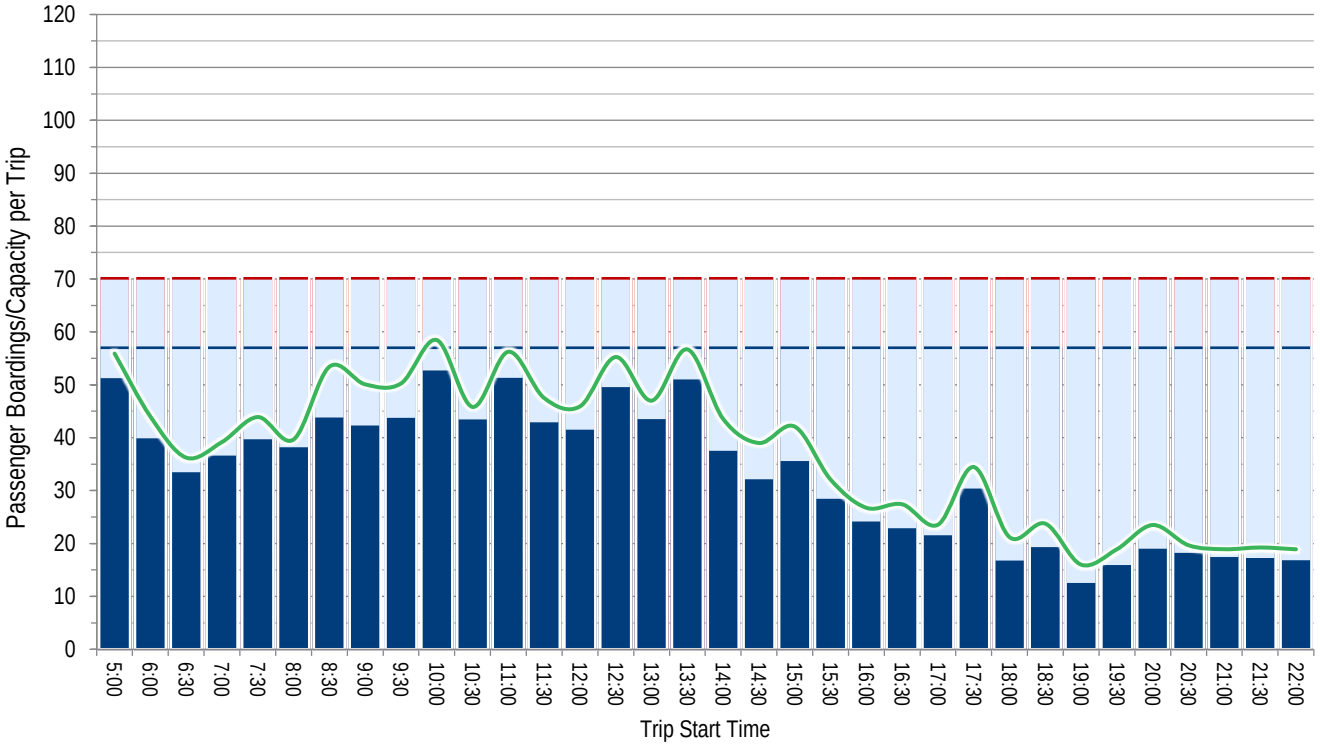
Available Capacity
Red: seats plus standing
Blue: seats

Weekday — **Southbound** Average Trip Ridership & Maximum Passenger Loads



DRAFT

Northbound Average Trip Ridership & Maximum Passenger Loads — *Saturday*

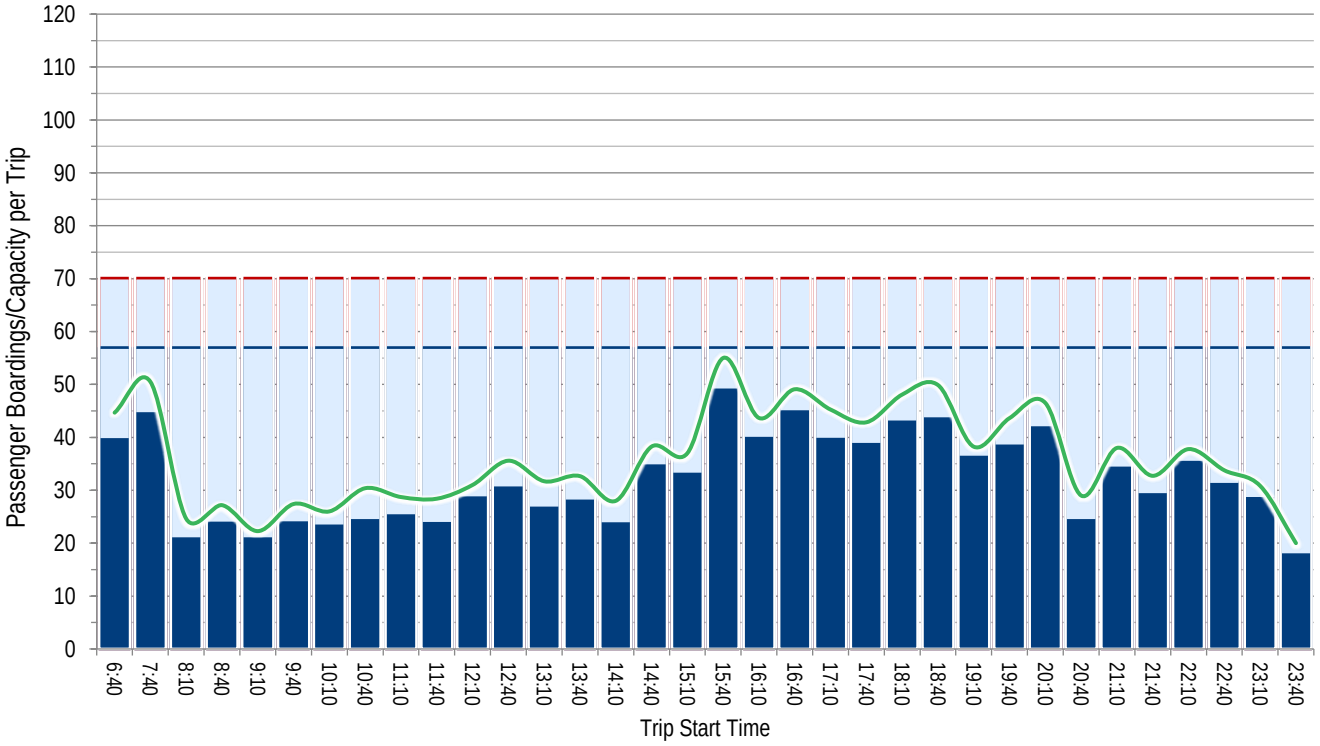


Average Maximum Passenger Load
Orange/Red: standing passengers
Blue: seated passengers

Average Passenger Boardings

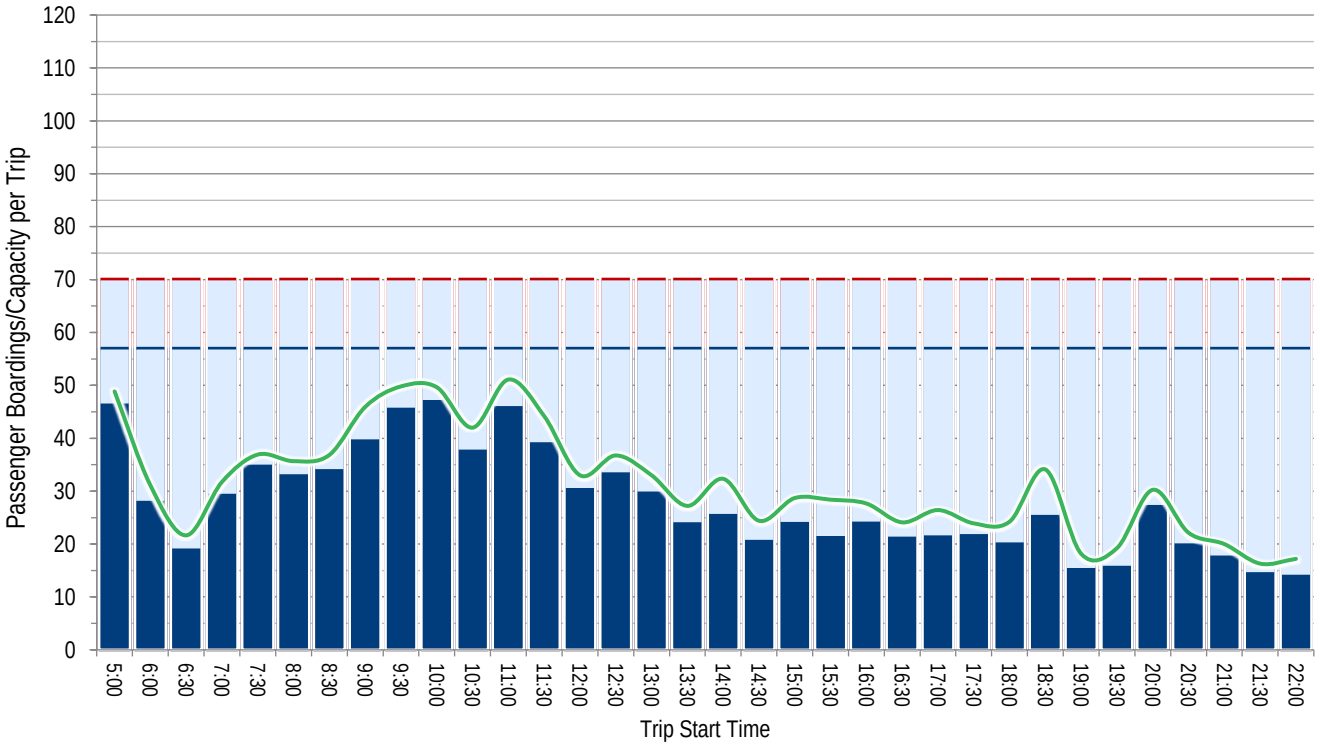
Available Capacity
Red: seats plus standing
Blue: seats

Saturday — **Southbound** Average Trip Ridership & Maximum Passenger Loads



DRAFT

Northbound Average Trip Ridership & Maximum Passenger Loads — Sunday

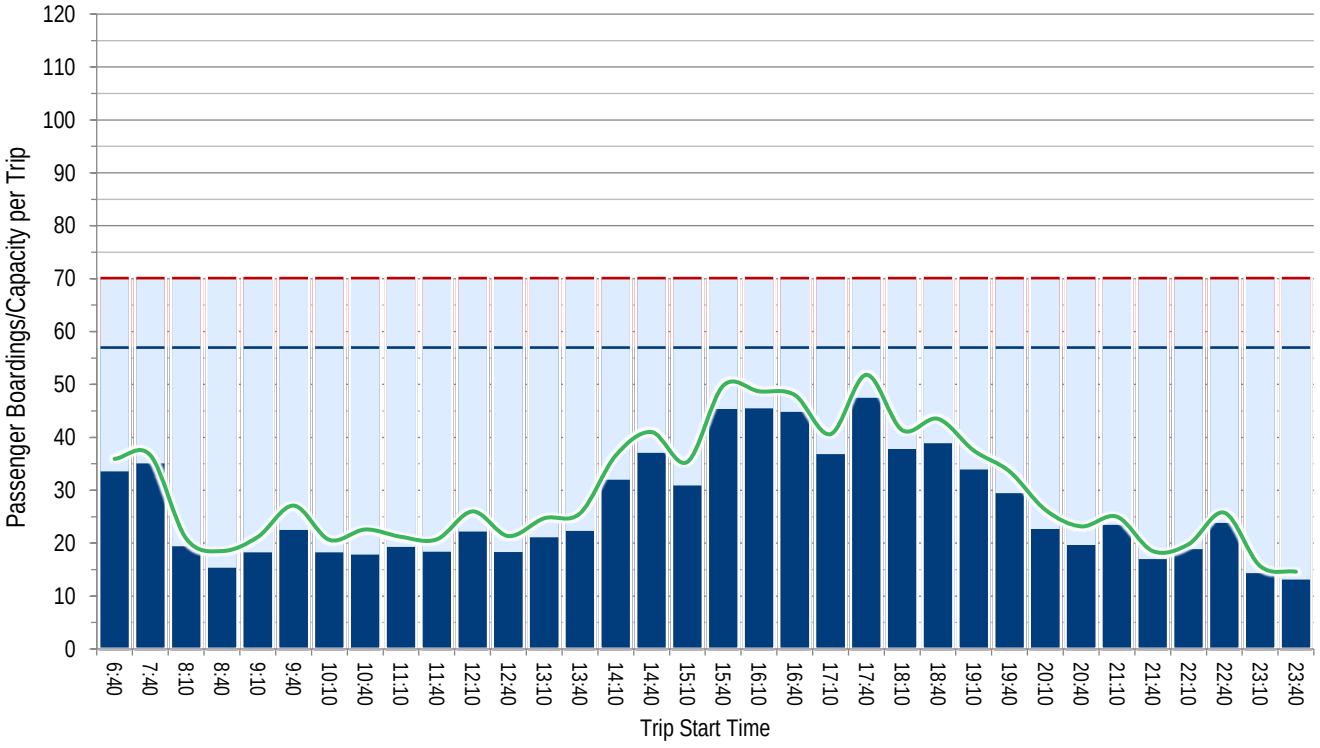


Average Maximum Passenger Load
Orange/Red: standing passengers
Blue: seated passengers

Average Passenger Boardings

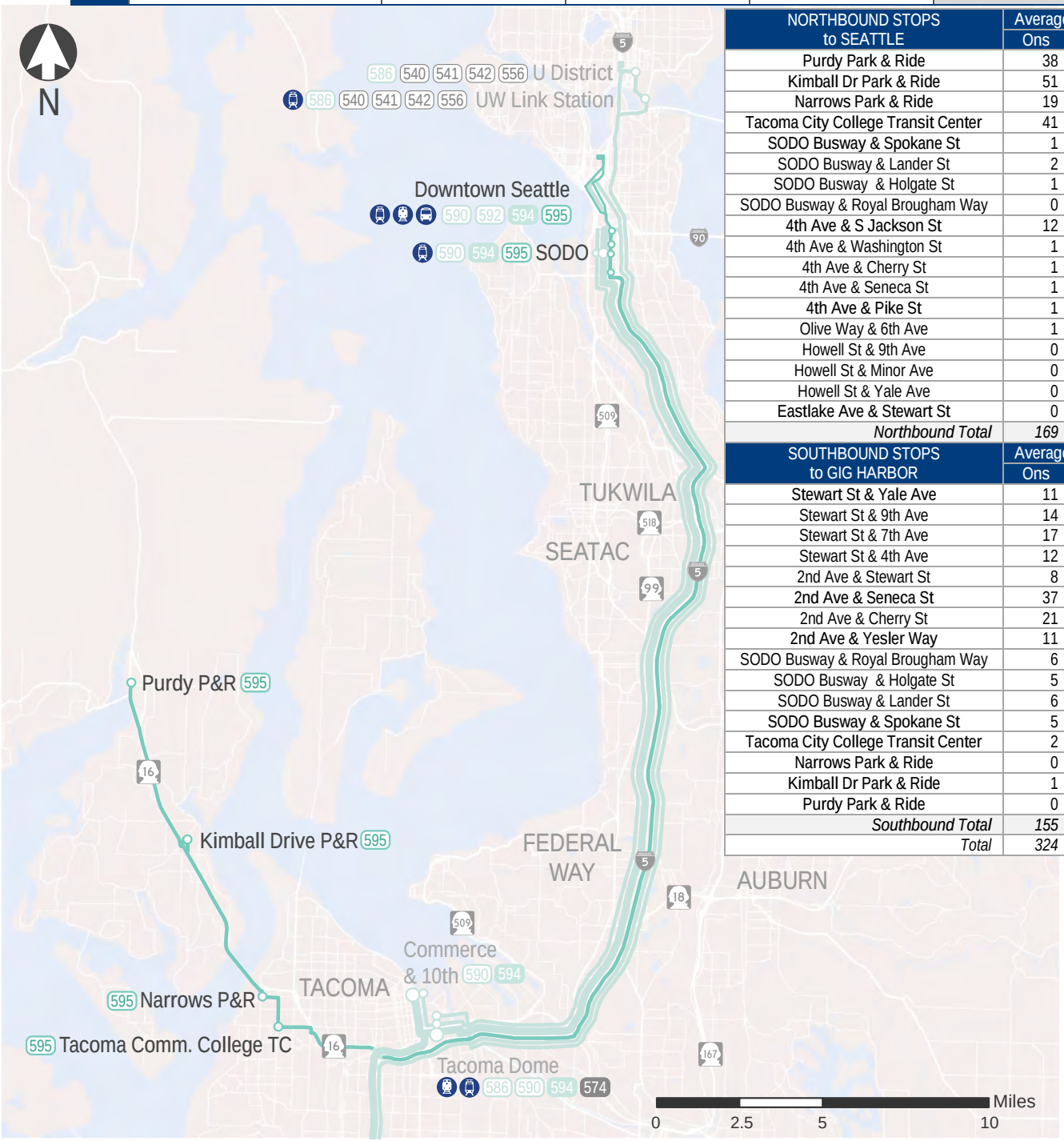
Available Capacity
Red: seats plus standing
Blue: seats

Sunday — **Southbound** Average Trip Ridership & Maximum Passenger Loads



Route 595 Gig Harbor – Seattle

Ridership	2015	2016	2017	SPRING 2018
Average **Weekday** Boardings	**371**	**346**	**352**	**335**
Average **Saturday** Boardings	**N/A**	**N/A**	**N/A**	**N/A**
Average **Sunday** Boardings	**N/A**	**N/A**	**N/A**	**N/A**
Annual Boardings	**94,603**	**88,218**	**89,496**	



NORTHBOUND STOPS to SEATTLE	Average Weekday Ons	Offs
Purdy Park & Ride	38	0
Kimball Dr Park & Ride	51	0
Narrows Park & Ride	19	0
Tacoma City College Transit Center	41	2
SODO Busway & Spokane St	1	5
SODO Busway & Lander St	2	9
SODO Busway & Holgate St	1	4
SODO Busway & Royal Brougham Way	0	2
4th Ave & S Jackson St	12	17
4th Ave & Washington St	1	3
4th Ave & Cherry St	1	38
4th Ave & Seneca St	1	31
4th Ave & Pike St	1	18
Olive Way & 6th Ave	1	20
Howell St & 9th Ave	0	8
Howell St & Minor Ave	0	0
Howell St & Yale Ave	0	3
Eastlake Ave & Stewart St	0	8
Northbound Total	*169*	*169*
SOUTHBOUND STOPS to GIG HARBOR	**Average Weekday Ons**	**Offs**
Stewart St & Yale Ave	11	0
Stewart St & 9th Ave	14	0
Stewart St & 7th Ave	17	0
Stewart St & 4th Ave	12	1
2nd Ave & Stewart St	8	1
2nd Ave & Seneca St	37	1
2nd Ave & Cherry St	21	0
2nd Ave & Yesler Way	11	1
SODO Busway & Royal Brougham Way	6	1
SODO Busway & Holgate St	5	0
SODO Busway & Lander St	6	1
SODO Busway & Spokane St	5	0
Tacoma City College Transit Center	2	44
Narrows Park & Ride	0	17
Kimball Dr Park & Ride	1	53
Purdy Park & Ride	0	35
Southbound Total	*155*	*155*
Total	*324*	*324*

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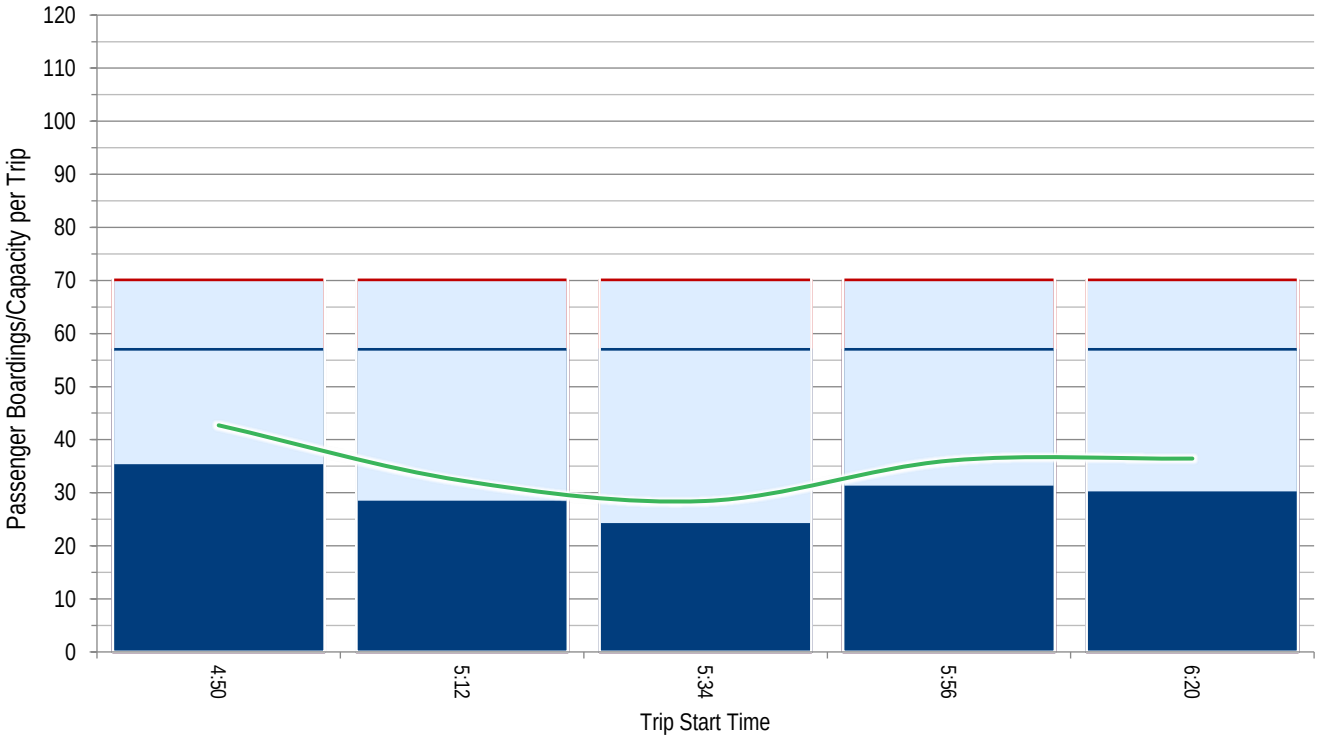
Northbound Average Trip Ridership & Maximum Passenger Loads — *Weekday*

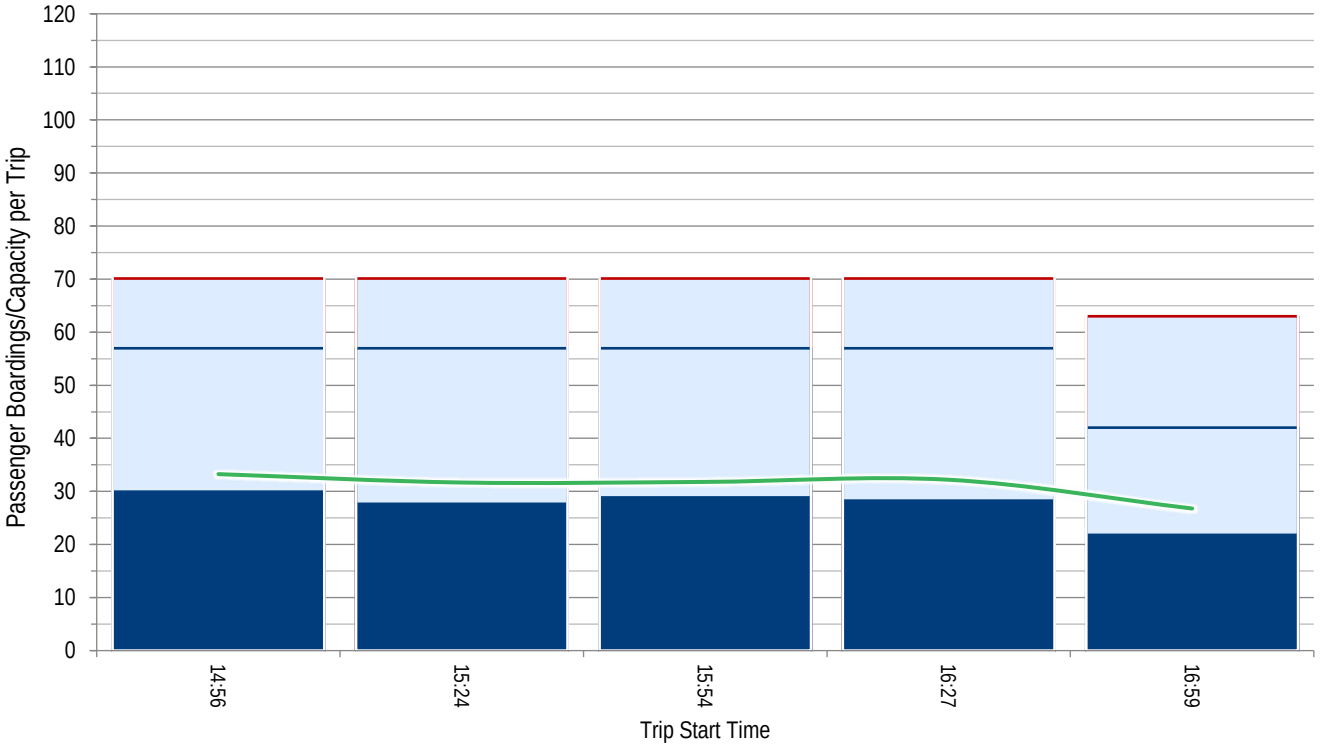


Average Maximum Passenger Load
Orange/Red: standing passengers
Blue: seated passengers

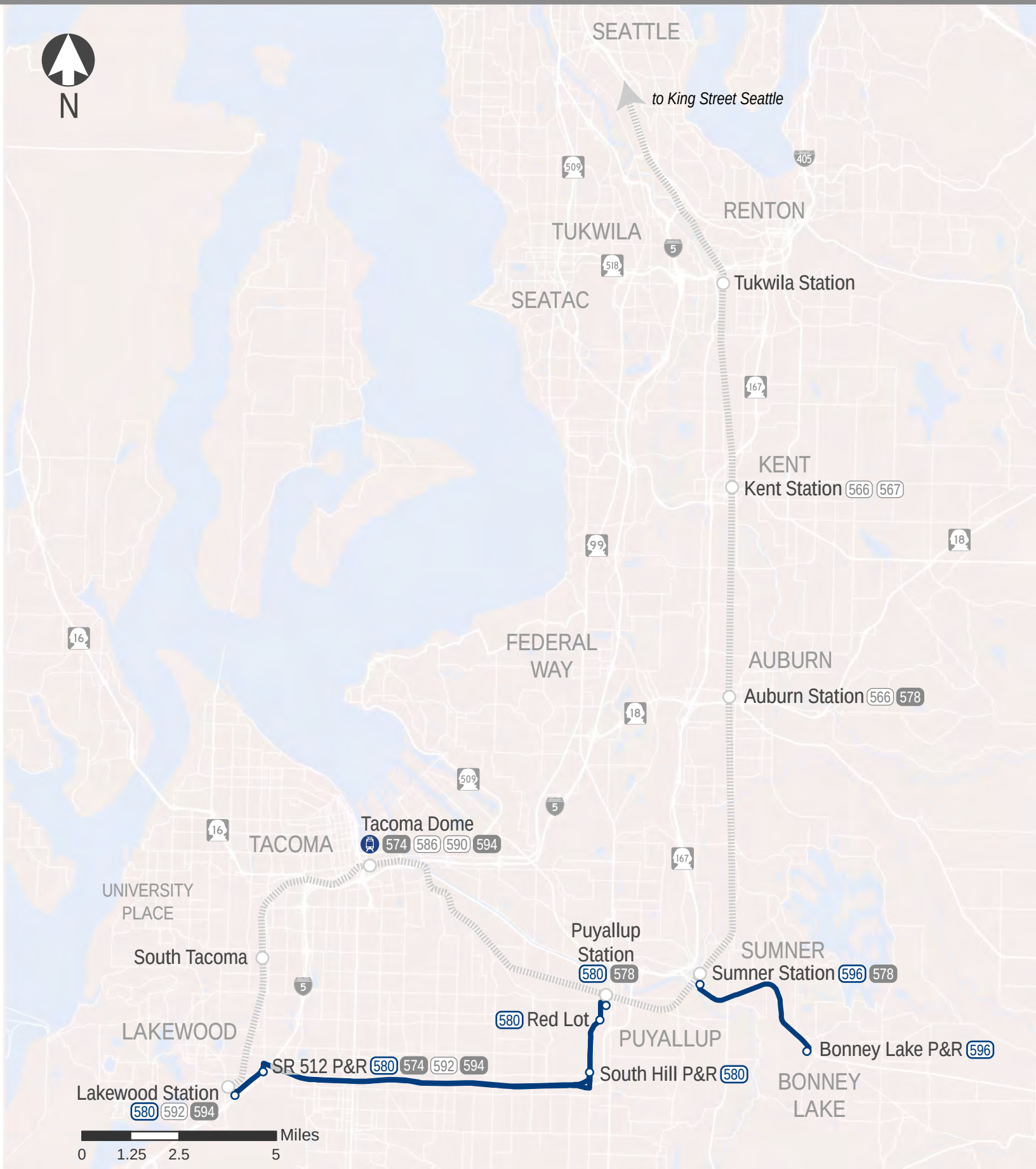
Average Passenger Boardings

Available Capacity
Red: seats plus standing
Blue: seats

Weekday — **Southbound** Average Trip Ridership & Maximum Passenger Loads



Sounder Connector



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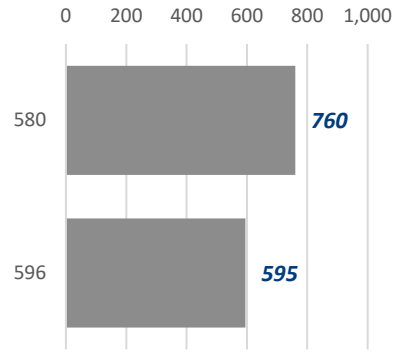
Weekday Ridership



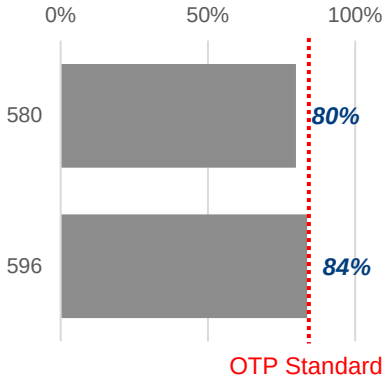
Saturday Ridership

No Saturday Service

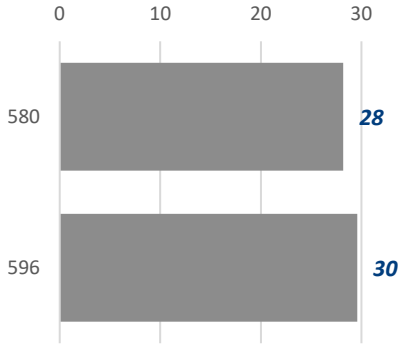
Sunday Ridership

No Sunday Service

OTP



Passengers per Trip

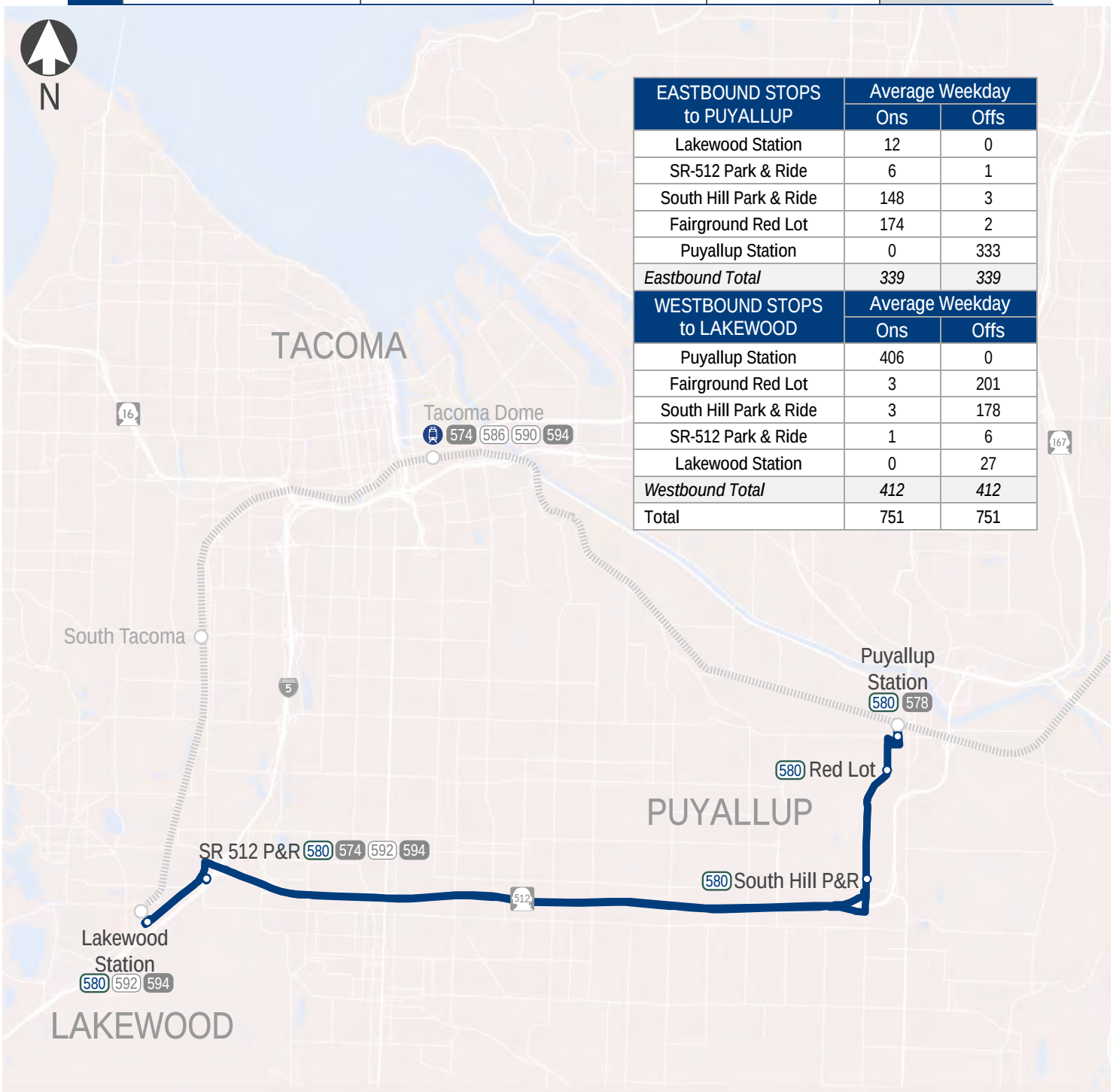


Corridor	Sounder Connectors	Hour																							
Day Type	*Direction*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*
Weekday	*Eastbound*																								
Weekday	*Westbound*																								
Saturday	*Eastbound*																								
Saturday	*Westbound*																								
Sunday	*Eastbound*																								
Sunday	*Westbound*																								
Service Frequency Legend		*Very Frequent (<10 min)*						*Frequent (10-20 min)*							*Moderate (20-30 min)*						*Minimum (30-60 min)*				

Sounder Connector

Route 580 Lakewood – Puyallup

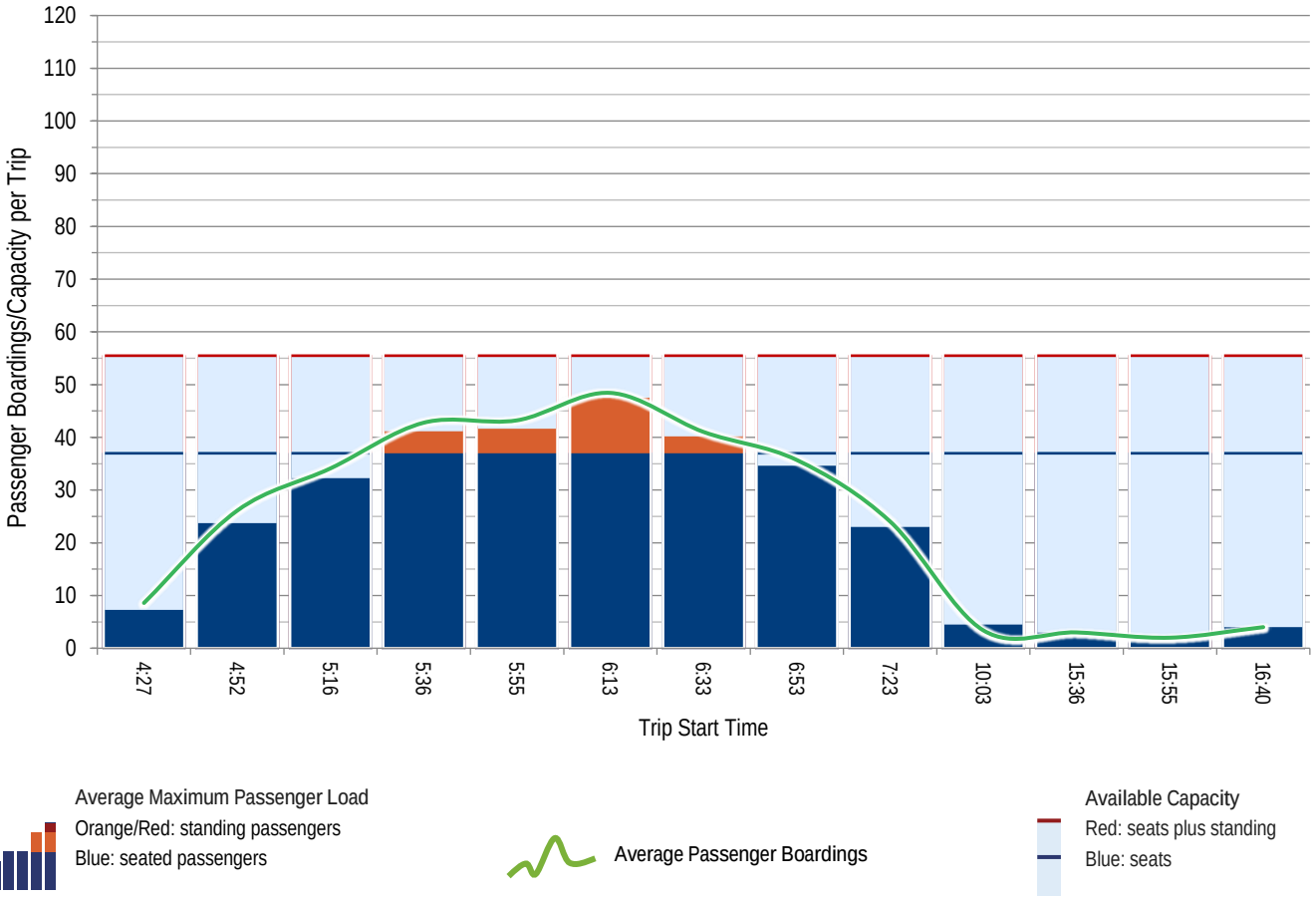
Ridership		2015	2016	2017	SPRING 2018
	Average **Weekday** Boardings	**117**	**489**	**621**	**760**
	Average **Saturday** Boardings	**N/A**	**N/A**	**N/A**	**N/A**
	Average **Sunday** Boardings	**N/A**	**N/A**	**N/A**	**N/A**
	Annual Boardings	**29,885**	**124,657**	**157,820**	



EASTBOUND STOPS to PUYALLUP	Average Weekday	
	Ons	Offs
Lakewood Station	12	0
SR-512 Park & Ride	6	1
South Hill Park & Ride	148	3
Fairground Red Lot	174	2
Puyallup Station	0	333
Eastbound Total	*339*	*339*
WESTBOUND STOPS to LAKEWOOD	**Average Weekday**	
	Ons	Offs
Puyallup Station	406	0
Fairground Red Lot	3	201
South Hill Park & Ride	3	178
SR-512 Park & Ride	1	6
Lakewood Station	0	27
Westbound Total	*412*	*412*
Total	751	751

DRAFT

Eastbound Average Trip Ridership & Maximum Passenger Loads — *Weekday*

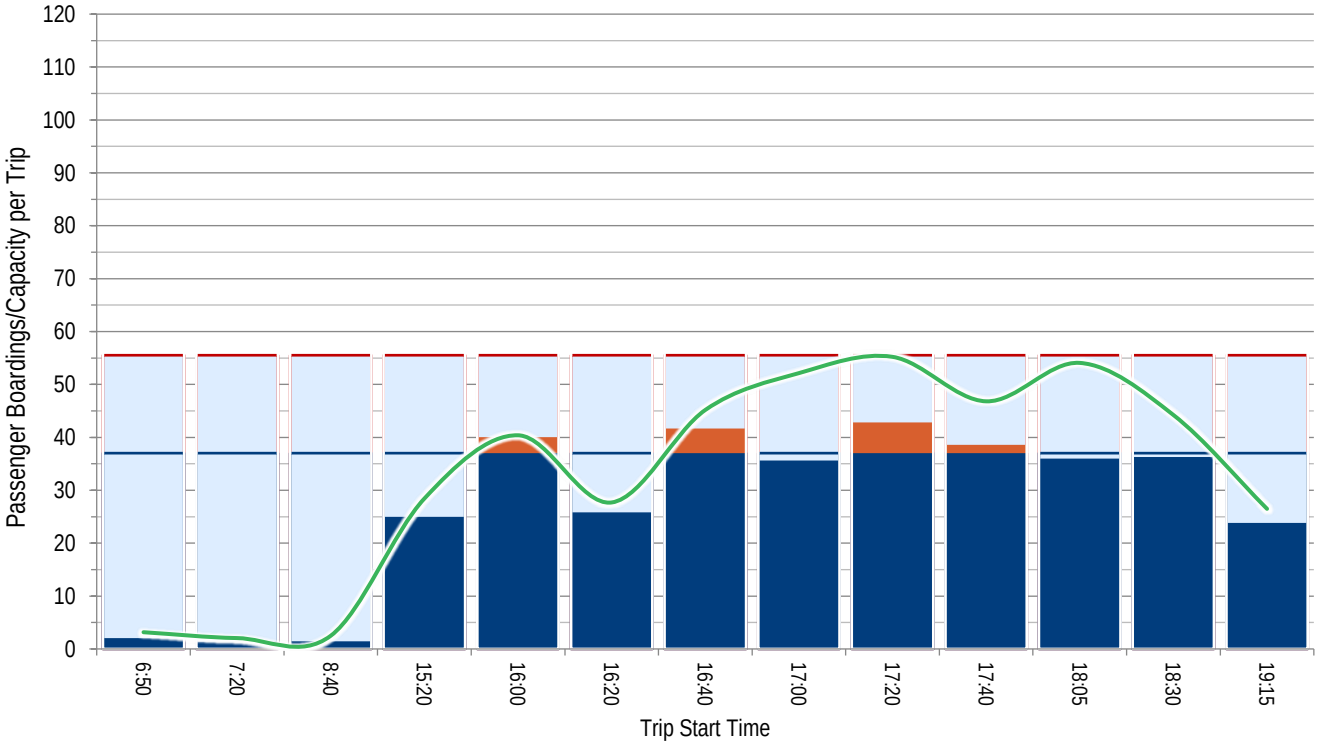


Average Maximum Passenger Load
Orange/Red: standing passengers
Blue: seated passengers

Average Passenger Boardings

Available Capacity
Red: seats plus standing
Blue: seats

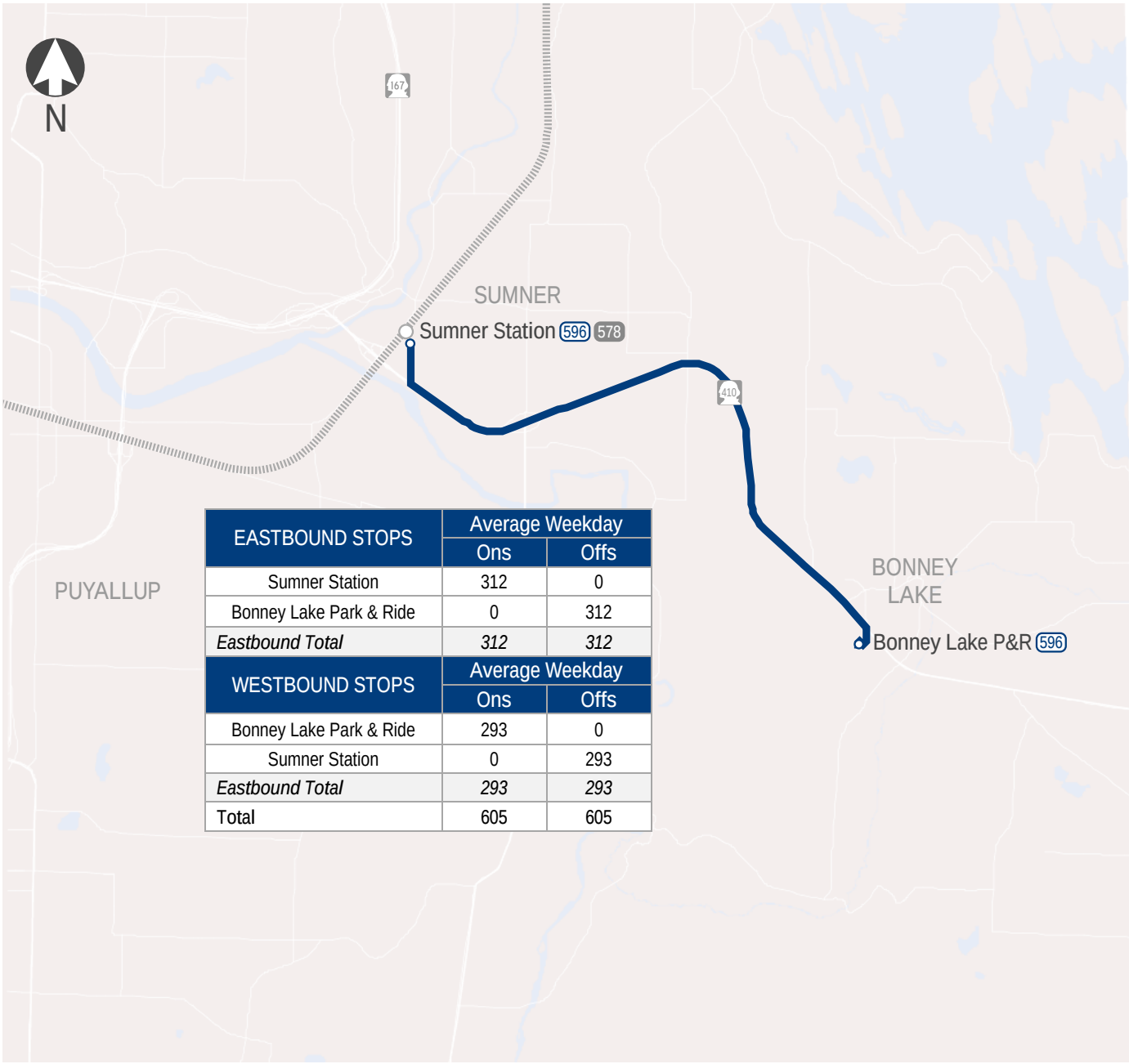
Weekday — **Westbound** Average Trip Ridership & Maximum Passenger Loads



Sounder Connector

Route 596 Bonney Lake – Sumner

		2015	2016	2017	SPRING 2018
Ridership	Average **Weekday** Boardings	**460**	**478**	**493**	**595**
	Average **Saturday** Boardings	**N/A**	**N/A**	**N/A**	**N/A**
	Average **Sunday** Boardings	**N/A**	**N/A**	**N/A**	**N/A**
	Annual Boardings	**117,291**	**121,821**	**125,247**	



EASTBOUND STOPS	Average Weekday	
	Ons	Offs
Sumner Station	312	0
Bonney Lake Park & Ride	0	312
Eastbound Total	*312*	*312*
WESTBOUND STOPS	**Average Weekday**	
	Ons	Offs
Bonney Lake Park & Ride	293	0
Sumner Station	0	293
Eastbound Total	*293*	*293*
Total	605	605

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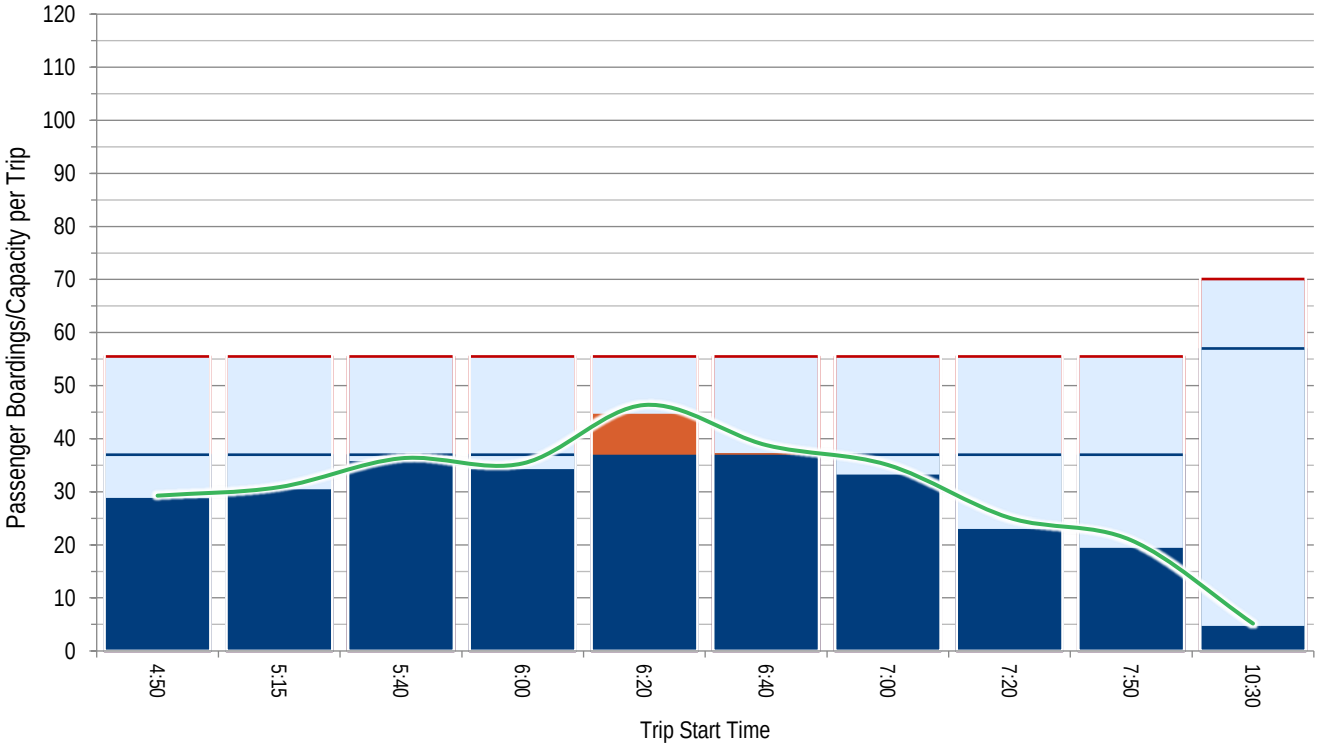
Westbound Average Trip Ridership & Maximum Passenger Loads — *Weekday*



Average Maximum Passenger Load
Orange/Red: standing passengers
Blue: seated passengers

Average Passenger Boardings

Available Capacity
Red: seats plus standing
Blue: seats

Weekday — **Eastbound** Average Trip Ridership & Maximum Passenger Loads