



2019 System Evaluation



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Executive Summary

This report presents Metro Transit’s annual assessment of its transit network as required by King County Ordinances 17143 and 18413 and Motion 13736. The report includes information about fixed-route, Dial-A-Ride Transit (DART), Water Taxi, and Community Connections services, all part of Metro’s expanding portfolio of mobility solutions.

Our analysis found that service improved where we invested to relieve crowding and improve reliability. Our investments also brought several corridors around the county up to their target service levels. However, despite our investments, we continue to see overall bus reliability degrade. Sustained improvements in reliability will require additional service hours largely due to major construction project impacts on traffic congestion, as well as infrastructure investments, to keep buses moving. In addition, base capacity limitations are impacting our ability to add service to meet demand during the peak periods. Base capacity expansions in progress are expected to help relieve this issue with added capacity by the end of 2020.

Our Findings

Our 2019 data analysis found that total investment of 455,150 annual service hours is needed to meet target service levels and improve service quality—a slight decrease from last year’s number. Crowding and reliability needs have increased, and service growth needs have decreased. This reflects ongoing and recent investments, regional growth in jobs and population, and increasing congestion on our roadways.

Metro currently operates about 4.2 million annual hours of Metro service. Making the investments identified in this report would reduce crowding, improve reliability, and grow our service network. To achieve the full METRO CONNECTS long-range vision and meet the demands of the Puget Sound Regional Council’s Transportation 2040 plan, we will ultimately need to provide about two million more annual hours of service.

Our Investment Activities

In fall 2018 and spring 2019, Metro invested about 40,900 annual service hours in our system to meet needs identified in previous reports. These investments include:

- » 5,200 hours to relieve crowding (Priority 1)
- » 8,400 hours to improve reliability (Priority 2) and operator access to comfort stations
- » 27,200 hours in service growth on major transit corridors (Priority 3)
- » Metro’s Community Connections investments—Vashon Island Community Van, Bothell/Woodinville Community Van, Des Moines Community Shuttle, and Issaquah Alps Trailhead Direct

During this period, Metro made other targeted investments in fixed-route service to respond to the permanent closure of the Alaskan Way Viaduct and the end of joint operations in the Downtown Seattle Transit Tunnel.

Seattle Investments

Metro and the City of Seattle work together to plan and implement new service funded by the Seattle Transportation Benefit District (approved by voters in November 2014). In fall 2018 and spring 2019, Seattle invested 46,700 annual service hours. In accordance with the contract between Metro and Seattle, Metro assumes funding for some of Seattle’s investments that are consistent with Metro priorities as we expand service.

Community Connections

This report includes performance data for pilot services created under Metro’s Community Connections program that were in the evaluation stage between September 2018 and March 2019. The program works with local governments and community partners to develop innovative and cost-efficient transportation solutions in areas of King County that do not have the infrastructure, density, street network, or land use to support regular, fixed-route bus service.

2019 Investment Needs

Priority	Investment Goal	Bus Hours
Priority 1	(Reduce Crowding)	9,600
Priority 2	(Improve Reliability)	25,450
Priority 3	(Service Growth)	420,100



Marine Division

The Marine Division was added to the System Evaluation Report beginning in 2016 and became a division of Metro in 2019. The report now includes data on the King County Water Taxi service. The Water Taxi serves two routes that connect Colman Dock in downtown Seattle with Vashon Island and West Seattle. Information about Water Taxi services are included in the Fixed-Route Service Evaluation and in the tables in Appendices C, E, F, and G.

Our Future

As we finalize this report, we are preparing to add 68,900 hours of new service in September 2019. Some of the new hours will address the priority investment needs identified in this System Evaluation, while others are funded by the City of Seattle. Future investments will be

included in the County's biennial budget process. Metro is exploring opportunities to partner with other agencies to provide more Water Taxi service, but, in the near-term, we plan to maintain current service on the two existing routes while studying potential future routes.

The needs identified in this report are only part of the two million service hours needed to nearly double our ridership and achieve the METRO CONNECTS vision. As we move toward achieving this vision, we aim to improve coordination with external agencies and jurisdictions to identify opportunities to deliver more service efficiently and effectively. More work is underway to align our Service Guidelines with METRO CONNECTS and to incorporate all of Metro's mobility services in a common framework for evaluation.

Introduction

What is the System Evaluation?

This report is a snapshot of the health of our transit system: our fixed-route, Dial-A-Ride Transit (DART), Water Taxi, and Community Connections services. It is based on our Service Guidelines, which established criteria and processes that we use to analyze and plan changes to our transit system. The guidelines were adopted by the King County Council (Ordinances 18301 and 18413 and Motion 13736). The report contains the following:

- » Fixed-route, DART, and Water Taxi service evaluation
- » Community Connections evaluation
- » METRO CONNECTS progress report
- » Potential changes to the Service Guidelines and Strategic Plan for Public Transportation

Reducing crowding and improving reliability—our primary service quality indicators—are Metro’s top two investment priorities, as they directly affect the quality of our service. Improvements in these areas help us keep the riders we have and attract new ones. Our third priority investment represents growing the system. More service lets us provide better mobility options and helps meet existing demand, reach climate action goals, and help the region’s economy to continue growing without expanding roadways. Our fourth investment priority is providing highly productive routes to carry the highest numbers of riders per hour and mile of service across the county.



Why produce the System Evaluation report?

Metro analyzes transit system data to inform decision-making and continuous improvement. We publish the System Evaluation report to show the public how our system is doing. The System Evaluation also provides the basis for decisions about adding, reducing, or changing service.

How does Metro use the System Evaluation report?

We analyze data to learn how different services are performing, where problems exist in our system and where we are not providing enough service. We combine this information with what we hear from customers, operators, and partners to develop proposals to change service. We take these proposals to the public, gather and incorporate feedback, and submit final plans for approval by the King County Council. After we make the approved service changes, the cycle begins again.

Our data analysis and the policies embedded in our Service Guidelines give us guidance on how to add, reduce, and restructure service.

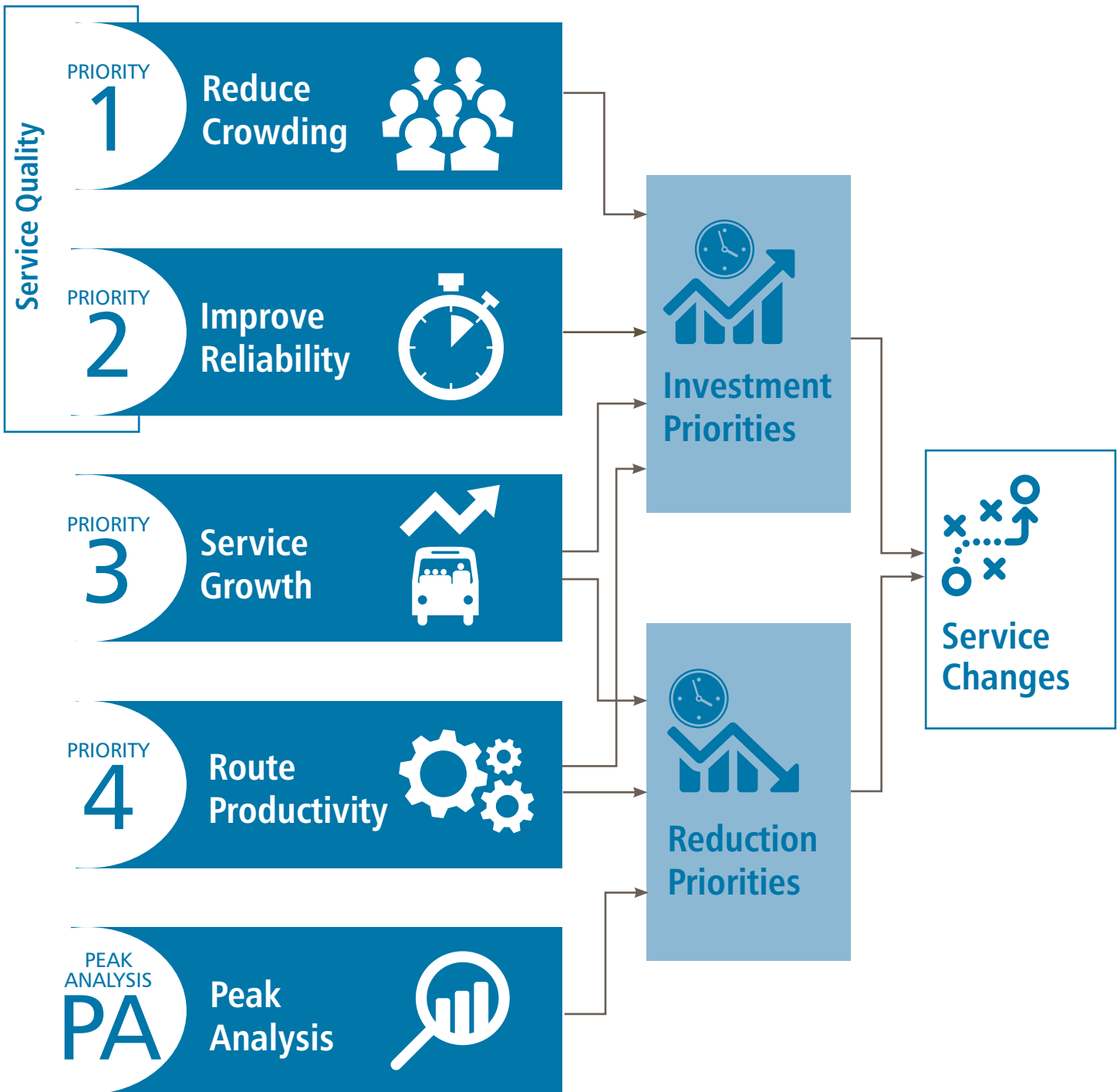
How can you use the System Evaluation report?

You can find your route(s) on the maps throughout this report and in the appendices and see how the route data compares to other routes in the system. You will be able to tell at a glance if we have identified problems on your route (like crowding), and what we believe we need to do to fix them. Keep in mind that this report provides a snapshot in time; some problems come and go, and we use the latest available data to make investment proposals.



King County Water Taxi Information

We conducted a peak analysis and evaluated crowding, reliability, and productivity of the King County Water Taxi. For more information, see the Fixed-Route Service Evaluation section and the tables in Appendices C, E, F, and G.



Fixed-Route Service Evaluation

Investment need



9,600
bus hours

Crowding (Priority 1)

What is Crowding?

- » The vehicle's average maximum load is more than the crowding threshold for the type of vehicle.
- » The average passenger load is more than the number of seats for 20 consecutive minutes.
- » Trips must be consistently crowded for several months to be identified for investment.

What We Found

After accounting for planned September 2019 investments, we identified 19 routes with chronically crowded trips, an increase from last year's 18. Ten of these 19 routes are new to the list. Three routes meet the condition of maximum load exceeding the crowding threshold for the type of vehicle; the rest have 20-minute standing passenger loads.

Most crowding happens during peak periods. For the near-term, our ability to add new service during these times will remain constrained. New peak service requires more buses, and our ability to increase the size of our fleet is limited by the space available at our seven bases. We are taking steps to increase available space at our current bases and plan to build a new base in the near future.

What We've Done

Between fall 2018 and spring 2019, approximately 2,500 hours were added to our transit system to reduce crowding. These investments were based on our 2018 System Evaluation and the latest available data.

What's Next?

As we finalize this report, 3,500 new service hours are slated to be added in September 2019, using Metro funds to address the most pressing crowding problems on routes 3, 65, 67, 218, 252, 255, 271, C Line, and E Line. We expect to propose more hours to address crowding in our budget submittal for 2021–2022, in accordance with our Service Guidelines. The specific investments we make will be informed by the latest data available at the time and the previously mentioned constraints on adding service in peak periods.

Of the 5 routes that received investments in March 2019



3 are no longer chronically crowded



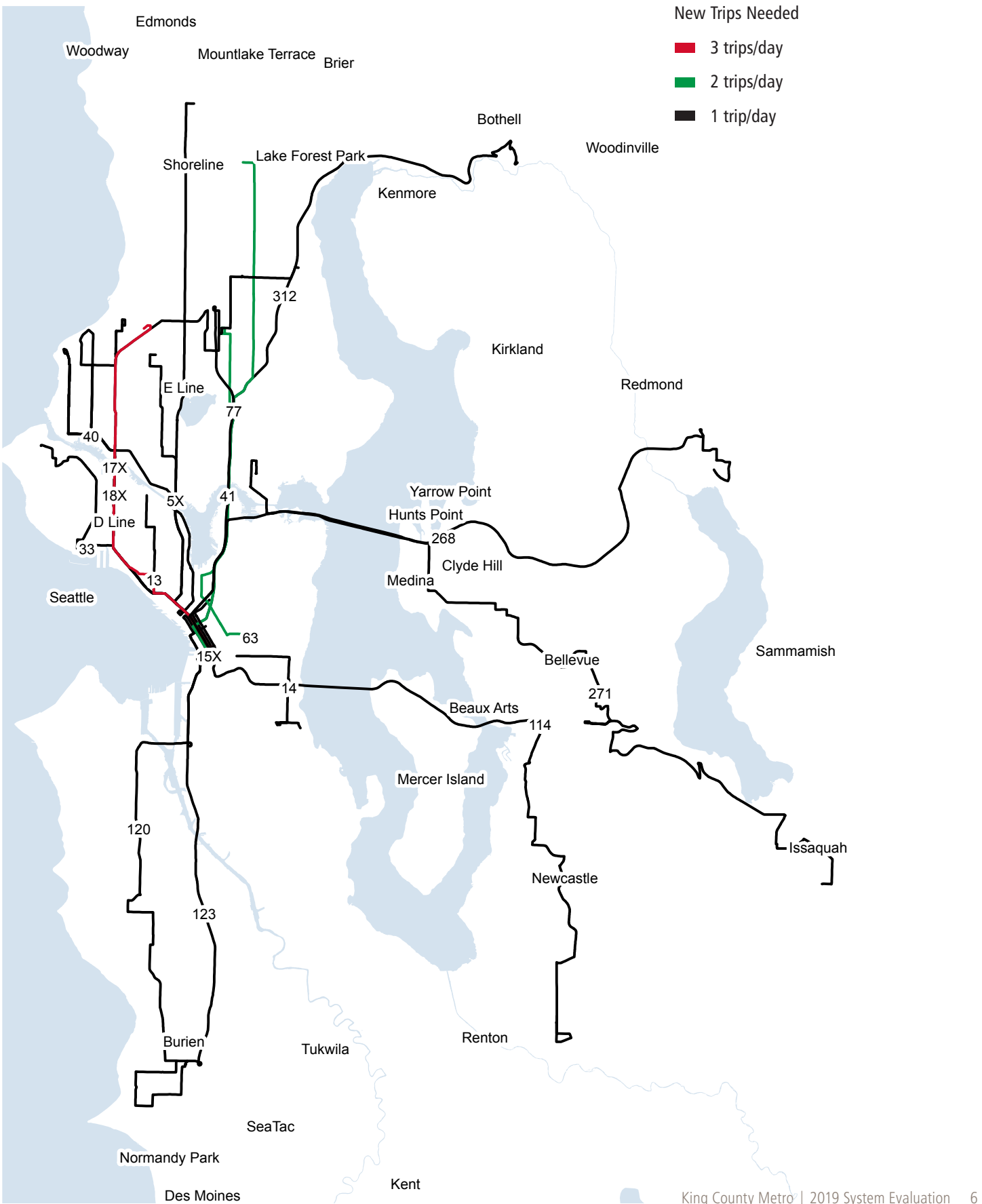
2 saw a decrease in crowding (but still need more investment)



King County Water Taxi

The capacity of Water Taxi vessels is capped by maritime regulations. From March to June 2019, none of the three trips on either the West Seattle or Vashon Island Water Taxi exceeded capacity (278 passengers). With the removal of the Alaskan Way Viaduct in early 2019 and the opening of the new Seattle passenger only ferry terminal in late summer, we expect that demand for the West Seattle commute routes will increase. We have started planning to analyze and develop future service and facility changes to meet this demand.

Figure 1. Metro Fixed Routes Needing Investment to Reduce Crowding per the Service Guidelines





25,450
bus hours

Reliability (Priority 2)

What is Reliability?

In a transit context, reliability refers to whether buses arrive when they are supposed to. We consider routes whose buses arrive late more than 20 percent of the time all day, or more than 35 percent of the time during the afternoon peak period, to be candidates for investment. We can invest by adding running time to schedules, but we also partner with cities on infrastructure improvements. These improvements help buses move faster and more reliably, saving money and providing a better customer experience.

What We Found

Despite aggressive recent investments in reliability, increased traffic congestion and high ridership are creating new challenges. Our investment need increased over last year's figure by about 6,200 annual hours despite ongoing investment. We list 63 routes needing investment—30 of them are new to the list. Thirty-two routes that were on last year's list are now within standards, but the rest have new or outstanding needs. See Appendix F for route-by-route reliability numbers.

- » **South county routes.** Routes 118, 125, 153, 181, 183, 186, 187, 197 are new to the list. Most of them slipped just outside of the standard this year, so their investment needs are relatively small. Routes that travel on I-5 south of Seattle have increasing reliability problems due to freeway congestion.
- » **East county routes.** Routes 221, 232, 234, 241, 243, 277, 342 are new to the list, most of them just slightly outside of the standard.
- » **Other routes.** Routes 2, 3, 7, 10, 12, 13, 22, 31, 32, 36, 44, 48, 60, 67, and 76 are new to the list. One RapidRide line, the E Line, continues to be out of standard on weekdays.

- » **Weekends.** The system-wide investment need for Saturday service (7,950 hours of the Priority 2 investment need) more than doubled over last year, indicating worsening weekend traffic.

What We've Done

In March 2019, we invested about 7,000 hours directly in service schedules to improve reliability. Taken as a whole, the routes we invested in saw weekday lateness decrease by about 19 percent overall, and by about 34 percent in the morning peak period.

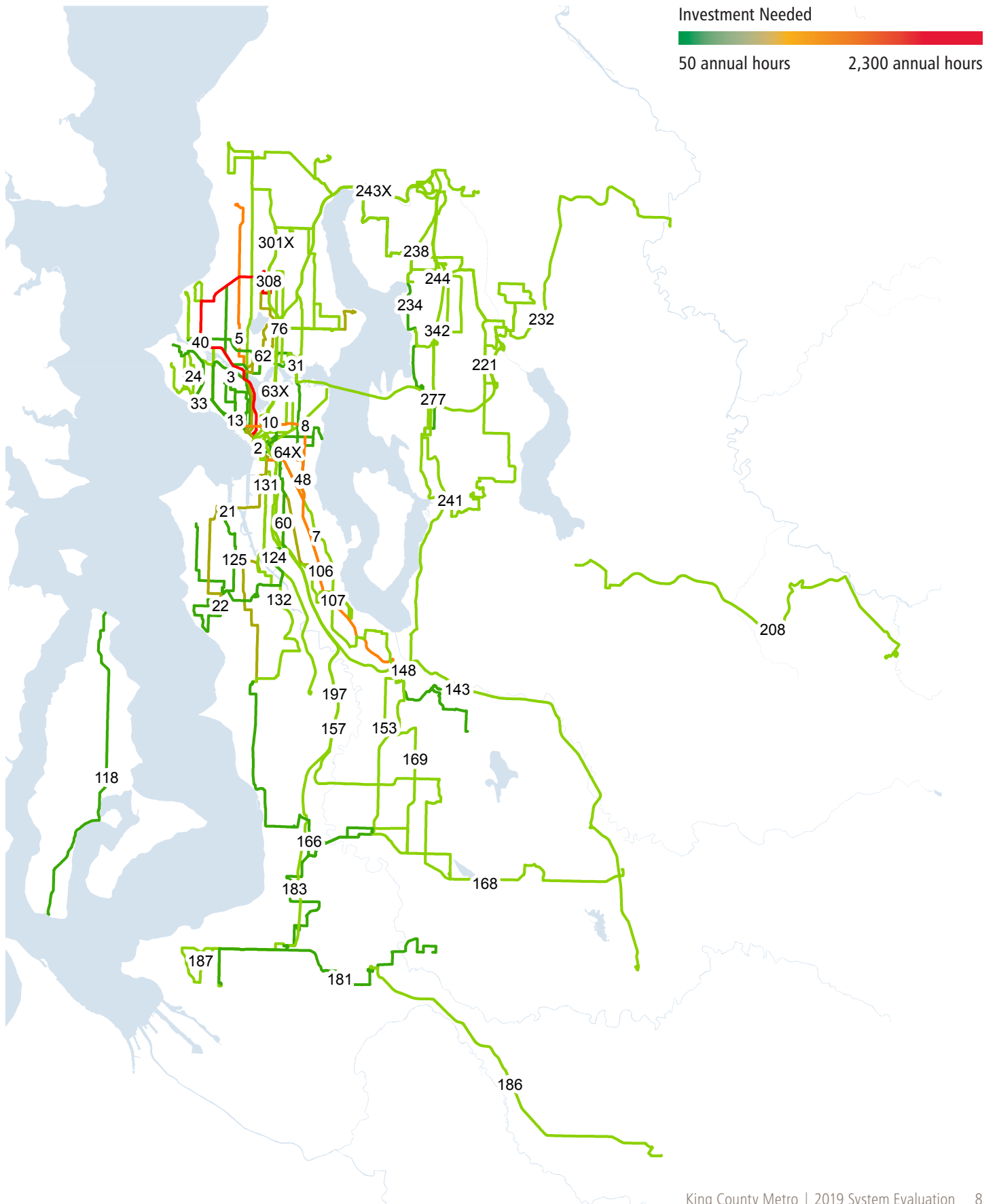
Metro also implemented all-door boarding for all routes serving the Third Avenue transit corridor in downtown Seattle. Riders with a transfer can board at any door and riders using an ORCA card can validate their fare at the bus stop ORCA reader, then board through any bus door. This change speeds boarding for all routes using Third Avenue, enabling the corridor to accommodate the addition of the Route 41 to Northgate.

What's Next?

Preliminary information following the March service change indicates a ridership decline on the routes coming out of the tunnel despite hours spent to improve reliability. It is expected that some of this ridership decline is due to longer travel times through downtown Seattle, as well as reliability problems experienced by some routes on their new surface pathways. We plan to continue to adjust service where possible to mitigate problems and to work with partner agencies to seek transit priority where possible.

Our findings continue to reinforce the idea that adding running time to schedules to deal with increased congestion is not always the best way to improve reliability; it just acknowledges that it takes longer than before to make the same trip. Slowing travel times make transit less attractive over time. We've already implemented other ways to keep buses moving, including simplifying fares, increasing opportunities for off-board fare payment, improving signage, and consolidating stops. As we seek to expand our infrastructure and work to improve bus speed and reliability, we highly value partnerships with jurisdiction to help us make these improvements.

Figure 2. Metro Fixed Routes Needing Investment to Improve Reliability per the Service Guidelines



Service Growth (Priority 3)

What is Service Growth?

Our Service Guidelines set policies that determine how often buses should arrive throughout the day on major transit corridors in our existing system. This is referred to in the Service Guidelines as target service levels. This analysis is based on a combination of land use productivity, social equity factors, and how well each corridor connects growth centers in our county. The gap between how much service we currently provide and how much service is needed constitutes the investment needed to meet target service levels. For this year’s analysis, we used data from September 2018 through March 2019. A summary of the analysis and the investment need for each corridor are in Appendices I and J.

Investment need



**420,100
bus hours**

What We Found

Service needs to grow on 53 corridors, fewer than last year’s 54. Our total Priority 3 investment need decreased by about 32,500 hours from last year. While we invested about 46,500 new service hours in Priority 3 needs since last year’s System Evaluation, growth in jobs, population, and ridership have created higher target service levels for some corridors this year. See the maps on the following pages for depictions of needs by time period.

What We’ve Done

In September 2018, we invested about 27,000 hours in corridors. (These investments were accounted for in last year’s Priority 3 investment need.) Together, these hours grew service on routes 5, 31/32, 73, 75, 150, 180, 181, 245, 345, 373, and F Line.

What’s Next?

As we prepared this report, we planned to make the first set of Priority 3 investments for the current biennium, totaling 8,300 hours, in September 2019. The investments this fall will benefit routes 105, 164, 183, 346, and E Line. Some of these routes do not appear in this year’s Priority 3 investment list because the planned investments will fulfill their Priority 3 investment needs.

Over the next few years, we expect to continue growing the system, but at a slower rate than over the past two years. As we look at future projects and investments, we will use the analysis of Priority 3 needs to inform service proposals. We also plan to work with the public and private partners to expand mobility where possible.

Table 1: Summary of Typical Service Levels

Service Level	Service Level: Frequency (minutes) and Time Period			Days of Service	Hours of Service
	Peak	Off-peak	Night		
Very frequent	15 or better	15 or better	30 or better	7 days	16–24 hours
Frequent	15 or better	30	30	7 days	16–24 hours
Local	30	30–60	--*	5–7 days	12–16 hours
Hourly	60	60	--	5 days	8–12 hours
Peak-only	8 trips/day minimum	--	--	5 days	Peak
Community Connections	Determined by demand and community collaboration process				

* Night service on local corridors is determined by ridership and connections made



The Complete Network: Integration with Sound Transit

Metro and Sound Transit continue joint planning to create an integrated network with the best possible transfer environments when Link light rail is extended to Northgate and Overlake, maximizing the total regional investment in transit service. We have also been working with Sound Transit, the University of Washington, and the Seattle Department of Transportation to review several ideas for improving transfer points at the Montlake Triangle/University of Washington Station as part of the North Eastside Mobility project. The goals of the project are to improve transfer experiences and enable Metro to extend mobility benefits in line with our long-range plan, METRO CONNECTS. The results of this review, together with public feedback, will inform future decision-making about transfer environment improvements and service revisions.

Table 2 lists key corridors in King County where Sound Transit is the primary provider of two-way, all-day transit service.

Table 2. Corridors Served Primarily by Sound Transit

Between	And	Via	Major Route
Woodinville	Downtown Seattle	Bothell, Kenmore, Lake Forest Park, Lake City	522
UW Bothell	Bellevue	Totem Lake	535
Redmond	Downtown Seattle	Overlake	545
Bellevue	Downtown Seattle	Mercer Island	550
Issaquah	Downtown Seattle	Eastgate, Mercer Island	554
Burien	Bellevue	SeaTac, Renton	560
Auburn	Overlake	Kent, Renton, Bellevue	566
SeaTac	Federal Way	I-5	574
Federal Way	Downtown Seattle	I-5	577/578
Angle Lake	University District	SeaTac, Rainier Valley, downtown Seattle, Capitol Hill	Link light rail

As Link service continues to expand, Sound Transit will become the backbone provider in more corridors, such as Northgate to downtown Seattle. As services are introduced and modified, Metro and Sound Transit will integrate services to maximize mobility.



Keep an eye on Metro's Link Connections webpage, www.kingcounty.gov/metro/linkconnections, for the latest news and to get involved in planning efforts to integrate bus and rail service.

Figure 3. Metro Corridors Needing Investment per the Service Guidelines (Peak Period, 5–9 a.m. and 3–7 p.m.)

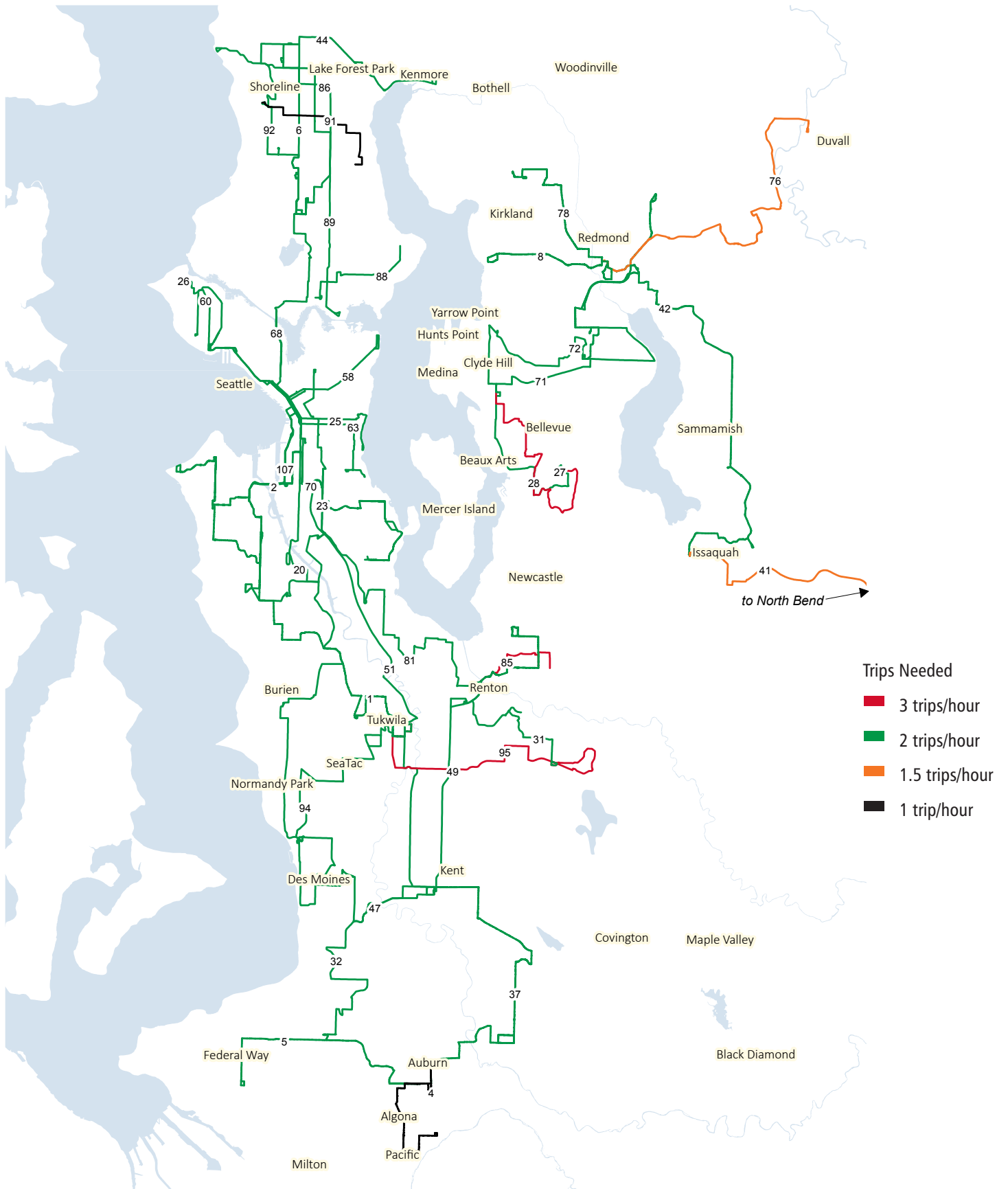


Figure 4. Metro Corridors Needing Investment per the Service Guidelines (Off-Peak Period, 9 a.m.–3 p.m.)

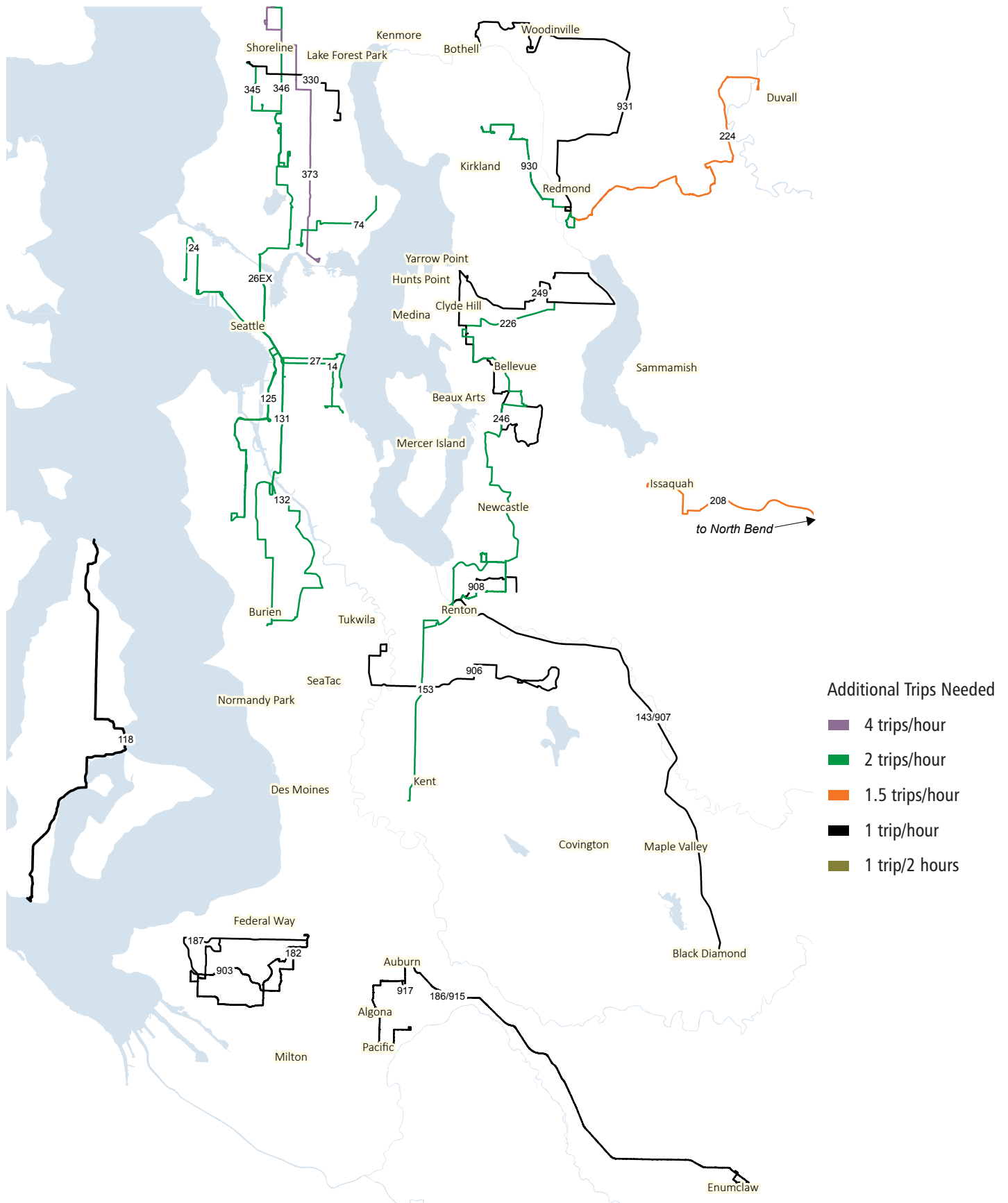
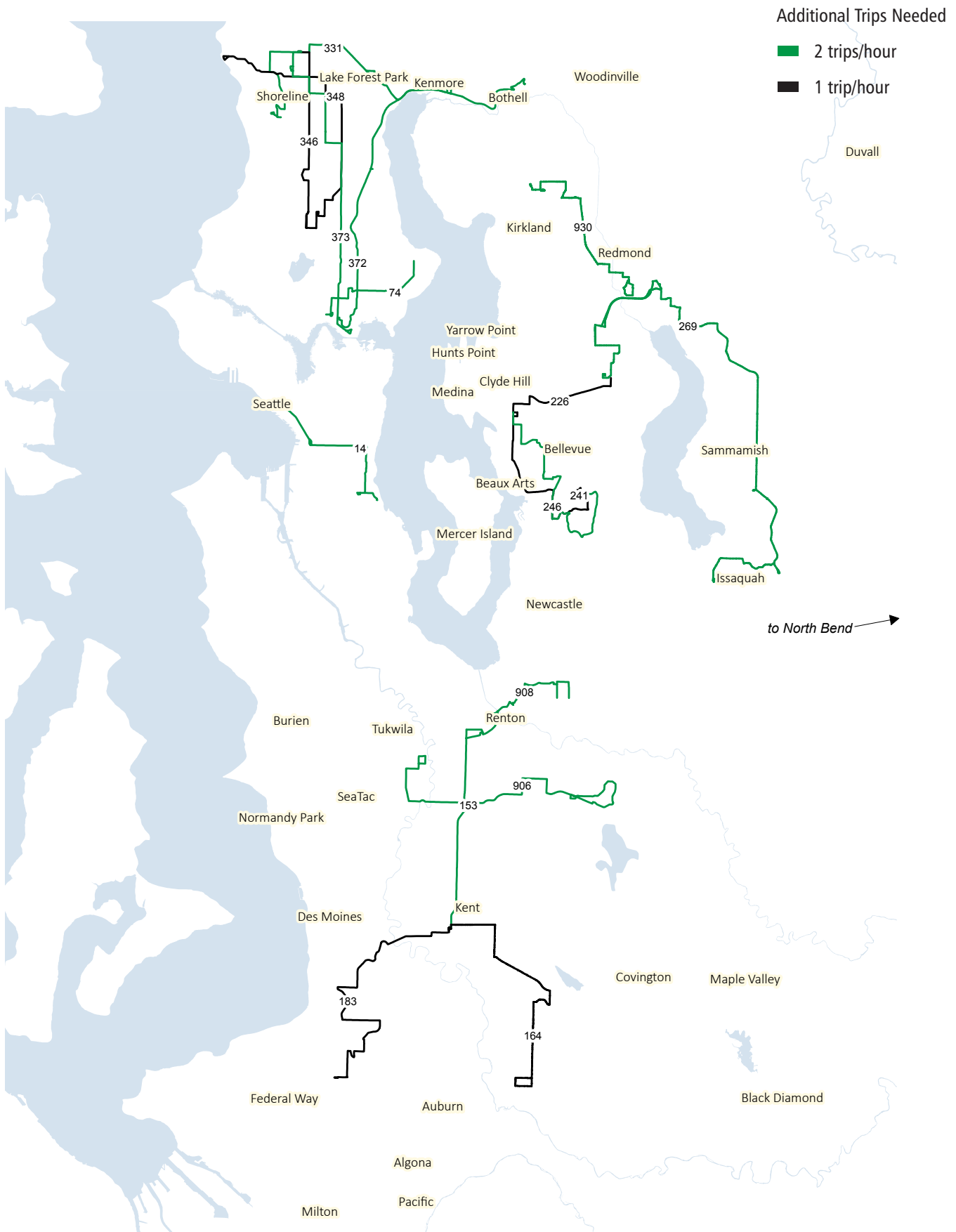


Figure 5. Metro Corridors Needing Investment per the Service Guidelines (Night Period, after 7 p.m.)



Route Productivity (Priority 4)

What is Productivity?

Productivity is a measure of efficiency and an indicator of how much demand there is for service. High productivity indicates high demand for transit, so the region has an interest in meeting that demand and helping it grow even more. Much of the transit service growth envisioned by METRO CONNECTS will happen on routes and in areas that are highly productive. See Appendix A for more about how we measure productivity.



Route productivity statistics (Appendix C) inform decisions about service investments, restructures, and reductions. Routes in the top 25 percent are eligible for investment, and routes in the bottom 25 percent are eligible for reduction¹ when the budget requires service reductions. The fixed-route system is divided into three service types (Urban, Suburban, and DART/Shuttles), and each route is compared only to other routes of the same service type. (See Appendix A for definitions of these categories.)

From March through June 2019, we generally saw a continuation of the recent trend of decreasing productivity, although this year's results were more mixed than last year's. This is expected in periods of growth, as it can take some time for ridership to build after adding service hours to the system.

- » **Suburban routes** remained generally flat, though we do see indications of strengthening productivity.
- » **Urban routes** saw small decreases in productivity at all times of the day.

See Appendix C for route-by-route productivity data and Appendix D for changes to the thresholds designating the top and bottom 25 percent of routes by service type.

Peak Analysis

What is Peak Analysis?

Peak-only services are routes, including express variants of local routes, that run only during the morning and afternoon peak periods on weekdays. Peak-only services add to the all-day network and provide more service at times of peak demand, usually in one direction.

In addition to their evaluation for crowding and reliability, peak-only routes undergo an additional analysis called the peak analysis. It compares each route that operates only in the peak period to an underlying local alternative, if one exists. Routes are measured in two metrics:

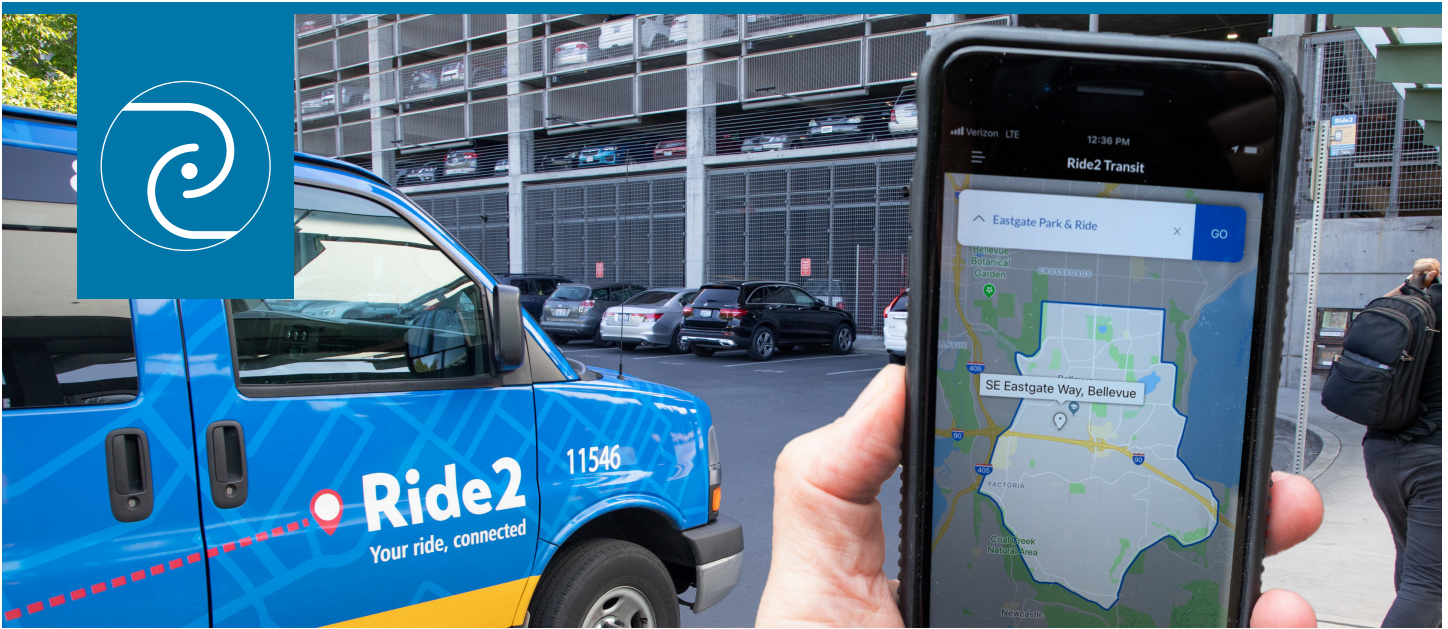
- » **Travel time:** Is the peak-only route 20 percent faster than the local alternative?
- » **Ridership:** Does the peak-only route have 90 percent of the local alternative's ridership during the peak hours?

Peak-only routes incur additional operating costs, as they require an increase in the size of our fleet and spend a higher-than-average amount of time deadheading (traveling without passengers from the base to the first bus stop, and from the last bus stop back to the base). To justify these additional costs and avoid being assigned top priority for reduction when Metro must reduce service, low-performing peak-only routes must meet at least one of the criteria above. (Note: high-performing peak-only routes are excluded from the top priority for reduction, like all other high-performing routes.) Our Service Guidelines provide more information about how we use peak-only metrics when reducing service.

This year, we found that 55 of the 64 peak-only routes we analyzed met at least one of the criteria, leaving only nine routes that failed both. See Appendix E for the complete results of our peak analysis.



¹ Other criteria must also be met for a service reduction to occur.



Alternative Services

Metro’s Community Connections program (formerly Alternative Services) was created in response to growing demand for mobility in the face of fluctuating funding. Its purposes are to support growing communities, fit the size of existing service to the needs of the community, complement existing services, and develop innovative alternatives to fixed-route service in communities that lack the land use, density, or topography to support a productive fixed-route transit network.

The alternative services concept became a four-year demonstration program with dedicated funding in King County’s 2015–2016 biennial budget (Ordinance 17941). Work on the demonstration program was guided by the priorities established by the funding ordinance: reducing the impact of service reductions, delivering the priorities laid out in the Five-Year Implementation Plan for Alternatives to Transit Service Delivery, and developing complementary services. As of January 1, 2019, Metro’s Community Connections program has become an ongoing Metro program with program responsibilities and resources becoming integrated into the planning and delivery of mobility services in general.

One of the defining features of the Community Connections program is the ability to launch, test, and refine innovative service solutions in partnership with communities. These services leverage Metro’s long-standing success in both DART and ridesharing services in combination with emerging mobility technologies. In addition to our current pilot services (described below), we are also continuing to develop new products and services through ideas that emerge from community partnerships and needs, as well as emerging national and international developments.

Pilot Services

- » **Community Ride:** Reservation-based or on-demand services for appointments, errands, and other local trips.
- » **Community Shuttle:** Metro routes with flexible service areas, provided through community partnerships.
- » **Community Van:** Metro vans for local group trips scheduled by a community transportation coordinator to meet local needs.
- » **Empty Seat Pilot:** Through a mobile app, allows VanPool drivers to make temporarily empty seats available to drop-in riders interested in sharing the ride for one-way trips.
- » **Feeder to Fixed:** Users can hail trips to and from a transit center or park-and-ride, on-demand, using a phone or mobile app.
- » **TripPool:** Real-time ridesharing between users’ home neighborhoods and transit centers.

Pilot Service Performance

Metro collects and analyzes ridership data for pilot services deployed through the Community Connections program. Pilot services that were in their performance evaluation phase during September 2018 to March 2019 are listed in Table 3. Please see Appendix A for the method we used to develop performance measures.

Operational pilot services shown in Figure 6 that were not in their performance evaluation phase during the September 2018-March 2019 service period include

Duvall Community Van and Kenmore-Kirkland TripPool; these services were in their baseline data collection phase as of March 2019. Note: The Snoqualmie Valley Shuttle (Route 629) was included in prior years' System Evaluation reports. Effective October 1, 2018, the Community Access Transportation (CAT) program began providing Metro oversight of this service along with other services operated by Snoqualmie Valley Transportation. CAT program services are outside the scope of this report.

Table 3: Data for Pilot Services in Performance Evaluation Phase, September 2018–March 2019 – Period Averages

Route	Daily Ridership	Cost/Boarding
Snoqualmie Community Shuttle (Route 628)	66.0	\$21.98
Mercer Island Community Shuttle (Route 630)	185	\$4.72
Burien Community Shuttle (Route 631)	52	\$12.51
Redmond LOOP ¹	20	\$19.51
Black Diamond Enumclaw Community Ride	13.2	\$40.68
Des Moines Community Shuttle (Route 635)	87	\$14.29
Vashon Island Community Van ²	66	n/a
Bothell-Woodinville Community Van ²	43	n/a
Trailhead Direct – Issaquah Alps ³	140	15.29
Trailhead Direct – Mount Si ⁴	156	11.63
Trailhead Direct – Mailbox Peak ⁵	114	16.07

1 Data for September 2018–December 2018 only; discontinued on December 28, 2018 due to poor performance

2 Community Van, ridership is measured by number of boardings/ month; cost per Community Van pilot are not currently available for this report as they are captured for the Community Connections fleet as a whole.

3 Data for 2018 April 21–October 28, 2018; Trailhead Direct Season for Issaquah Alps

4 Data for May 19–October 28, 2018: Trailhead Direct Season for Mount Si

5 Data for June 16–October 28, 2018: Trailhead Direct Season for Mailbox Peak

Route Number	Full Name	Average Monthly Ridership	Average Cost per Rider	Average Vehicle Utilization
651	Eastgate Park & Ride Ride2	1,569	\$45.00	Not Available

What's Next

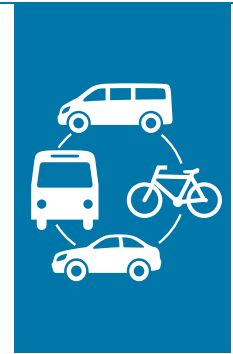
Metro is moving forward with implementation for several services planned during the period this report was gathered. Sammamish Community Ride launched in summer 2019. Planning for future pilot services is ongoing in communities spanning the county including Kenmore, Kent, Kirkland, Issaquah, Redmond, Tukwila, Seattle, Skyway, and Woodinville.

Community Connections will be a part of all major upcoming service redesigns in the Renton, Kent, and Auburn, and the North Link Connections Mobility project, and was part of the North Eastside Mobility Project. In these projects, Metro engages the community to assess needs and develop service concepts including flexible and innovative services that provide more options for communities to have expanded mobility.

METRO CONNECTS Progress Report

Overview

This section reports on Metro’s progress toward the METRO CONNECTS long-range vision to bring more and better transit service to King County to meet the growing demand and needs of the region over the next 25 years. This is the second installment of this report and it represents Metro’s first step in the long-term monitoring of performance metrics associated with METRO CONNECTS.



Measuring Progress

METRO CONNECTS envisions major changes to the King County transit network that would increase access to transit, how much transit is used, and how efficient it is. The plan outlines key performance metrics intended to show progress toward our 2040 vision. Table 4 below compares our current performance on some of these metrics to our goals for 2040. These metrics are intended to measure:

- » **Transit access.** Walkable access to frequent transit service, including for historically disadvantaged populations, and how people are getting to transit
- » **Transit use.** Use of Metro and Metro-operated transit systems, and transit use during the busiest travel times
- » **Transit efficiency.** The productivity and cost-efficiency of our system

Annual monitoring of these metrics allows us to track our progress toward our desired 2040 outcomes. As outlined in METRO CONNECTS, full implementation of the vision will require additional resources beyond what our current revenue sources will be able to provide. In future System Evaluations, we intend to include METRO CONNECTS metrics for accessibility and all-day service.

Table 4: METRO CONNECTS Performance Metrics

	2017*	2018	2040
Transit access (fixed-route)			
Proximity of households to transit stops: percentage of households within half a mile of frequent service	50%	52%	73%
Equity of access: percentage of minority households with access to frequent service	47%	49%	77%
Equity of access: percentage of low-income households with access to frequent service	51%	53%	87%
Proximity of jobs to transit stops: percentage of jobs within half a mile of frequent service	69%	69%	87%
Access to transit: percentage of people who bike and walk to transit	78%	79%	84%
Transit use (all transit)			
Ridership: daily boardings	497,000	504,000	1,026,000
Mode share: percentage of all commute trips taken on transit (2016 one-year American Community Survey estimates, Table B08101)	13.1%	13.7%	23%
Transit efficiency			
Cost per boarding (Metro fixed-route bus and DART service only) *2015 dollars	\$4.73	\$4.87	\$3.95
Productivity: boardings per hour (Metro fixed-route bus and DART service only)	30.7	29.7	36.7

* Figures for 2017 have been adjusted and corrected since the 2018 System Evaluation was published.



Potential Changes to the Service Guidelines and Strategic Plan Integration with METRO CONNECTS

Metro has been working with community members, regional leaders, and an Equity Cabinet to develop a Mobility Framework that will help us integrate the METRO CONNECTS vision into our Service Guidelines in a way that prioritizes equity and sustainability and that is mindful of new advances in mobility technologies. A number of areas of the guidelines could be updated, including:

- » **Partnerships.** Clarify the definition, process, prioritization, and support needed, including the development of a strategy for smaller cities.
- » **Innovations and alternative services.** Develop guidelines around testing new services through pilot programs and partnerships, as well as evaluating alternative services and new technologies.
- » **Service network.** Revise guidance for prioritizing investments in the future network incorporating speed and reliability, fleet, layover, access, passenger facilities, bases, and other capital projects into the decision-making process.

Metro will collaborate with the King County Council, Regional Transit Committee, and stakeholders in 2020 to develop proposed policy changes to better align the Service Guidelines with METRO CONNECTS.

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Appendix A: Methodologies and Process Descriptions

Crowding (Priority 1)

Data is processed for two metrics: crowding and 20-minute standing loads.

Crowding. Data from Automated Passenger Counters (APCs) are collected, validated, cleaned, and compiled for each unique trip in the system (for example, the Route 5 trip that leaves Shoreline Community College at 5:15 a.m. on weekdays). We use several months of data to determine the average maximum load on each trip. We compare this figure to the crowding threshold of the scheduled coach assignment. Each coach type Metro operates has its own crowding threshold. This threshold is determined by adding the number of seats on the coach to the number of standing passengers the coach can accommodate if each passenger has at least 4 square feet of floor space. For example, a coach with 50 seats and 100 square feet of floor space available for passengers to stand would have a crowding threshold of $50 + 100/4 = 75$. If a trip's average maximum load is greater than its crowding threshold, we then determine if other trips that arrive within 15 minutes have the capacity to take the excess load without being overcrowded themselves. If excess capacity does not exist, the route is identified as needing investment. This process prevents Metro from adding too much capacity where it already exists. We estimate investment need based on the number of hours it takes to provide a trip on the identified route in the identified time period.

Twenty minute standing loads. We compile data from APCs for each unique trip in the system. We use several months of data to determine the average departing load from each bus stop served by the trip. We also use the data to determine the average time when buses leave each stop (known as the "passing minute"). We process these data to determine whether the passenger load exceeded the number of seats on the scheduled coach assignment for a period of at least 20 consecutive minutes. Where this happens, we check whether other trips that arrive within 15 minutes have the capacity to take those standing passengers without having standing loads themselves. If we don't find excess capacity, we identify the route as needing investment. Note that this measure does not determine if any individual passengers were standing for more than 20 minutes, as Metro is unable to collect such data. Investment need is estimated as above.

Reliability (Priority 2)

On-time performance is measured by comparing actual arrival times at time stops to scheduled arrival times. Buses that arrive at time stops up to 1.5 minutes before the scheduled time and up to 5.5 minutes after the scheduled time are considered to be on time. This allows for random variations resulting from operating in mixed traffic without prompting an unnecessary allocation of resources. All arrivals at time stops are recorded by systems on the bus. This data is then validated and cleaned. For the System Evaluation, we analyze late arrivals by route and by time period.

The four time periods we use are weekdays all day, weekday PM peak, Saturdays all day, and Sundays all day. For each route and each time period, we calculate the percentage of recorded arrivals at time stops that are late (more than 5.5 minutes after the scheduled arrival time). For all-day measures, routes that arrive late more than 20 percent of the time are identified for investment. For the weekday PM peak period, routes that arrive late more than 35 percent of the time are identified for investment. Investment need is estimated based on how much time must be added to schedules to ensure the route meets the 20 percent or 35 percent goal.

Methodologies and Process Descriptions continued

Service Growth (Priority 3)

Target service levels are determined for corridors, which are major transit pathways throughout the county. A combination of productivity, geographic value, and social equity factors are used to determine how much service each corridor should have.

Productivity. The productivity measure includes two primary factors:

Housing. We calculate the number of housing units that fall within a quarter-mile network-based walkshed of each stop served by the corridor. Housing unit information is maintained by the King County Assessor. We add the number of park-and-ride stalls within the same walkshed, multiplied by a factor of 1.1 (representing average occupancy), to this figure. Park-and-ride data is maintained by Metro. A graduated scale establishes the points assigned to each corridor (see the Service Guidelines for more information).

Employment. We calculate the number of jobs that fall within the same walkshed. This proprietary information is provided by the Puget Sound Regional Council. To this number we add the number of in-person students at campuses of degree-conferring institutes of higher learning that fall within the same walkshed. This data is collected from each institute of higher learning. A graduated scale establishes the points assigned to each corridor (see the Service Guidelines for more information).

Geographic Value. This measure determines the value of connections made between centers. A primary connection between each distinct pair of Regional Growth Centers, Manufacturing/Industrial Centers, and Transit Activity Centers is determined based on two factors: ridership and travel time. These two factors are designed to determine which corridor a typical rider would choose when traveling between two centers. We evaluate each corridor serving each pair of centers on these factors; the best corridor is determined to be the primary connection and scores points as outlined in the Service Guidelines.

Social Equity. This measure includes two primary factors:

- » Boardings from low-income census tracts
- » Boardings from minority census tracts

First, census tracts in King County are divided into two groups: low-income or not low-income. Low-income tracts are those where a greater percentage of the population than the countywide average has low incomes (less than 200 percent of the federal poverty level depending on household size). This data is from the latest American Community Survey 5-year estimates, or decennial census data when it is the most up-to-date and accurate. Second, we compare each corridor's proportion of inbound boardings that happen in low-income tracts to the system wide average of boardings in low-income tracts. Corridors above the system wide average receive the greatest numbers of points, while corridors just below the system wide average receive fewer. See the Service Guidelines for more details.

We use this same process to measure boardings from minority census tracts.

Initial target and final target. The aggregate score of the three measures above determine each corridor's initial service level. We then conduct an analysis that measures how crowded buses would be, given current ridership, if only that level of service were provided. If the initial level of service is not sufficient to handle current ridership, we adjust final target service levels upward to ensure the target at least matches current demand. We apply additional policy considerations for night service to arrive at target service levels for peak, off-peak, and night time periods. Then we compare the target to current service levels in each time period. We estimate investment need corridor by corridor based on this gap, if one exists, by determining the number of additional trips that are needed to meet the target. We prioritize corridors for investment based on their initial score, ordering first by geographic value, then productivity, then social equity, then corridor number if a tie exists.

Methodologies and Process Descriptions continued

Route Productivity (Priority 4)

We calculate two measures of productivity for three time periods (peak, off-peak, and night):

- » Rides per platform hour. Annualized ridership for each route in each time period is determined based on data collected in one service period (between one service change and the next). Annualized platform hours are similarly calculated. We then divide rides by platform hours.
- » Passenger miles per platform mile. Annualized passenger miles (the sum of miles every individual passenger travels) are divided by the number of miles buses traveled on each route in each time period.

Routes are separated into three service types: urban, suburban, and DART/Shuttle:

- » **Urban routes** primarily serve the densest parts of the county: the PSRC-designated Regional Growth Centers of Seattle Downtown, First Hill/Capitol Hill, South Lake Union, the University Community, and Uptown.
- » **Suburban routes** primarily serve passengers in suburban and rural areas in Seattle and King County.
- » **DART/Shuttle routes** are those that provide flexible, community-based service that has different characteristics than the fixed-route system.

For each group of routes, in each time period, for each measure, we calculate quartiles based on the results. Each route's performance in each time period in each measure is classified as being in either the top 25 percent, middle 50 percent, or bottom 25 percent of routes within the same service type. This data helps planners know which routes in each category and in each time period are the most and least productive, which informs investment and reduction decisions in accordance with the Service Guidelines.

Peak Analysis

Routes that operate only the peak period are called peak-only routes. A local alternative for each peak-only route is designated only if the local alternative serves at least 50 percent of the riders of the peak-only route. Each peak-only route is compared to its alternative, if one exists, on two measures: ridership and travel time. Peak-only routes either pass or fail each measure. If the peak-only route's ridership is at least 90 percent of the alternative route's ridership in the peak period, it passes the ridership test. If the peak-only route's scheduled travel time is at least 20 percent faster than the alternative route's travel time, it passes the travel time test. If no local alternative exists, the peak-only route automatically passes both measures. We use the results of this analysis when Metro is forced to reduce service, in accordance with the Service Guidelines.

Methodologies and Process Descriptions continued

Community Connections

This section describes the methodology for measuring the performance of Community Shuttle and TripPool services. Conceptually, the performance measures are similar, but due to differences in service design, the computation of those measures are different.

Community Shuttle

Community Shuttle performance measures are based on DART performance measures. The table below shows the performance measures used to evaluate Community Shuttle routes. The description for each measure includes its purpose and how its outcome may inform changes to service.

Measure	Description
Average daily ridership	<ul style="list-style-type: none">» Purpose: This metric is designed to measure the level of use of alternative services over time.» High ridership may trigger additional trips and/or conditional conversion to fixed-route» Low ridership may trigger a re-evaluation of the service and potential right-sizing
Cost per boarding	<p>Direct fixed cost per boarding</p> <ul style="list-style-type: none">» Purpose: This measure compares the direct cost of the service on a per-passenger basis. Direct cost is defined as the fixed cost of operating the service. In the case of this service, the direct cost is determined through a contract with Hopelink. This cost includes service operation, vehicle maintenance and administration conducted by the service provider. Due to the highly variable nature of fuel prices, we excluded this cost from this measure in order to be able to generate numerical targets for a particular route. Including fuel prices in this measure would require Metro to forecast the future price of fuel in order to set realistic performance targets.» Example: a shuttle that costs \$1,200 per day to operate and provides an average of 100 boardings per day costs \$12 per boarding to provide the service.» An uncharacteristically high cost per boarding may trigger a re-evaluation of the service
Vehicle capacity used	<p>Rides / seats provided</p> <ul style="list-style-type: none">» Purpose: This metric is designed to measure the level of use of alternative services relative to the capacity of the service provided.» Example: a shuttle with 16 seats making four one-way trips per weekday will provide 1,280 seats over the course of a month. This measure compares the rides provided in that month to the number of seats.» High vehicle capacity use may trigger additional trips and/or conditional conversion to fixed-route service.» Low vehicle capacity use may trigger a re-evaluation of the service and potential right-sizing.
Customer satisfaction	<p>Measures customer satisfaction with a given service based on intercept surveys of current riders.</p> <ul style="list-style-type: none">» Purpose: This metric is designed to determine if a given service is meeting the community-identified transportation need effectively.» High customer satisfaction suggests that a Community Connections solution is meeting the needs of the community effectively.» Low customer satisfaction suggests that the service in its current form is not effectively meeting the needs of the community and may trigger a re-evaluation of the service to better fit customer needs.

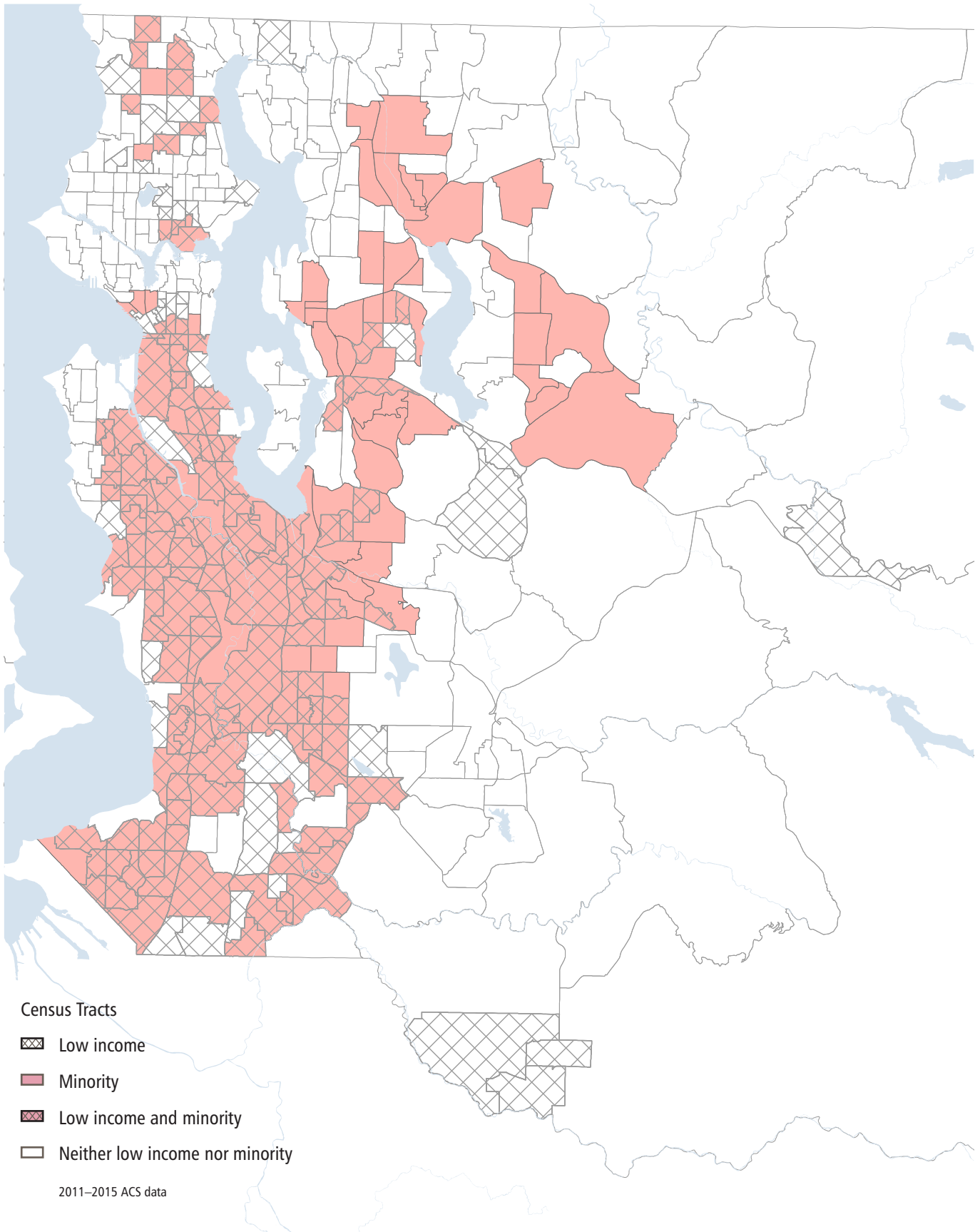
Methodologies and Process Descriptions continued

TripPool

The table below shows the performance measures used to evaluate TripPool services. The description for each measure includes its purpose and how its outcome may inform changes to service.

Measure	Description
Average daily ridership	<ul style="list-style-type: none"> » Purpose: This metric is designed to measure the level of use of services over time. » High ridership may trigger adding additional vehicles to the system » Low ridership may trigger a re-evaluation of the service and potential right-sizing
Vehicle capacity used	<p>Average participants/trip</p> <ul style="list-style-type: none"> » Purpose: This metric is designed to measure the level of use of service for a trip. » High participation for a trip may trigger additional trips of this type, or provision of a larger vehicle. » Low use may trigger re-evaluation of a trip when resources are constrained or opportunity costs are high.
Operating cost per boarding	<p>Operating cost/ boarding</p> <ul style="list-style-type: none"> » Purpose: This measure compares the actual cost of the service on a per-passenger basis. » An uncharacteristically high cost per rider may trigger a re-evaluation of the service » Low cost per rider may trigger an expansion of the service.
Customer satisfaction	<p>Measures customer satisfaction with a given service based on intercept surveys of current riders.</p> <ul style="list-style-type: none"> » Purpose: This metric is designed to determine if a given service is meeting the community-identified transportation need effectively. » High customer satisfaction suggests that a Community Connections solution is meeting the needs of the community effectively. » Low customer satisfaction suggests that the service in its current form is not effectively meeting the needs of the community and may trigger a re-evaluation of the service to better fit customer needs

Appendix B: King County Low-Income and Minority Census Tracts



Appendix C: Route Productivity Data

Suburban Routes

Route	Description	Peak		Off Peak		Night	
		Rides/ Platform Hour	Passenger Miles/ Platform Mile	Rides/ Platform Hour	Passenger Miles/ Platform Mile	Rides/ Platform Hour	Passenger Miles/ Platform Mile
22	Arbor Heights - Westwood Village - Alaska Junction	17.9	4.4	8.9	2.1	6.2	1.6
50	Alki - Columbia City - Othello Station	22.2	6.3	17.3	4.9	7.7	2.4
105	Renton Highlands - Renton TC	29.3	8.3	25.9	8.1	15.8	4.3
107	Renton TC - Rainier Beach	27.1	7.1	22.4	6.6	12.8	3.9
118	Tahlequah - Vashon	12.7	5.6	11.0	3.5	4.7	1.4
119	Dockton - Vashon	12.3	5.8	10.0	3.3		
128	Southcenter - Westwood Village - Admiral District	27.2	9.5	25.3	8.7	13.3	4.6
148	Fairwood - Renton TC	13.4	5.4	14.8	6.1	12.4	5.4
153	Kent Station - Renton TC	21.4	7.6	17.2	6.8		
154	Tukwila Station - Boeing Industrial	16.7	5.2	28.3	8.5		
156	Southcenter - SeaTac Airport - Highline CC	13.7	3.7	15.7	5.8	8.4	3.1
164	Green River CC - Kent Station	36.2	10.6	33.7	12.0	22.8	6.2
166	Kent Station - Burien TC	22.1	7.8	23.3	7.9	14.7	5.5
168	Maple Valley - Kent Station	20.8	6.4	23.9	8.5	19.7	5.1
169	Kent Station - East Hill - Renton TC	25.1	9.4	26.0	10.1	25.8	9.4
180	Auburn - SeaTac Airport - Burien TC	26.1	9.0	28.8	11.4	17.0	6.9
181	Twin Lakes P&R - Green River CC	18.0	5.4	24.3	8.8	15.0	4.1
182	NE Tacoma - Federal Way TC	13.7	3.4	18.0	6.0		
183	Federal Way - Kent Station	22.4	8.3	22.7	10.3	11.1	4.9
186	Enumclaw - Auburn Station	10.7	2.6				
187	Federal Way TC - Twin Lakes	23.3	6.5	27.6	7.7	14.5	3.2
200	Downtown Issaquah - North Issaquah			9.1	2.0		
208	Issaquah - North Bend	6.1	3.2	9.3	5.4	3.7	1.5
221	Education Hill - Overlake - Eastgate	19.0	5.9	18.4	5.4	10.3	2.6
226	Eastgate - Crossroads - Bellevue	24.4	7.7	20.3	5.8	10.5	2.9
232	Duvall - Bellevue	15.6	6.0				

Route Productivity Data continued

Route	Description	Peak		Off Peak		Night	
		Rides/ Platform Hour	Passenger Miles/ Platform Mile	Rides/ Platform Hour	Passenger Miles/ Platform Mile	Rides/ Platform Hour	Passenger Miles/ Platform Mile
234	Kenmore - Kirkland TC - Bellevue	20.9	8.3	15.7	6.1	10.8	3.6
235	Kingsgate - Kirkland TC - Bellevue	21.9	7.5	16.1	6.3	9.7	3.5
236	Woodinville - Totem Lake - Kirkland	7.4	2.2	7.4	2.6	5.0	1.2
237	Woodinville - Bellevue	18.5	9.7				
238	Bothell - Totem Lake - Kirkland	10.0	2.9	11.1	3.8		
240	Bellevue - Newcastle - Renton	18.8	7.8	19.5	8.6	12.8	5.7
241	Eastgate - Factoria - Bellevue	14.3	4.6	10.3	3.5	6.4	2.1
243	Overlake - Kenmore	2.2	0.8				
244	Kenmore - Overlake	12.8	6.4				
245	Kirkland - Overlake - Factoria	21.2	6.3	21.6	6.7	14.7	4.0
246	Eastgate - Factoria - Bellevue	11.7	3.1	9.2	2.8		
248	Avondale - Redmond TC - Kirkland	20.9	6.0	17.9	4.9	11.2	2.7
249	Overlake - South Kirkland - South Bellevue	16.4	4.9	11.9	4.0		
269	Issaquah - Overlake	13.6	5.8	8.7	3.9		
330	Shoreline CC - Lake City	24.4	6.8	30.3	10.1		
331	Shoreline CC - Kenmore	17.1	6.4	15.2	5.5		
342	Shoreline - Bellevue TC - Renton	17.5	10.1				
345	Shoreline CC - Northgate	28.2	7.7	28.1	7.9	7.8	2.8
346	Aurora Village - Northgate	26.7	7.8	21.1	6.7	8.3	3.3
347	Mountlake Terrace - Northgate	22.5	7.1	20.2	5.5	15.2	5.0
348	Richmond Beach - Northgate	22.8	5.7	22.9	5.7	15.8	5.1
671	Federal Way - Tukwila	52.3	15.8	56.1	18.3	43.6	14.2
672	Bellevue - Crossroads - Redmond	40.5	12.1	34.3	10.6	26.7	7.4
676	Burien - Tukwila Int'l Blvd - Renton	31.8	9.2	33.5	11.3	21.7	7.1
952	Auburn P&R - Kennydale - Seaway TC	6.4	5.1	7.3	4.5		

Spring 2019 Thresholds: Suburban Routes	Peak		Off Peak		Night	
Bottom 25%	13.7	5.3	11.9	4.9	8.4	2.8
Top 25%	24.1	7.8	25.3	8.5	15.8	5.4

Route Productivity Data continued

DART/Shuttle Routes

Route	Description	Peak		Off Peak		Night	
		Rides/ Platform Hour	Passenger Miles/ Platform Mile	Rides/ Platform Hour	Passenger Miles/ Platform Mile	Rides/ Platform Hour	Passenger Miles/ Platform Mile
204**	South Mercer Island - Mercer Island P&R	9.2	1.8	9.9	2.7		
224**	Duvall - Redmond TC	7.2	3.0	8.4	3.9		
773	Seacrest Park - Alaska Junction	21.7	4.5	20.9	3.5		
775	Seacrest Park - Admiral District - Alki	25.3	5.2	32.1	5.5		
901DART	Mirror Lake - Federal Way TC	16.1	4.6	16.2	4.3	12.7	4.7
903DART	Twin Lakes - Federal Way TC	8.0	1.8	10.2	2.4		
906DART	Fairwood - Southcenter	13.0	4.2	13.4	5.3		
907DART	Black Diamond - Renton TC			6.4	3.0		
908DART	Renton Highlands - Renton TC	9.6	2.6	6.5	1.8		
910DART	North Auburn - SuperMall			11.0	2.4		
913DART	Kent Station - Riverview	12.4	3.3				
914DART	Kent - Kent East Hill			12.5	3.7		
915DART	Enumclaw - Auburn Station			20.2	6.7		
916DART	Kent - Kent East Hill			9.9	4.0		
917DART	Pacific - Auburn	10.5	2.7	7.1	1.8		
930DART	Kingsgate - Redmond	12.0	4.6	14.3	5.3		
931DART	Bothell - Redmond	5.5	2.5	4.0	2.0		

Spring 2019 Thresholds:
DART/Shuttle Routes

	Peak		Off Peak		Night	
Bottom 25%	8.9	2.5	8.1	2.4	12.7	4.7
Top 25%	13.8	4.5	14.8	4.5	12.7	4.7

** Information is from fall 2018 service change due to a lack of sampling in spring 2019

Route Productivity Data continued

Urban Routes

Route	Description	Peak		Off Peak		Night	
		Rides/ Platform Hour	Passenger Miles/ Platform Mile	Rides/ Platform Hour	Passenger Miles/ Platform Mile	Rides/ Platform Hour	Passenger Miles/ Platform Mile
1	Kinross - Seattle CBD	44.9	12.0	34.9	7.8	18.8	5.1
2	West Queen Anne - Seattle CBD - Madrona Park	54.3	13.1	44.1	9.2	23.5	5.2
3	Seattle Pacific University - North Queen Anne - Seattle CBD - Madrona Park	52.0	12.1	41.2	9.0	20.8	3.9
4	Seattle Pacific University - East Queen Anne - Seattle CBD - Judkins Park	35.6	7.8	25.6	5.3	14.3	3.2
5	Shoreline CC - Seattle CBD	52.5	17.1	38.7	12.5	20.1	6.8
5X	Greenwood - Seattle CBD	36.0	14.1				
7	Rainier Beach - Seattle CBD	44.5	13.9	47.1	13.4	31.6	9.9
8	Seattle Center - Capitol Hill - Mt Baker	55.4	11.9	42.3	9.5	28.8	6.3
9	Rainier Beach - Capitol Hill	27.2	7.7	22.7	7.2		
10	Capitol Hill - Seattle CBD	36.7	6.9	36.5	7.1	21.8	4.4
11	Madison Park - Seattle CBD	53.7	12.4	45.5	9.6	24.6	4.2
12	Interlaken Park - Seattle CBD	51.4	9.9	33.6	6.7	15.2	3.4
13	Seattle Pacific University - Queen Anne - Seattle CBD	43.8	12.0	40.5	9.4	26.3	6.1
14	Mount Baker - Seattle CBD	43.0	9.7	35.9	7.3	19.2	4.5
15X	Blue Ridge - Ballard - Seattle CBD	43.3	17.9				
17X	Sunset Hill - Ballard - Seattle CBD	40.3	16.6	23.4	9.3		
18X	North Beach - Ballard - Seattle CBD	37.6	15.2				
19	West Magnolia - Seattle CBD	24.6	8.8				
21	Arbor Heights - Westwood Village - Seattle CBD	40.1	12.9	26.7	9.3	15.0	5.5
21X	Arbor Heights - Westwood Village - Seattle CBD	30.6	15.3				
24	Magnolia - Seattle CBD	40.7	13.0	24.1	8.2	13.4	4.1
26	Northgate - East Green Lake - Wallingford - Seattle CBD	42.4	13.9	24.4	9.8	12.2	4.5
27	Colman Park - Leschi Park - Seattle CBD	32.3	7.7	19.8	4.8	14.0	3.3
28	Broadview - Crown Hill - Ballard - Seattle CBD via Leary Way NW	36.2	12.3	23.9	8.7	10.7	3.8
29	Ballard - Queen Anne - Seattle CBD	29.8	6.9	12.0	3.8		

Route Productivity Data continued

Route	Description	Peak		Off Peak		Night	
		Rides/ Platform Hour	Passenger Miles/ Platform Mile	Rides/ Platform Hour	Passenger Miles/ Platform Mile	Rides/ Platform Hour	Passenger Miles/ Platform Mile
31	University District - Fremont - Magnolia	32.4	8.1	26.0	7.0	16.0	3.2
32	University District - Fremont - Seattle Center	35.4	10.6	30.6	9.6	19.2	5.3
33	Discovery Park - Seattle CBD	46.2	13.7	29.1	8.4	12.4	4.2
36	Othello Station - Beacon Hill - Seattle CBD	44.1	12.4	41.0	10.7	24.4	6.2
37	Alaska Junction - Alki - Seattle CBD	15.1	7.9				
40	Northgate TC - Ballard - Seattle CBD via Leary Av NW	45.0	13.1	37.2	12.1	22.9	7.4
41	Lake City - Seattle CBD via Northgate	33.6	19.9	24.8	13.9	18.2	10.3
43	University District - Capitol Hill - Seattle CBD	24.6	6.2	21.6	4.6	11.4	3.6
44	Ballard - Wallingford - Montlake	62.2	16.9	46.7	11.9	34.1	8.3
45	Loyal Heights - University District	38.1	8.8	38.1	9.9	26.3	5.4
47	Summit - Seattle CBD	24.7	4.7	20.0	3.8		
48	Mt Baker - University District	34.9	10.3	24.1	6.6	14.2	3.7
49	University District - Capitol Hill - Seattle CBD	41.0	14.5	35.6	12.1	29.4	10.9
55	Admiral District - Alaska Junction - Seattle CBD	25.1	11.4				
56	Alki - Seattle CBD	29.5	12.9	16.4	9.6		
57	Alaska Junction - Seattle CBD	33.7	15.6				
60	Westwood Village - Georgetown - Capitol Hill	33.0	10.1	31.2	9.4	19.4	5.7
62	Sand Point - Green Lake - Seattle CBD	43.5	12.6	29.4	9.6	17.0	5.3
63	Northgate - Cherry Hill	27.2	9.6	18.9	7.4		
64	Jackson Park - Cherry Hill	29.8	9.5				
65	Jackson Park - Lake City - University District	52.3	12.4	36.3	8.9	25.8	6.3
67	Northgate TC - University District	42.8	12.1	41.6	11.0	32.2	7.0
70	University District - Seattle CBD	52.4	18.3	38.3	14.1	19.7	7.5
71	Wedgwood - University District	28.5	6.0	23.0	4.8	19.2	3.0
73	Jackson Park - Cowen Park - University District			27.0	8.2	24.6	6.1
74	Sand Point - Seattle CBD	24.2	10.3	11.1	3.6		
75	Northgate TC - Lake City - Seattle CBD	41.8	10.2	32.1	7.7	23.3	5.4
76	Wedgwood - Seattle CBD	39.7	15.0	18.8	8.9		
77	North City - Seattle CBD	31.8	15.7				

Route Productivity Data continued

Route	Description	Peak		Off Peak		Night	
		Rides/ Platform Hour	Passenger Miles/ Platform Mile	Rides/ Platform Hour	Passenger Miles/ Platform Mile	Rides/ Platform Hour	Passenger Miles/ Platform Mile
78	Children's Hospital - UW Station	18.4	3.4	18.2	3.5		
101	Renton TC - Seattle CBD	26.4	19.9	22.4	18.3	21.6	16.2
102	Fairwood - Seattle CBD	27.1	19.3				
106	Renton TC - Rainier Beach - Seattle CBD	38.8	10.2	30.8	9.1	19.7	6.5
111	Lake Kathleen - Seattle CBD	18.0	14.1				
113	Shorewood - Seattle CBD	19.6	10.0				
114	Renton Highlands - Seattle CBD	13.7	10.6				
116	Fauntleroy Ferry - Seattle CBD	20.1	7.3				
118X	Tahlequah - Vashon	16.4	9.7	12.0	5.1		
119X	Dockton - Vashon	22.1	10.5				
120	Burien TC - Westwood Village - Seattle CBD	33.4	15.1	30.0	13.1	26.0	12.1
121	Highline CC -Burien TC - Seattle CBD via 1st Av S	15.1	7.9	11.4	4.9		
122	Highline CC -Burien TC - Seattle CBD via Des Moines Memorial Dr S	15.3	8.1	16.3	10.0		
123	Burien - Seattle CBD	22.2	13.8				
124	Tukwila - Georgetown - Seattle CBD	35.0	12.1	30.9	10.1	19.8	7.5
125	Westwood Village - Seattle CBD	25.1	11.2	15.1	6.9	11.2	5.2
131	Burien TC - Highland Park - Seattle CBD	38.7	15.6	34.3	13.1	22.3	9.0
132	Burien TC - South Park - Seattle CBD	32.9	13.4	27.5	9.9	17.5	7.2
143	Black Diamond - Renton TC - Seattle CBD	15.9	11.2				
150	Kent Station - Southcenter - Seattle CBD	25.1	16.6	21.5	16.4	20.1	16.3
157	Lake Meridian - Seattle CBD	14.3	11.1				
158	Kent East Hill - Seattle CBD	16.5	12.5				
159	Timberlane - Seattle CBD	14.0	10.5				
167	Renton - Newport Hills - University District	20.0	16.1	12.8	14.6		
177	Federal Way - Seattle CBD	13.4	10.1				
178	South Federal Way - Seattle CBD	12.4	10.1				
179	Twin Lakes - Seattle CBD	17.7	15.8				
190	Redondo Heights - Seattle CBD	11.7	9.4				
192	Star Lake - Seattle CBD	9.2	7.4				
193*	Federal Way - First Hill	13.2	10.5				
197	Twin Lakes - University District	13.0	11.2	11.2	7.9		

Route Productivity Data continued

Route	Description	Peak		Off Peak		Night	
		Rides/ Platform Hour	Passenger Miles/ Platform Mile	Rides/ Platform Hour	Passenger Miles/ Platform Mile	Rides/ Platform Hour	Passenger Miles/ Platform Mile
212	Eastgate - Seattle CBD	38.6	22.6	26.0	14.1		
214	Issaquah - Seattle CBD	27.3	19.3				
216	Sammamish - Seattle CBD	31.6	22.8				
217	Seattle CBD - Eastgate - Issaquah	16.5	12.0				
218	Issaquah Highlands - Seattle CBD	33.8	22.9	27.3	19.3		
219	Redmond - Sammamish - Seattle CBD	25.1	21.8				
252	Kingsgate - Seattle CBD	24.3	17.2				
255	Brickyard - Kirkland TC - Seattle CBD	27.2	16.4	19.0	11.9	17.4	10.3
257	Brickyard - Seattle CBD	24.2	17.2				
268	Redmond - Seattle CBD	32.7	22.2				
271	Issaquah - Bellevue - University District	26.6	12.3	23.2	11.4	16.1	7.8
277	Juanita - University District	12.8	5.7	20.3	9.3		
301	Aurora Village - Seattle CBD	35.6	25.7	29.1	21.4		
303*	Shoreline - First Hill	31.5	16.5				
304	Richmond Beach - Seattle CBD	28.2	20.6				
308	Horizon View - Seattle CBD	14.8	8.8				
309*	Kenmore - First Hill	28.1	15.9				
311	Woodinville - Seattle CBD	24.3	18.0				
312*	Bothell - Seattle CBD	31.9	18.9	18.0	10.3		
316	Meridian Park - Seattle CBD	38.9	17.4				
355*	Shoreline CC - University District - Seattle CBD	30.0	13.1	19.2	7.6		
372*	Woodinville - Lake City - University District	36.1	10.6	38.6	10.5	24.8	6.2
373*	Aurora Village - University Village	34.1	11.5	34.2	10.3		
673*	Westwood Village - Alaska Junction - Seattle CBD	38.9	16.6	30.4	14.6	19.1	9.1
674*	Crown Hill - Ballard - Seattle Center - Seattle CBD	60.5	17.8	52.2	16.8	34.2	10.1
675*	Aurora Village - Seattle CBD	52.8	19.8	54.9	23.1	41.4	15.8
--	South Lake Union Streetcar	79.7	7.9	66.5	6.1	27.9	3.3
--	West Seattle Water Taxi	90.0	38.0				
--	Vashon Island Water Taxi	178.0	90.0				

Spring 2019 Thresholds: Urban Routes	Peak		Off Peak		Night	
Bottom 25%	24.3	10.1	21.2	7.4	16.6	4.3
Top 25%	40.3	16.4	36.4	11.9	24.7	7.6

* Designates routes receiving Seattle investments.

Route Productivity Data continued

Appendix D: Changes to Route Productivity Thresholds

Top 25%

Service Type	Year	Peak		Off Peak		Night	
		Rides/ Platform Hour	Passenger Miles/ Platform Mile	Rides/ Platform Hour	Passenger Miles/ Platform Mile	Rides/ Platform Hour	Passenger Miles/ Platform Mile
Suburban	2019	24.1	7.8	25.3	8.5	15.8	5.4
	2018	23.9	8.2	25.1	8.3	16.8	5.6
	Change	0.2	-0.3	0.2	0.3	-1.0	-0.2
Urban	2019	40.3	16.4	36.4	11.9	24.7	7.7
	2018	41.6	17.5	37.2	12.1	25.9	7.9
	Change	-1.4	-1.1	-0.8	-0.2	-1.2	-0.2
DART/Shuttle	2019	13.8	4.5	14.8	4.5	12.7	4.7
	2018	11.9	3.8	13.8	4.5	13.0	4.7
	Change	1.9	0.7	1.0	0.0	-0.3	0.0

Bottom 25%

Service Type	Year	Peak		Off Peak		Night	
		Rides/ Platform Hour	Passenger Miles/ Platform Mile	Rides/ Platform Hour	Passenger Miles/ Platform Mile	Rides/ Platform Hour	Passenger Miles/ Platform Mile
Suburban	2019	13.7	5.3	11.9	4.9	8.4	2.8
	2018	14.0	4.7	12.1	4.7	9.6	3.5
	Change	-0.3	0.5	-0.2	0.2	-1.2	-0.8
Urban	2019	24.3	10.1	21.2	7.4	16.6	4.3
	2018	24.7	9.8	22.4	7.5	15.7	4.4
	Change	-0.4	0.3	-1.2	-0.1	0.9	-0.1
DART/Shuttle	2019	8.9	2.5	8.1	2.4	12.7	4.7
	2018	8.1	2.1	7.4	2.3	13.0	4.7
	Change	0.8	0.5	0.6	0.1	-0.3	0.0

Appendix E: Peak Route Analysis

Route	Description	Alternative Route(s)*	Ridership ≥ 90% of alternative	Travel Time ≥ 20% faster than alternative
5EX	Shoreline CC - Seattle CBD	5	No	No
9EX	Rainier Beach - Capitol Hill	7	No	No
15EX	Blue Ridge - Ballard - Seattle CBD	D Line	No	Yes
17EX	Sunset Hill - Ballard - Seattle CBD	29	Yes	Yes
18EX	North Beach - Ballard - Seattle CBD	40	No	No
19	West Magnolia - Seattle CBD	24	No	No
21EX	Arbor Heights - Westwood Village - Seattle CBD	21	Yes	Yes
29	Ballard - Queen Anne - Seattle CBD	2	Yes	Yes
37	Alaska Junction - Alki - Seattle CBD	773	Yes	Yes
55	Admiral District - Alaska Junction - Seattle CBD	50	Yes	No
56	Alki - Seattle CBD	50	Yes	Yes
57	Alaska Junction - Seattle CBD	56	Yes	No
63EX	Northgate - Cherry Hill	303EX	No	No
64EX	Lake City - First Hill	76	No	Yes
76	Wedgwood - Seattle CBD	71	Yes	No
77EX	North City - Seattle CBD	373EX	Yes	Yes
102	Fairwood - Renton TC - Seattle CBD	148	Yes	No
111	Lake Kathleen - Seattle CBD	None	Yes	Yes
113	Shorewood - Seattle CBD	None	Yes	Yes
114	Renton Highlands - Seattle CBD	240	Yes	Yes
116EX	Fauntleroy Ferry - Seattle CBD	C Line	No	No
118EX	Tahlequah - Seattle CBD via ferry	118	Yes	No
119EX	Dockton - Seattle CBD via ferry	119	Yes	No
121	Highline CC -Burien TC - Seattle CBD via 1st Ave S	166	Yes	Yes
122	Highline CC -Burien TC - Seattle CBD via Des Moines Memorial Dr S	156	Yes	Yes
123	Burien - Seattle CBD	121	Yes	No
154	Tukwila Station - Boeing Industrial	124	No	No
157	Lake Meridian - Seattle CBD	None	Yes	Yes
158	Kent East Hill - Seattle CBD	164	Yes	No
159	Timberlane - Seattle CBD	164	Yes	No
167	Renton - Newport Hills - University District	560EX	Yes	Yes
177	Federal Way - Seattle CBD	577EX	No	No
178	South Federal Way - Seattle CBD	177	Yes	No
179	Twin Lakes - Seattle CBD	181	Yes	No
190	Redondo Heights - Seattle CBD	574EX	No	Yes
192	Star Lake - Seattle CBD	574EX	No	Yes

Route	Description	Alternative Route(s)*	Ridership ≥ 90% of alternative	Travel Time ≥ 20% faster than alternative
193EX	Federal Way - First Hill	None	Yes	Yes
197	Twin Lakes - University District	181	Yes	Yes
212	Eastgate - Seattle CBD	554EX	Yes	No
214	Issaquah - Seattle CBD	554EX	Yes	No
216	Sammamish - Seattle CBD	269	Yes	No
217	Issaquah - Eastgate - Seattle CBD	554EX	No	Yes
218	Issaquah Highlands - Seattle CBD	554EX	Yes	Yes
219	Redmond - Sammamish - Seattle CBD	None	Yes	Yes
232	Duvall - Bellevue	248	Yes	Yes
237	Woodinville - Bellevue	311	No	Yes
243EX	Overlake - Kenmore	930	Yes	Yes
244	Kenmore - Overlake	234	Yes	Yes
252	Kingsgate - Seattle CBD	255	No	Yes
257	Brickyard - Seattle CBD	238	Yes	Yes
268	Redmond - Seattle CBD	545	No	Yes
277	Juanita - University District	235	No	Yes
301	Aurora Village - Seattle CBD	E Line	No	Yes
303EX	Shoreline - First Hill	None	Yes	Yes
304	Richmond Beach - Seattle CBD	348	Yes	Yes
308	Horizon View - Seattle CBD	331	Yes	No
309EX	Kenmore - First Hill	312EX	No	Yes
311	Woodinville - Seattle CBD	232	Yes	Yes
312EX	Bothell - Seattle CBD	522EX	Yes	No
316	Meridian Park - Seattle CBD	26EX	Yes	Yes
342	Shoreline - Bellevue TC - Renton	None	Yes	Yes
355EX	Shoreline CC - University District - Seattle CBD	5	No	No
913DART	Kent Station - Riverview	None	Yes	Yes
Vashon Water Taxi	Vashon - Seattle CBD	118	Yes	Yes
West Seattle Water Taxi	West Seattle - Seattle CBD	37	Yes	Yes

Peak-only routes 27, 143, 153, 183, 373 Express, 930, and 931 are included in the corridor analysis because they each serve as the only route on one of Metro’s corridors during at least one time period. These routes are not analyzed as part of the peak analysis because their target service levels are set by the corridor analysis.

* Alternative routes must serve at least 50% of riders on the peak-only route.

Appendix F: Route-level Reliability

■ over the lateness threshold

Route	All-Day % Late	PM % Late	Saturday % Late	Sunday % Late
1	14.6%	17.1%	8.9%	16.1%
2	16.0%	14.9%	11.4%	20.6%
3	15.9%	20.5%	14.8%	20.2%
4	11.7%	15.2%	14.6%	12.6%
5	23.1%	40.0%	32.4%	25.8%
5X	14.2%	21.9%	-	-
7	18.8%	25.5%	27.3%	11.8%
8	25.7%	32.4%	31.4%	30.2%
9X	17.1%	23.7%	-	-
10	23.1%	21.6%	20.4%	9.8%
11	19.9%	30.7%	33.4%	34.8%
12	22.9%	33.5%	10.9%	11.0%
13	12.9%	10.0%	11.6%	21.9%
14	10.5%	13.1%	5.6%	9.8%
15X	19.4%	31.2%	-	-
17X	27.2%	26.6%	-	-
18X	26.5%	36.6%	-	-
19	12.0%	13.5%	-	-
21	21.8%	29.7%	36.0%	20.0%
21X	10.5%	14.4%	-	-
22	12.3%	19.7%	30.7%	5.0%
24	22.4%	27.6%	28.1%	14.9%
26X	23.8%	27.3%	28.8%	25.2%
27	11.5%	12.9%	15.7%	17.8%
28X	19.9%	24.8%	23.2%	18.0%
29	14.0%	15.7%	-	-
31	20.7%	28.3%	27.9%	-
32	18.5%	21.2%	20.6%	22.3%
33	18.4%	29.8%	27.3%	15.7%
36	23.5%	35.5%	10.4%	17.0%
37	19.2%	25.0%	-	-
40	23.6%	35.4%	30.1%	45.9%
41	13.4%	17.7%	8.4%	4.8%
43	16.8%	21.8%	19.8%	5.5%
44	7.8%	9.6%	20.1%	8.8%
45	10.2%	10.1%	10.2%	13.5%
47	10.2%	23.3%	19.1%	6.9%
47	7%	12%	11%	4%

Route	All-Day % Late	PM % Late	Saturday % Late	Sunday % Late
48	11.4%	20.7%	21.4%	11.3%
49	16.9%	17.3%	16.7%	13.3%
50	17.3%	25.5%	16.3%	17.8%
55	12.6%	18.1%	-	-
56	8.0%	13.8%	-	-
57	5.8%	7.6%	-	-
60	18.3%	22.3%	23.8%	17.9%
62	22.4%	35.4%	22.9%	19.3%
63X	30.6%	37.9%	-	-
64X	31.2%	45.5%	-	-
65	14.3%	23.5%	13.2%	11.6%
67	22.9%	29.0%	21.2%	19.0%
70	11.6%	21.9%	11.0%	8.5%
71	15.6%	20.9%	18.6%	-
74	4.9%	14.3%	-	-
75	17.6%	24.4%	16.6%	17.3%
76	23.9%	39.6%	-	-
77X	16.6%	16.1%	-	-
78	4.2%	8.0%	-	-
101	6.3%	8.1%	9.3%	14.1%
102	5.9%	8.2%	-	-
105	2.9%	3.4%	5.1%	7.4%
106	26.7%	26.4%	22.8%	19.9%
107	22.0%	27.1%	23.7%	16.0%
111	7.3%	13.6%	-	-
113	14.6%	15.8%	-	-
114	7.9%	15.0%	-	-
116X	18.5%	13.3%	-	-
118	10.8%	14.3%	20.6%	10.6%
118X	12.0%	23.1%	-	-
119	14.0%	29.8%	-	-
119X	13.1%	25.7%	-	-
120	8.4%	12.4%	8.0%	8.4%
121	8.3%	10.3%	-	-
122	10.3%	13.2%	-	-
123	11.4%	14.0%	-	-
124	17.3%	19.2%	27.0%	12.2%
124	18%	26%	20%	10%

Route-level Reliability continued

■ over the lateness threshold

Route	All-Day % Late	PM % Late	Saturday % Late	Sunday % Late
125	9.9%	15.2%	12.9%	20.3%
128	9.8%	12.7%	12.5%	6.2%
131	23.4%	37.3%	28.4%	24.9%
132	20.9%	19.8%	24.3%	22.5%
143	25.3%	33.4%	-	-
148	18.5%	30.3%	25.4%	12.8%
150	11.4%	13.8%	16.1%	9.2%
153	17.3%	39.4%	-	-
154	13.1%	18.7%	-	-
156	13.2%	15.0%	8.9%	18.1%
157	21.5%	29.6%	-	-
158	13.7%	21.3%	-	-
159	12.3%	20.9%	-	-
164	9.0%	10.6%	11.4%	-
166	10.8%	23.9%	22.6%	20.9%
167	14.0%	23.2%	-	-
168	21.4%	29.5%	23.8%	23.0%
169	12.4%	17.8%	25.1%	29.1%
177	10.8%	13.4%	-	-
178	9.7%	14.4%	-	-
179	13.2%	20.9%	-	-
180	12.3%	20.8%	17.8%	12.4%
181	13.8%	27.1%	22.7%	16.9%
182	15.5%	28.8%	15.3%	2.2%
183	10.3%	14.9%	21.2%	-
186	28.9%	51.3%	-	-
187	19.7%	36.1%	14.6%	2.0%
190	7.8%	13.2%	-	-
192	8.3%	10.5%	-	-
193X	12.8%	15.6%	-	-
197	21.9%	36.2%	-	-
200	19.5%	-	-	-
208	19.5%	37.5%	44.9%	-
212	7.8%	11.4%	-	-
214	7.7%	8.9%	-	-
216	12.2%	16.5%	-	-
214	21%	26%		
216	37%	55%		

Route	All-Day % Late	PM % Late	Saturday % Late	Sunday % Late
217	5.1%	11.6%	-	-
218	9.1%	10.3%	-	-
219	10.0%	13.4%	-	-
221	21.7%	28.6%	9.0%	20.3%
226	19.0%	20.0%	15.1%	12.0%
232	23.0%	29.3%	-	-
234	19.3%	26.5%	24.0%	17.8%
235	19.9%	24.5%	5.4%	3.3%
236	17.0%	25.5%	19.4%	18.1%
237	9.0%	16.8%	-	-
238	21.7%	35.8%	9.5%	15.5%
240	17.7%	23.4%	12.2%	7.9%
241	20.4%	29.6%	13.4%	6.2%
243X	23.4%	53.5%	-	-
244	46.1%	55.9%	-	-
245	16.7%	24.3%	17.0%	12.6%
246	12.0%	32.6%	-	-
248	12.3%	19.9%	4.8%	6.1%
249	14.8%	25.5%	18.8%	15.2%
252	16.9%	28.1%	-	-
255	12.5%	22.7%	14.9%	6.5%
257	16.8%	33.4%	-	-
268	14.1%	9.8%	-	-
269	18.5%	30.1%	3.5%	-
271	15.1%	21.7%	10.0%	9.5%
277	28.0%	36.0%	-	-
301	14.0%	25.5%	-	-
301X	20.2%	31.3%	-	-
303X	15.1%	29.9%	-	-
304	8.1%	9.3%	-	-
308	22.9%	52.5%	-	-
309X	18.5%	41.0%	-	-
311	15.3%	31.6%	-	-
312X	13.6%	20.1%	-	-
316	19.0%	30.8%	-	-
330	18.1%	25.4%	-	-
331	14.7%	16.9%	11.9%	4.4%
342	22.8%	40.6%	-	-
345	6.1%	8.7%	5.6%	5.0%

Route-level Ridership continued

over the lateness threshold

Route	All-Day % Late	PM % Late	Saturday % Late	Sunday % Late
346	4.1%	9.6%	3.0%	2.0%
347	12.8%	24.4%	9.2%	10.0%
348	12.7%	17.3%	11.0%	6.7%
355X	15.6%	15.0%	-	-
372X	20.2%	27.4%	6.5%	8.9%
373X	14.1%	16.5%	-	-
A Line	17.1%	20.3%	-	-
B Line	16.1%	19.4%	-	-
C Line	17.8%	20.8%	-	-
D Line	18.2%	20.4%	-	-
E Line	22.4%	25.6%	-	-
F Line	15.3%	16.5%	-	-
King County Marine Division	All-Day Weekday % Late			
West Seattle Water Taxi	1.0%			
Vashon Island Water Taxi	1.7%			

Appendix G: Route-level Ridership and Hours

We adopted a more accurate methodology to process data from our automatic passenger counters. This methodology was applied to last year's data to provide an apples-to-apples comparison. Data for 2015 will not match the data published in last year's System Evaluation.

Route	Weekday Rides in Fall 2017	Weekday Rides in Fall 2018	Change in Rides	Weekday Platform Hours in Fall 2017	Weekday Platform Hours in Fall 2018	Change in Platform Hours
1	2,400	2,400	0	66	67	1
2	5,900	5,900	0	138	138	0
3	7,200	8,100	900	166	190	24
4	3,900	2,700	-1,200	105	110	5
5	8,300	8,000	-300	193	203	10
7	10,800	11,200	400	257	260	3
8	8,600	8,600	0	190	194	4
9	1,000	1,000	0	36	37	1
10	3,100	3,200	100	94	94	0
11	4,000	4,100	100	89	93	4
12	3,300	3,400	100	84	86	2
13	2,400	2,400	0	63	64	1
14	2,900	3,000	100	88	87	-1
15X	1,500	1,400	-100	33	33	0
17X	1,100	1,100	0	25	27	2
18X	1,000	1,100	100	25	27	2
19	300	300	0	12	13	1
21	4,900	4,800	-100	152	158	6
22	200	200	0	16	16	0
24	2,300	2,300	0	72	74	2
26X	2,900	3,000	100	94	95	1
27	1,100	1,200	100	51	50	-1
28X	3,200	3,300	100	103	106	3
29	1,100	1,100	0	38	38	0
31	1,600	1,800	200	58	67	9
32	2,400	2,300	-100	78	77	-1
33	2,100	2,100	0	59	60	1
36	9,200	9,200	0	237	237	0
37	200	200	0	10	13	3
40	12,000	12,600	600	299	315	16
41	9,600	8,800	-800	201	233	32
43	700	700	0	29	32	3
44	8,800	8,900	100	178	177	-1
45	6,900	6,800	-100	185	186	1

Route-level Ridership and Hours continued

Route	Weekday Rides in Fall 2017	Weekday Rides in Fall 2018	Change in Rides	Weekday Platform Hours in Fall 2017	Weekday Platform Hours in Fall 2018	Change in Platform Hours
47	600	500	-100	23	23	0
48	5,800	5,600	-200	198	199	1
49	6,400	6,000	-400	169	169	0
50	2,300	2,400	100	124	137	13
55	1,000	900	-100	32	37	5
56	700	700	0	21	26	5
57	500	500	0	11	13	2
60	5,400	5,700	300	192	193	1
62	7,500	8,100	600	241	244	3
63	700	700	0	29	30	1
64X	800	800	0	28	30	2
65	5,700	5,700	0	145	146	1
67	5,700	5,700	0	145	146	1
70	8,300	8,600	300	191	216	25
71	1,300	1,300	0	51	51	0
73	1,100	700	-400	40	24	-16
74	1,300	1,300	0	38	50	12
75	4,400	4,600	200	130	136	6
76	1,600	1,600	0	43	44	1
77	1,100	1,100	0	30	36	6
78	200	200	0	14	14	0
99	300	--	--	17	--	--
101	4,800	4,700	-100	117	154	37
102	1,000	1,400	400	30	40	10
105	1,000	900	-100	38	38	0
106	5,600	5,800	200	178	178	0
107	2,600	2,700	100	117	117	0
111	800	800	0	40	43	3
113	200	200	0	13	13	0
114	400	400	0	30	31	1
116	600	600	0	29	29	0
118X	200	200	0	11	11	0
118	300	400	100	30	30	0
119X	100	100	0	5	5	0
119	200	200	0	12	12	0
120	8,600	8,400	-200	228	243	15

Route-level Ridership and Hours continued

Route	Weekday Rides in Fall 2017	Weekday Rides in Fall 2018	Change in Rides	Weekday Platform Hours in Fall 2017	Weekday Platform Hours in Fall 2018	Change in Platform Hours
121	900	900	0	51	56	5
122	500	400	-100	28	30	2
123	300	300	0	12	14	2
124	4,000	4,200	200	136	137	1
125	1,700	1,400	-300	58	60	2
128	3,500	3,400	-100	139	140	1
131	3,100	3,300	200	93	93	0
132	2,800	2,900	100	103	103	0
143	600	500	-100	36	35	-1
148	600	600	0	43	43	0
150	6,200	6,300	100	192	208	16
153	400	800	400	22	42	20
154	200	100	-100	8	9	1
156	1,100	1,000	-100	65	70	5
157	200	200	0	17	17	0
158	600	600	0	30	31	1
159	400	300	-100	25	25	0
164	1,700	1,700	0	48	48	0
166	2,000	1,700	-300	86	86	0
167	300	300	0	16	16	0
168	1,400	1,500	100	69	72	3
169	3,200	3,300	100	144	144	0
177	500	500	0	36	36	0
178	400	400	0	32	32	0
179	800	700	-100	40	42	2
180	4,400	4,600	200	150	183	33
181	2,200	2,200	0	89	108	19
182	500	500	0	28	29	1
183	700	1,000	300	33	52	19
186	200	200	0	21	21	0
187	500	500	0	20	19	-1
190	400	400	0	27	29	2
192	100	100	0	15	14	-1
193	500	400	-100	30	31	1
197	500	500	0	40	40	0
200	100	100	0	13	13	0
201	<50	<50	0	3	2	-1

Route-level Ridership and Hours continued

Route	Weekday Rides in Fall 2017	Weekday Rides in Fall 2018	Change in Rides	Weekday Platform Hours in Fall 2017	Weekday Platform Hours in Fall 2018	Change in Platform Hours
204	200	200	0	19	19	0
208	100	100	0	17	17	0
212	2,700	2,700	0	72	79	7
214	1,200	1,200	0	45	46	1
216	900	900	0	30	31	1
217	200	200	0	9	13	4
218	1,300	1,400	100	35	41	6
219	800	800	0	33	36	3
221	1,500	1,500	0	83	83	0
224	100	100	0	16	16	0
226	1,500	1,500	0	66	70	4
232	400	400	0	24	24	0
234	1,300	1,300	0	74	76	2
235	1,100	1,100	0	67	67	0
236	400	400	0	63	63	0
237	100	100	0	6	6	0
238	800	800	0	78	78	0
240	2,200	2,400	200	105	136	31
241	600	600	0	45	48	3
243	<50	<50	0	11	11	0
244	200	200	0	17	16	-1
245	3,400	3,500	100	148	168	20
246	300	300	0	30	30	0
248	900	1,000	100	55	55	0
249	800	800	0	54	54	0
252	700	700	0	26	26	0
255	6,800	6,300	-500	229	240	11
257	600	600	0	23	24	1
268	400	600	200	15	17	2
269	800	900	100	86	86	0
271	5,500	5,400	-100	233	236	3
277	200	200	0	19	19	0
301	1,700	1,600	-100	49	49	0
303	1,200	1,200	0	40	39	-1
304	400	400	0	15	16	1
308	200	200	0	10	13	3
309	500	500	0	19	19	0

Route-level Ridership and Hours continued

Route	Weekday Rides in Fall 2017	Weekday Rides in Fall 2018	Change in Rides	Weekday Platform Hours in Fall 2017	Weekday Platform Hours in Fall 2018	Change in Platform Hours
311	1,300	1,300	0	48	49	1
312	2,500	2,600	100	83	84	1
316	1,200	1,200	0	28	29	1
330	400	400	0	14	14	0
331	900	900	0	48	51	3
342	300	300	0	17	17	0
345	1,200	1,100	-100	38	47	9
346	1,100	1,100	0	43	44	1
347	1,200	1,200	0	56	55	-1
348	1,300	1,200	-100	56	57	1
355	1,000	900	-100	33	34	1
372	8,000	7,800	-200	216	216	0
373	1,500	1,900	400	38	61	23
628*	100	<50	-50	19	18	-1
629*	100	<50	-50	28	28	0
630*	200	<50	-50	11	11	0
631	100	<50	-50	9	9	0
633*	<50	<50	0	14	14	0
635	--	<50	--	--	16	--
A Line	10,200	9,400	-800	182	182	0
B Line	6,200	6,200	0	166	166	0
C Line	12,100	12,200	100	297	339	42
D Line	14,300	13,900	-400	256	261	5
E Line	17,300	16,800	-500	305	336	31
F Line	5,600	5,700	100	182	191	9
773	100	200	100	11	7	-4
775	200	200	0	12	8	-4
823	100	100	0	2	2	0
824	100	100	0	2	2	0
886	<50	<50	0	2	2	0
887	100	100	0	2	2	0
888	100	100	0	2	2	0
889	100	100	0	2	2	0
891	100	100	0	3	3	0
892	100	100	0	2	2	0
893	100	100	0	2	2	0

Route-level Ridership and Hours continued

Route	Weekday Rides in Fall 2017	Weekday Rides in Fall 2018	Change in Rides	Weekday Platform Hours in Fall 2017	Weekday Platform Hours in Fall 2018	Change in Platform Hours
894	100	100	0	2	2	0
895	100	100	0	2	2	0
901DART	400	300	-100	21	18	-3
903DART	300	200	-100	27	24	-3
906DART	400	300	-100	27	26	-1
907DART	100	100	0	19	17	-2
908DART	100	100	0	11	10	-1
910DART	100	100	0	10	9	-1
913DART	200	100	-100	13	13	0
914DART	200	100	-100	11	10	-1
915DART	200	300	100	17	15	-2
916DART	100	100	0	12	12	0
917DART	200	100	-100	16	14	-2
930DART	100	200	100	15	20	5
931DART	200	100	-100	32	28	-4
952	200	200	0	27	27	0
980	<50	<50	0	2	2	0
981	<50	<50	0	2	3	1
982	100	100	0	4	4	0
984	<50	<50	0	2	2	0
986	100	100	0	3	4	1
987	100	100	0	4	4	0
988	100	100	0	3	3	0
989	100	100	0	4	4	0
994	100	100	0	3	3	0
995	<50	<50	0	3	3	0
West Seattle Water Taxi**	786	1,468	682	8	17	9
Vashon Water Taxi**	943	1,069	126	6	6	0

Rides are rounded to the nearest 100; rounding errors may appear in this table

* The 2018 System Evaluation incorrectly reported platform hours for these services.

** Data from March-June 2019; previous year data from October 2017-March 2018

Appendix H: Service Changes and Corridor Changes

Service Changes

Route (s)	Summary of Change	Type of Change
September 2018		
2, 13	Adjust trip times in the AM Peak to help address overcrowding.	Schedule adjustment
3, 4	Add one AM Peak trip to help relieve overcrowding.	Added trips
4	Re-route of the Route 4 shuttle due to 23rd Ave construction.	Reroute
5, 5X	Add one AM Peak inbound Route 5 and one AM Peak inbound Route 5X trip. Add additional service hours to improve reliability.	Added trips
7, 49*	Add one late night Route 7 trip.	Added trips
8	Add two new AM peak trips.	Added trips
9X	Provide a connection to I-90 express routes that will use the Rainier Ave/Charles St stop once the Rainier Ave Freeway Station closes.	Route revision - Rainier Freeway Station
17*, 18*	Add three new AM Peak trips.	Added trips
21X, 37, 55, 56*, 57*, 113, 116, 118, 119, 120*, 121, 122, 123, 125, 150, 673*	Move routes that currently use the Alaskan Way Viaduct (AWV) to a new pathway between the West Seattle Bridge and downtown Seattle.	Route revision - AWW closure
28*	Add one new AM Peak trip.	Added trips
31, 32, 75	Add new evening service to route 31 (30 minute frequency) weekdays until 10pm, Saturday until 9:30pm. Co-adjust schedule with Route 32 to achieve 15 minute frequency. Link with Route 75 to provide service consistency and efficient operation.	Added trips
40*	Extend span of frequent service.	Added trips
41*, 74, 101, 102, 150, 255, 550, 554, 630, 989	Add layover time to account for longer running time when Convention Place Station closes.	Added hours
41*	Add weekday trips to meet SDOT's frequency goals.	Added trips
56*, 57*	Add one new AM Peak trip for Route 56, one new AM Peak for Route 57.	Added trips
62	Add one new outbound PM peak trip.	Added trips
63, 64	Relieve crowding by smoothing schedule.	Schedule adjustment
63, 64	Add one new early PM peak trip on Route 63.	Added trips
70*	Add service hours to improve reliability. Add trips to meet SDOT's frequency goals. Eliminate summer-only season trips.	Added trips
73, 373	Add reverse-peak Route 373 and extend hours of operation. Unify stop pattern for Route 73, Route 373 on 15th Ave NE.	Added hours, extended trips
76, 316	Relieve crowding by smoothing schedule.	Schedule adjustment
106*	Add one new Sunday trip.	Added trips

Service Changes and Corridor Changes continued

Route (s)	Summary of Change	Type of Change
111, 114, 212, 214, 216, 217, 218, 219	Routing change is required as the Rainier Av S flyer stop will be permanently closing in the Fall of 2018, due to the construction of the Judkins Park station for East Link. Add hours to maintain schedule.	Route revision - Rainier Freeway Station, added hours
111	Add one new AM Peak trip.	Added trips
114	Add one new AM Peak trip.	Added trips
120*	Add two new AM Peak trips and one new PM Peak trip.	Added trips
150	Improve AM peak frequency to < 15 minutes. (Add northbound AM Peak trips.)	Added trips
180	Improve AM peak northbound and PM peak southbound frequency to 15 minutes.	Added trips
181	Improve AM peak frequency to 15 minutes.	Added trips
240	Improve peak frequency to 15 minutes.	Added trips
245	Improve PM peak frequency to 12 minutes.	Added trips
331, 345*	Improve AM Peak southbound frequency to 15 minutes. Improve Weekday night frequency to 30 minutes. Through-route Route 331 with Route 345. Remove UW Reduced designation.	Added trips
345*	On weekdays, add one AM Peak trip and one night trip in each direction; On Sunday, add three southbound trips.	Added trips
372	Add one new weekday NB trip.	Added trips
673*	Add one PM peak trip southbound; add one AM peak trip northbound.	Added trips
674*	Add one AM trip.	Added trips
675*	Add ten southbound trips, four northbound trips.	Added trips
676	Improve Saturday/Sunday night frequency to 15 minutes.	Added trips
March 2019		
5, 21, 26, 28, 105, 107, 113, 114, 131, 132, 148, 158, 159, 178, 179, 190, 192	Additional service hours to help improve reliability.	Added hours
15	Add one new inbound trip.	Added trips
40*	Add 8 southbound and 3 northbound trips.	Added trips
41, 74, 101, 102, 150, 255, 301, 316	Revise routing (DSTT).	Added hours, route revision
50*	Improve midday service on weekdays.	Added trips
55	Schedule adjustment to serve West Seattle High School students.	Schedule adjustment
70	Revise routing due to Fairview Ave bridge replacement project.	Route revision
76, 77, 308	Revise routing (5th/6th pathway).	Route revision

Service Changes and Corridor Changes continued

Route (s)	Summary of Change	Type of Change
101, 102	Convert 2 PM peak Route 101 trips to Route 102 trips to relieve overcrowding.	Added hours
105	Revise routing for all trips to stay on NE 3 St between N 3 St and NE 4 St.	Routing
106*	Upgrade Sunday service to every 15 minutes.	Added trips
111	Add one AM and one PM trip.	Added trips
120*	Additional trips to improve weekday frequency.	Added trips
158	Adjust schedule to meet Sounder arrival times at Kent Station.	Schedule adjustment
169	Adjust trip times to address layover congestion at Renton Transit Center.	Schedule adjustment
201, 204	Delete Route 201, use the Route 201 hours to provide Saturday service on Route 204; convert Route 204 to DART.	Route removal, service type conversion
224	Convert to DART.	Service type conversion
248	Add new northbound stop on Avondale PI NE.	Added stop
303, 304	Revise routing (NE 145th freeway stop closure).	Route revision
312	Add one AM peak trip; adjust surrounding trip times.	Added trips
891, 892, 894	Revise routing and add service hours due to construction at Convention Place Station.	Added hours
952	New northern terminal will be at the Seaway Transit Center.	Route revision
June 2019		
School Routes	Service begins Aug 21.	School service
4	Eliminate Route 4 shuttle; restore regular Route 4 routing.	Return to regular operation
48*	Restore regular routing to/from Mt. Baker Transit Center.	Return to regular operation
70	Add 6 new PM peak trips and 2 PM peak trip to operate during summer only on weekdays.	Added trips
74	Add 2 new AM peak trips to operate during summer only on weekdays.	Added trips
252, 255, 257, 268, 311, 545, 555, 982, 986, 992	Revised routing (Montlake freeway station closure).	Revised routing
355	Relocate terminal from SB Eastlake Av E/E Nelson PI to SB Eastlake/Aloha.	Terminal change
992	Add stop at Lakeside Middle school.	Added stop

Appendix I: Corridor Analysis

BETWEEN	AND	VIA	Connections			Major Route			Land Use - Productivity			Social Equity - Demographics			Geographic Value - Connections to Centers			Initial Target Service Levels		
			MAJOR ROUTE	HOUSEHOLDS & P&R STALLS*1 / CORRIDOR MILE	POINTS	JOB & STUDENTS / CORRIDOR MILE	POINTS	% BOARDINGS IN MINORITY TRACTS	POINTS	% BOARDINGS IN LOW-INCOME TRACTS	POINTS	CONNECTION TYPE	POINTS	TOTAL SCORE	RAPIDRISE	PEAK	OFFPEAK	NIGHT		
Admiral District	Southcenter	California Ave SW, Military Rd, TIBS	128	1,262	4	1,161	2	73%	5	73%	5	23		15	30	30				
Alki	SODO Station	Alaska Junction	50	1,430	4	2,162	4	32%	0	32%	0	15		30	30	0				
Auburn	Burien	Kent, SeaTac	180	740	2	1,193	2	64%	5	99%	5	15		15	30	30				
Auburn	Pacific	Algona	917	408	0	504	2	63%	3	100%	5	30		30	30	0				
Auburn/GRCC	Federal Way	15th St SW, Lea Hill Rd	181	747	2	1,114	2	82%	5	98%	5	12		15	30	30				
Aurora Village	Northgate	Meridian Ave N	346	1,314	4	1,963	4	68%	5	65%	5	25		15	15	30				
Aurora Village	Seattle CBD	Aurora Ave N	E Line	3,093	10	8,852	8	58%	5	46%	3	36	Yes	<15	15	15				
Avondale	Kirkland	NE 85th St, Redmond Way, Avondale Rd NE	248	1,743	4	1,767	4	81%	5	0%	0	20		15	30	30				
Ballard	Northgate	Holman Road	40	2,883	8	3,191	6	11%	0	9%	0	24		15	30	30				
Ballard	Seattle CBD	15th Ave W	D Line	4,788	10	15,798	10	11%	0	5%	0	30	Yes	<15	15	15				
Ballard	Seattle CBD	Fremont, South Lake Union	40	4,972	10	28,361	10	20%	0	6%	0	30		15	15	30				
Ballard	University District	Green Lake, Greenwood	45	2,897	8	12,002	10	13%	0	42%	3	28		15	15	30				
Ballard	University District	Wallingford (N 45th St)	44	3,528	10	15,109	10	18%	0	18%	0	30		15	15	30				
Beacon Hill	Seattle CBD	Beacon Ave	36	2,633	8	13,816	10	97%	5	100%	5	30		15	15	30				
Belleuve	Eastgate	Lake Hills Connector	271	670	2	4,201	6	98%	5	10%	0	25	Yes	<15	15	15				
Belleuve	Redmond	NE 8th St, 156th Ave NE	B Line	1,769	4	5,443	6	91%	5	0%	0	25		15	15	30				
Belleuve	Renton	Newcastle, Factoria	240	1,210	4	4,199	6	96%	5	34%	3	25		15	15	30				
Burien	Seattle CBD	1st Ave S, South Park	131	2,020	6	9,080	8	83%	5	100%	5	34		15	15	30				
Burien	Seattle CBD	Delridge, Ambaum	120	1,740	4	6,848	8	90%	5	92%	5	32		15	15	30				
Burien	Seattle CBD	Des Moines Mem Dr S, South Park	132	1,673	4	8,233	8	82%	5	100%	5	29		15	15	30				
Capitol Hill	Seattle CBD	15th Ave E	10	7,377	10	23,927	10	0%	0	72%	5	27		15	15	30				
Capitol Hill	Seattle CBD	Madison St	12	7,866	10	47,954	10	0%	0	93%	5	27		15	15	30				
Capitol Hill	White Center	South Park, Georgetown, Beacon Hill, First Hill	60	2,650	8	5,584	8	90%	5	88%	5	33		15	15	30				
Central District	Seattle CBD	E Jefferson St	3/4	8,512	10	40,277	10	74%	5	89%	5	37		15	15	30				
Colman Park	Seattle CBD	Leschi, Yesler Way	27	5,638	10	21,804	10	76%	5	65%	5	32		15	15	30				
Discovery Park	Seattle CBD	Gilman Ave W, 22nd Ave W, Thorndyke Ave W	33	3,717	10	14,275	10	5%	0	0%	0	22		15	30	30				
Eastgate	Belleuve	Newport Way, S. Bellevue, Beaux Arts	241	1,441	4	6,837	8	89%	5	24%	0	24		15	30	30				
Eastgate	Belleuve	Somerset, Factoria, Woodridge	246	1,317	4	6,003	8	100%	5	29%	0	19		15	30	30				
Eastgate	Overlake	Phantom Lake	226	1,087	2	2,357	4	47%	3	22%	0	11		30	30	0				
Enumclaw	Auburn	Auburn Way S, SR 164	186/915	276	0	426	0	45%	3	95%	5	15		30	30	0				
Fairwood	Renton	S Puget Dr, Royal Hills	148	959	2	875	2	73%	5	52%	5	21		15	30	30				
Federal Way	Kent	Military Road S	183	1,121	2	786	2	95%	5	98%	5	24		15	30	30				
Federal Way	SeaTac	SR-99	A Line	1,171	2	2,351	4	100%	5	100%	5	26	Yes	<15	15	15				
Fremont	Broadview	8th Ave NW	28	2,375	6	1,761	4	0%	0	7%	0	15		30	30	0				
Fremont	Seattle CBD	Dexter Ave N	62	6,522	10	28,730	10	13%	0	6%	0	27		15	15	30				
Fremont	University District	N 40th St	31/32	1,844	6	18,488	10	8%	0	8%	0	23		15	30	30				
Green River CC	Kent	132nd Ave SE	164	1,016	2	1,435	4	93%	5	93%	5	23		15	30	30				
Greenwood	Seattle CBD	Greenwood Ave N	5	3,760	10	10,715	10	4%	0	13%	0	27		15	15	30				
High Point	Seattle CBD	35th Ave SW	21	2,822	8	13,658	10	62%	5	63%	5	35		15	15	30				

Levels	Threshold			Points			Threshold			Points		
	> 3000	> 2400	> 1800	> 10250	> 5500	> 3000	FR: 53%	DART: 63%	FR: 31%	FR: 50%	DART: 56%	FR: 31%
15	30	30	30	7	7	7	RGC/MIC - TAC	RGC/MIC - TAC	TAC - TAC	RGC/MIC - RGC/MIC	RGC/MIC - TAC	TAC - TAC
30	30	30	30	7	7	7	RGC/MIC - TAC	RGC/MIC - TAC	TAC - TAC	RGC/MIC - RGC/MIC	RGC/MIC - TAC	TAC - TAC
60	0-9	0-9	0-9	3	3	3	DART: 37%	DART: 37%	DART: 37%	Other	Other	Other

Figures rounded for display purposes.

(RGC: Regional Growth Center)
 (MIC: Manufacturing/Industrial Center)
 (TAC: Transit Activity Center)

Corridor Analysis continued

BETWEEN	AND	VIA	Connections				Land Use - Productivity				Social Equity - Demographics				Geographic Value - Connections to Centers		Initial Target Service Levels		
			MAJOR ROUTE	HOUSEHOLDS & P&R STALLS*1.1 / CORRIDOR MILE	POINTS	JOBS & STUDENTS / CORRIDOR MILE	POINTS	% BOARDINGS IN MINORITY TRACTS	POINTS	% BOARDINGS IN LOW-INCOME TRACTS	POINTS	CONNECTION TYPE	POINTS	TOTAL SCORE	RAPIDRIE	PEAK	OFFPEAK	NIGHT	
Issaquah	Eastgate	SE Newport Way	271	638	2	2,178	4	68%	5	30%	0	Other	2	13	30	30	0		
Issaquah	North Bend	Fall City, Snoqualmie	208	291	0	413	0	12%	0	49%	3	RGC/MIC - TAC	7	10	30	30	0		
Issaquah	Overlake	Sammamish, Bear Creek	269	592	0	1,731	4	70%	5	1%	0	RGC/MIC - RGC/MIC	10	19	15	30	30		
Kenmore	Kirkland	Juanita	234	870	2	620	2	0%	0	0%	0	TAC - TAC	5	9	60	60	0		
Kenmore	Shoreline	Lake Forest Park, Aurora Village TC	331	821	2	1,125	2	35%	3	52%	5	TAC - TAC	5	17	30	30	0		
Kenmore	Totem Lake	Finn Hill, Juanita	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Kennydale	Renton	Edmonds Ave NE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Kent	Burien	Kent-DM Rd, S. 240th St, 1st Ave S	166	983	2	1,173	2	90%	5	92%	5	RGC/MIC - TAC	7	21	15	30	30		
Kent	Maple Valley	SE Kent-Kangley Road	168	814	2	717	2	34%	0	48%	3	RGC/MIC - TAC	7	14	30	30	0		
Kent	Renton	84th Ave S, Lind Ave SW	153	634	2	2,856	4	100%	5	100%	5	RGC/MIC - RGC/MIC	10	26	15	15	30		
Kent	Renton	Kent East Hill	169	1,030	2	1,336	2	100%	5	98%	5	RGC/MIC - RGC/MIC	10	24	15	15	30		
Kent	Seattle CBD	Tukwila	150	1,071	2	8,202	8	97%	5	99%	5	RGC/MIC - RGC/MIC	10	30	15	15	30		
Kirkland	Bellevue	South Kirkland	234/235	2,005	6	8,376	8	6%	0	0%	0	RGC/MIC - TAC	7	21	15	30	30		
Kirkland	Factoria	Overlake, Crossroads, Eastgate	245	1,479	4	3,442	6	59%	5	21%	0	RGC/MIC - TAC	7	22	15	30	30		
Lake City	Seattle CBD	NE 125th St, Northgate, I-5	41	2,234	6	12,535	10	42%	3	70%	5	RGC/MIC - RGC/MIC	10	34	15	15	30		
Lake City	University District	35th Ave NE	65	1,967	6	9,905	8	14%	0	53%	5	TAC - TAC	5	24	15	30	30		
Northgate ¹	University District	Lake City, Sand Point	75	1,541	4	9,744	8	28%	0	57%	5	RGC/MIC - TAC	7	24	15	30	30		
Laurelhurst	University District	NE 41st St	78	277	0	22,190	10	18%	0	28%	0	Other	2	12	30	30	0		
Madison Park	Seattle CBD	Madison St	11	4,795	10	14,851	10	0%	0	54%	5	RGC/MIC - TAC	7	32	15	15	30		
Madrona	Seattle CBD	Union St	2	5,897	10	26,585	10	6%	0	62%	5	Other	2	27	15	15	30		
Magnolia	Seattle CBD	34th Ave W, 28th Ave W	24	3,329	10	12,539	10	7%	0	0%	0	RGC/MIC - TAC	7	27	15	15	30		
Mercer Island	S Mercer Island	Island Crest Way	204	779	2	699	2	0%	0	0%	0	TAC - TAC	5	9	60	60	0		
Mirror Lake	Federal Way	S 312th St	901	1,087	2	533	2	100%	5	100%	5	Other	2	16	30	30	0		
Mount Baker	Seattle CBD	31st Ave S, S Jackson St	14	5,067	10	20,025	10	67%	5	100%	5	Other	2	32	15	15	30		
Mount Baker	University District	23rd Ave E	48	1,989	6	13,451	10	70%	5	86%	5	RGC/MIC - TAC	7	33	15	15	30		
Mount Baker Transit Ctr	Seattle Center	Martin Luther King Jr Way, E John St, Denny Way	8	5,982	10	8,614	8	55%	5	26%	0	RGC/MIC - RGC/MIC	10	33	15	15	30		
Mountlake Terrace	Northgate	15th Ave NE, 5th Ave NE	347	1,580	4	1,819	4	29%	0	48%	3	Other	2	13	30	30	0		
Northgate	Federal Way	SW 356th St, 9th Ave S	182	755	2	926	2	62%	5	62%	5	Other	2	16	30	30	0		
Northgate	Seattle CBD	Green Lake, Wallingford	26	3,415	10	10,395	10	19%	0	39%	3	RGC/MIC - RGC/MIC	10	33	15	15	30		
Northgate	University District	Roosevelt Way NE	67	3,272	10	15,945	10	38%	3	72%	5	RGC/MIC - RGC/MIC	10	38	15	15	30		
Othello Station	SODO Station	Columbia City Station	50	1,189	2	1,559	4	89%	5	89%	5	Other	2	18	30	30	0		
Overlake	Bellevue	Bell-Red Road	226	2,559	8	12,374	10	91%	5	0%	0	Other	2	25	15	15	30		
Overlake	Bellevue	Sammamish Viewpoint, Northrup Way	249	1,457	4	5,225	6	63%	5	0%	0	RGC/MIC - TAC	7	22	15	30	30		
Queen Anne	Seattle CBD	Queen Anne Ave N	2/13	6,075	10	22,727	10	17%	0	15%	0	Other	2	22	15	30	30		
Queen Anne	Seattle CBD	Taylor Ave N	3/4	6,315	10	24,912	10	32%	0	61%	5	Other	2	27	15	15	30		
Rainier Beach	Seattle CBD	Rainier Ave S	7	2,670	8	12,074	10	86%	5	97%	5	Other	2	30	15	15	30		
Rainier Beach	Capitol Hill	Rainier Ave S	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Rainier Beach	Mount Baker Transit Cent	Martin Luther King Jr Way S	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Redmond	Duvall	Avondale Rd NE	224	633	2	513	2	52%	3	0%	0	RGC/MIC - TAC	7	14	30	30	0		
Redmond	Eastgate	148th Ave, Crossroads, Bellevue College	221	1,031	2	2,119	4	81%	5	11%	0	RGC/MIC - TAC	7	18	30	30	0		
Redmond	Totem Lake	Willows Road	930	1,128	2	3,280	6	79%	5	0%	0	RGC/MIC - RGC/MIC	10	23	15	15	30		

Levels	Points	Points	Points
15	19-40	25-40	--
30	10-18	10-24	19-40
60	0-9	0-9	--

Threshold	Points	Threshold	Points	Threshold	Points
> 3000	10	> 10250	10	FR: 50%	5
> 2400	8	> 5500	6	DART: 63%	5
> 1800	6	> 3000	6	FR: 35%	3
> 1200	4	> 1400	4	DART: 44%	3
> 600	2	> 500	2	(FR: Fixed-route)	2

(RGC: Regional Growth Center)
(MIC: Manufacturing/Industrial Center)
(TAC: Transit Activity Center)

Figures rounded for display purposes.
¹ Corridor was extended from Lake City to Northgate.
 The Kenmore-Totem Lake and Kennydale-Renton corridors are not currently served in their entirety.

Corridor Analysis continued

BETWEEN	AND	VIA	Connections				Land Use - Productivity				Social Equity - Demographics				Geographic Value - Connections to Centers			Initial Target Service Levels			
			MAJOR ROUTE	HOUSEHOLDS & P&R STALLS*1.1 / CORRIDOR MILE	POINTS	JOB & STUDENTS / CORRIDOR MILE	POINTS	% BOARDINGS IN MINORITY TRACTS	POINTS	% BOARDINGS IN LOW-INCOME TRACTS	POINTS	CONNECTION TYPE	POINTS	TOTAL SCORE	RAPIDRIDE	PEAK	OFFPEAK	NIGHT			
Renton	Burien	S 154th St	F Line	884	2	1,888	4	100%	5	85%	5	RGC/MIC - RGC/MIC	10	26	Yes	<15	15	15			
Renton	Black Diamond ¹	Maple Valley	143/907	278	0	350	0	50%	3	40%	3	RGC/MIC - TAC	7	13		30	30	0			
Renton	Beacon Hill	West Hill, Rainier View	107	968	2	718	2	97%	5	86%	5	RGC/MIC - TAC	7	21		15	30	0			
Renton	Renton Highlands	NE 4th St, Union Ave NE	105	1,367	4	1,748	4	100%	5	87%	5	RGC/MIC - TAC	7	25		15	15	30			
Renton	Seattle CBD	Martin Luther King Jr Way S, I-5	101/102	1,236	4	8,586	8	96%	5	98%	5	RGC/MIC - RGC/MIC	10	32		15	15	30			
Renton	Seattle CBD	Skyway, Martin Luther King Jr Way S, Beacon Hill	106	1,566	4	2,178	4	92%	5	92%	5	RGC/MIC - TAC	7	25		15	15	30			
Renton Highlands	Renton	NE 7th St, Edmonds Ave NE	908	1,249	4	1,920	4	100%	5	67%	5	Other	2	20		15	30	30			
Richmond Beach	Northgate	Richmond Beach Rd, 15th Ave NE	348	1,657	4	1,905	4	49%	3	73%	5	RGC/MIC - TAC	7	23		15	30	30			
Roosevelt	UJW	University Way						Connection now served by Northgate - U District via Roosevelt Way NE corridor													
Sand Point	Fremont ²	View Ridge, NE 65th St, Cowen Park	62	2,480	8	2,135	4	0%	0	30%	0	Other	2	14		30	30	0			
Sand Point	University District	NE 55th St	74	3,063	10	11,813	10	37%	3	79%	5	Other	2	30		15	15	30			
Shoreline	University District	Jackson Park, 15th Ave NE	373	1,515	4	6,633	8	39%	3	77%	5	RGC/MIC - TAC	7	27		15	15	30			
Shoreline CC	Greenwood	Greenwood Ave N	5	2,082	6	2,560	4	10%	0	60%	5	TAC - TAC	5	20		15	30	30			
Shoreline CC	Lake City	N 155th St, Jackson Park	330	1,640	4	2,155	4	17%	0	88%	5	TAC - TAC	5	18		30	30	0			
Shoreline CC	Northgate	N 130th St, Meridian Ave N	345	1,458	4	3,126	6	40%	3	73%	5	RGC/MIC - TAC	7	25		15	15	30			
Totem Lake	Seattle CBD	Kirkland, SR-520	255	1,851	6	9,074	8	3%	0	8%	0	RGC/MIC - RGC/MIC	10	24		15	30	30			
Tukwila	Des Moines	McMicken Heights, Sea-Tac	156	592	0	1,210	2	94%	5	94%	5	RGC/MIC - RGC/MIC	10	22		15	30	30			
Tukwila	Fairwood	S 180th St, Carr Road	906	628	2	1,443	4	93%	5	72%	5	RGC/MIC - TAC	7	23		15	30	30			
Tukwila	Seattle CBD	Pacific Hwy S, 4th Ave S	124	1,916	6	9,621	8	85%	5	86%	5	RGC/MIC - RGC/MIC	10	34		15	15	30			
Twin Lakes	Federal Way	S 320th St	187	936	2	609	2	100%	5	89%	5	Other	2	16		30	30	0			
Twin Lakes	Federal Way	SW Campus Dr, 1st Ave S	903	1,207	4	1,147	2	70%	3	68%	5	Other	2	16		30	30	0			
University District	Bellevue	SR-520	271	936	2	12,668	10	94%	5	9%	0	RGC/MIC - RGC/MIC	10	27		15	15	30			
University District	Seattle CBD	Broadway	49	5,733	10	29,298	10	59%	5	77%	5	Other	2	32		15	15	30			
University District	Seattle CBD	Eastlake, Fairview	70	5,936	10	43,089	10	51%	3	57%	5	TAC - TAC	5	33		15	15	30			
UW Bothell	Redmond	Woodinville, Cottage Lake	931	573	0	1,091	2	20%	0	0%	0	RGC/MIC - TAC	7	9		60	60	0			
UW Bothell	University District	Kenmore, Lake Forest Park, Lake City	372	1,465	4	7,256	8	44%	3	54%	5	RGC/MIC - TAC	7	27		15	15	30			
UW Bothell/CCC	Kirkland	132nd Ave NE, Lake Washington Tech	238	1,223	4	2,297	4	0%	0	0%	0	RGC/MIC - TAC	7	15		30	30	0			
Vashon	Tahlequah	Valley Center	118	51	0	81	0	0%	0	0%	0	Other	2	2		60	60	0			
West Seattle	Seattle CBD	Fauntleroy, Alaska Junction	C Line	2,279	6	12,602	10	24%	0	27%	0	RGC/MIC - TAC	7	23	Yes	<15	15	15			
White Center	Seattle CBD	16th Ave SW, South Seattle College	125	723	2	6,422	8	94%	5	94%	5	RGC/MIC - TAC	7	27		15	15	30			
Woodinville	Kirkland	Kingsgate	236	1,209	4	1,321	2	27%	0	0%	0	RGC/MIC - TAC	7	13		30	30	0			

Threshold	Points	Threshold	Points	Threshold	Points	Threshold	Points	Threshold	Points	Threshold	Points	Levels	Points	Points	Points
> 3000	10	> 10250	10	FR: 53%	5	FR: 50%	5	RGC/MIC - RGC/MIC	10	15	19-40	25-40	--		
> 2400	8	> 5500	8	DART: 63%	5	DART: 56%	5	RGC/MIC - TAC	7	30	10-18	10-24	19-40		
> 1800	6	> 3000	6	FR: 35%	3	FR: 31%	3	TAC - TAC	5	60	0-9	0-9	--		
> 1200	4	> 1400	4	DART: 44%	3	DART: 37%	3	Other	2						
> 600	2	> 500	2	(FR: Fixed-route)		(DART: Dial-a-Ride Transit)									

Figures rounded for display purposes.
¹ Corridor was truncated. Demand-response service in place between Black Diamond and Enumclaw.
² Corridor was extended from Cowen Park to Fremont.

(RGC: Regional Growth Center)
(MIC: Manufacturing/Industrial Center)
(TAC: Transit Activity Center)

Corridor Analysis continued

Connections		Loads at Preliminary Service Level *			Load-Based Service Level Improvements			Other Policy-based Night Service Additions			Service Level Improvements				Final Target Service Levels and Family					
BETWEEN	AND	VIA	MAJOR ROUTE			PEAK	OFFPEAK	NIGHT	PEAK	OFFPEAK	NIGHT	CORRIDOR HAS 15 MIN PEAK SERVICE	ADD WHAT FREQUENCY?	PRIMARY CONNECTIONS BETWEEN URBAN CENTERS	PEAK	OFFPEAK	NIGHT	RESULTING SERVICE FAMILY	INVESTMENT NEED (After subtracting Mar & Sep 2018 investments)	INVESTMENT PRIORITY
			24%	43%	28%															
Admiral District	Southcenter	California Ave SW, Military Rd, TIBS	128	24%	43%	28%	-	-	-	-	-	30	30	-	-	-	-	-	-	-
Alki	SODO Station	Alaska Junction	50	93%	39%	19%	1	-	-	-	30	30	1	-	-	-	-	-	-	-
Auburn	Burien	Kent, SeaTac	180	41%	50%	32%	-	-	-	-	60	30	-	-	-	-	-	-	-	-
Auburn	Pacific	Algona	917	9%	4%	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Auburn/GRCC	Federal Way	15th St SW, Lea Hill Rd	181	19%	34%	22%	-	-	-	-	60	30	-	-	-	-	-	-	-	-
Aurora Village	Northgate	Meridian Ave N	346	18%	13%	11%	-	-	-	-	30	30	-	-	-	-	-	-	-	-
Aurora Village	Seattle CBD	Aurora Ave N	E line	96%	69%	51%	1	1	-	-	60	30	1	1	-	-	-	-	-	-
Avondale	Kirkland	NE 85th St, Redmond Way, Avondale Rd NE	248	14%	22%	14%	-	-	-	-	30	30	2	-	-	-	-	-	-	-
Ballard	Northgate	Holman Road	40	137%	82%	73%	2	1	1	1	60	30	2	1	1	-	-	-	-	-
Ballard	Seattle CBD	15th Ave W	D line	101%	71%	48%	1	1	-	-	60	30	1	1	-	-	-	-	-	-
Ballard	Seattle CBD	Fremont, South Lake Union	40	177%	41%	73%	2	-	-	-	60	30	2	-	-	-	-	-	-	-
Ballard	University District	Green Lake, Greenwood	45	122%	33%	76%	2	-	-	-	30	30	2	-	-	-	-	-	-	-
Ballard	University District	Wallingford (N 45th St)	44	148%	51%	86%	2	-	-	-	60	30	2	-	-	-	-	-	-	-
Beacon Hill	Seattle CBD	Beacon Ave	36	131%	85%	76%	2	1	1	1	-	30	30	2	1	1	-	-	-	-
Bellevue	Eastgate	Lake Hills Connector	271	43%	44%	21%	-	-	-	-	-	30	30	-	-	-	-	-	-	-
Bellevue	Redmond	NE 8th St, 156th Ave NE	B line	49%	30%	25%	-	-	-	-	60	30	30	-	-	-	-	-	-	-
Bellevue	Renton	Newcastle, Factoria	240	23%	18%	19%	-	-	-	-	30	30	-	-	-	-	-	-	-	-
Burien	Seattle CBD	1st Ave S, South Park	131	42%	19%	24%	-	-	-	-	60	30	30	-	-	-	-	-	-	-
Burien	Seattle CBD	Dalridge, Ambaum	120	127%	34%	82%	2	-	-	-	60	30	2	-	-	-	-	-	-	-
Burien	Seattle CBD	Des Moines Mem Dr S, South Park	132	28%	15%	20%	-	-	-	-	30	30	-	-	-	-	-	-	-	-
Capitol Hill	Seattle CBD	15th Ave E	10	73%	32%	57%	1	-	-	-	30	30	1	-	-	-	-	-	-	-
Capitol Hill	Seattle CBD	Madison St	12	89%	30%	32%	1	-	-	-	-	30	30	1	-	-	-	-	-	-
Capitol Hill	White Center	South Park, Georgetown, Beacon Hill, First Hill	60	63%	41%	32%	1	-	-	-	-	30	30	1	-	-	-	-	-	-
Central District	Seattle CBD	E Jefferson St	3/4	118%	91%	69%	2	1	1	1	-	30	30	2	1	1	-	-	-	-
Colman Park	Seattle CBD	Leschi, Yesler Way	27	30%	9%	15%	-	-	-	-	-	30	30	-	-	-	-	-	-	-
Discovery Park	Seattle CBD	Glisan Ave W, 22nd Ave W, Thorndyke Ave W	33	58%	28%	19%	1	-	-	-	30	30	1	-	-	-	-	-	-	-
Eastgate	Bellevue	Newport Way, S. Bellevue, Beaux Arts	241	9%	15%	5%	-	-	-	-	-	30	30	-	-	-	-	-	-	-
Eastgate	Bellevue	Somerset, Factoria, Woodridge	246	6%	8%	N/A	-	-	-	-	-	30	30	-	-	-	-	-	-	-
Eastgate	Overlake	Phantom Lake	226	19%	15%	8%	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Enumclaw	Auburn	Auburn Way S, SR 164	186/915	35%	16%	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fairwood	Renton	S Puget Dr, Royal Hills	148	19%	26%	22%	-	-	-	-	30	30	-	-	-	-	-	-	-	-
Federal Way	Kent	Military Road S	183	16%	28%	10%	-	-	-	-	60	30	30	-	-	-	-	-	-	-
Federal Way	SeaTac	SR-99	28	43%	44%	34%	-	-	-	-	60	30	30	-	-	-	-	-	-	-
Fremont	Brookview	8th Ave NW	28	138%	14%	10%	2	-	-	-	-	30	30	2	-	-	-	-	-	-
Fremont	Seattle CBD	Dexter Ave N	62	126%	34%	57%	2	-	-	-	30	30	2	-	-	-	-	-	-	-
Fremont	University District	N 40th St	31/32	85%	77%	55%	1	1	-	-	-	30	30	1	1	-	-	-	-	-
Green River CC	Kent	132nd Ave SE	164	30%	40%	18%	-	-	-	-	-	30	30	-	-	-	-	-	-	-
Greenwood	Seattle CBD	Greenwood Ave N	5	90%	33%	72%	1	-	-	-	-	30	30	1	-	-	-	-	-	-
High Point	Seattle CBD	35th Ave SW	21	47%	27%	33%	-	-	-	-	-	30	30	-	-	-	-	-	-	-

Figures rounded for display purposes.

* The average load's proportion to the crowding threshold. Ridership service level improvements move the preliminary levels of service up one or two levels, e.g. a ridership service level improvement of 2 changes a 30 min. service to <15 or a 60 min. service to 15, etc.

Ridership*		Peak	OffPk	Night
110%		2	2	2
55%		1	1	1

Above Target	
At Target	
Below Target	

Corridor Analysis continued

Connections		Loads at Preliminary Service Level *			Load-Based Service Level Improvements			Other Policy-based Night Service Additions			Service Level Improvements				Final Target Service Levels and Family			
BETWEEN	AND	VIA	MAJOR ROUTE	PEAK	OFFPEAK	NIGHT	PEAK	OFFPEAK	NIGHT	PRIMARY CONNECTIONS BETWEEN URBAN CENTERS	CORRIDOR HAS 15 MIN PEAK SERVICE	ADD WHAT FREQUENCY?	PEAK	OFFPEAK	NIGHT	RESULTING SERVICE FAMILY	INVESTMENT NEED (after subtracting Mar & Sep investments)	INVESTMENT PRIORITY
Issaquah	Eastgate		271	26%	23%	22%	-	-	-	-	-	-	-	30	30	0	Local	-
Issaquah	North Bend		208	0%	8%	N/A	-	-	-	-	-	-	-	30	30	0	Local	10,200
Issaquah	Overlake		269	16%	25%	N/A	-	-	-	60	30	30	-	15	30	30	Frequent	14,400
Kenmore	Kirkland		234	49%	21%	11%	-	-	-	-	-	-	-	60	60	0	Hourly	-
Kenmore	Shoreline		331	64%	37%	N/A	1	-	-	-	30	30	1	15	30	30	Frequent	9,600
Kenmore	Totem Lake		-	-	-	-	-	-	-	-	-	-	-	60	60	0	Hourly	9,500
Kennydale	Renton		-	-	-	-	-	-	-	-	-	-	-	60	60	0	Hourly	7,200
Kent	Burien		168	14%	31%	25%	-	-	-	-	-	-	-	15	30	0	Local	-
Kent	Maple Valley		168	55%	30%	41%	-	-	-	-	30	30	-	15	15	30	Very Frequent	13,000
Kent	Renton		153	17%	11%	N/A	-	-	-	60	30	30	-	15	15	30	Very Frequent	-
Kent	Renton		169	30%	55%	39%	-	1	-	60	30	30	1	<15	15	30	Very Frequent	-
Kent	Seattle CBD		150	64%	34%	43%	1	-	-	60	30	30	-	<15	15	30	Very Frequent	9,100
Kirkland	Bellvue		234/235	45%	43%	28%	-	-	-	-	30	30	-	15	30	30	Frequent	-
Kirkland	Factoria		245	51%	66%	20%	-	1	-	-	30	30	-	<15	15	30	Very Frequent	-
Lake City	Seattle CBD		41	130%	44%	84%	2	-	1	60	30	30	2	<15	15	15	Very Frequent	-
Lake City	University District		65	134%	106%	77%	2	1	1	-	30	30	2	<15	15	15	Very Frequent	-
Northgate ¹	University District		75	81%	76%	74%	1	1	1	-	30	30	1	<15	15	15	Very Frequent	-
Laurelhurst	University District		78	21%	13%	N/A	-	-	-	-	-	-	-	30	30	0	Local	-
Madison Park	Seattle CBD		11	60%	29%	42%	1	-	-	-	30	30	1	<15	15	15	Very Frequent	2,900
Madrona	Seattle CBD		2	95%	49%	66%	1	-	1	-	30	30	1	<15	15	15	Very Frequent	-
Magnolia	Seattle CBD		24	67%	15%	23%	1	-	-	-	30	30	1	<15	15	30	Very Frequent	11,400
Mercer Island	Mercer Island		204	34%	13%	N/A	-	-	-	-	-	-	-	60	60	0	Hourly	-
Mirror Lake	Federal Way		901	7%	10%	5%	-	-	-	-	-	-	-	30	30	0	Local	-
Mount Baker	Seattle CBD		14	81%	33%	56%	1	-	1	-	30	30	1	<15	15	15	Very Frequent	8,000
Mount Baker	University District		48	42%	28%	18%	-	-	-	-	30	30	-	15	15	30	Very Frequent	-
Mount Baker Transit Ctr	Seattle Center		8	65%	41%	35%	1	-	-	60	30	30	1	<15	15	30	Very Frequent	-
Mountlake Terrace	Northgate		347	52%	24%	38%	-	-	-	-	30	30	-	30	30	0	Local	-
Northgate	Federal Way		182	23%	15%	16%	-	-	-	-	-	-	-	30	30	0	Local	2,300
Northgate	Seattle CBD		26	74%	15%	22%	1	-	-	60	30	30	1	<15	15	30	Very Frequent	13,400
Northgate	University District		67	74%	60%	47%	1	1	-	60	30	30	1	<15	15	15	Very Frequent	-
Orthello Station	SODO Station		50	93%	39%	19%	1	-	-	-	30	30	1	15	30	30	Frequent	8,200
Overlake	Bellvue		226	19%	15%	8%	-	-	-	-	30	30	-	15	15	30	Very Frequent	14,900
Overlake	Bellvue		249	18%	14%	17%	-	-	-	-	30	30	-	15	30	30	Frequent	11,200
Queen Anne	Seattle CBD		2/13	135%	92%	73%	2	1	1	-	30	30	2	<15	15	15	Very Frequent	-
Queen Anne	Seattle CBD		3/4	98%	53%	65%	1	-	1	-	30	30	1	<15	15	15	Very Frequent	-
Rainier Beach	Seattle CBD		7	96%	61%	71%	1	1	1	-	30	30	1	<15	15	15	Very Frequent	-
Rainier Beach	Capitol Hill		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rainier Beach	Mount Baker Transit Cent		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Redmond	Duvall		224	9%	6%	N/A	-	-	-	-	-	-	-	30	30	0	Local	7,600
Redmond	Eastgate		221	24%	34%	16%	-	-	-	-	-	-	-	30	30	0	Local	-
Redmond	Totem Lake		930	9%	N/A	N/A	-	-	-	60	30	30	-	15	30	30	Frequent	11,200

Above Target	At Target	Below Target
3	3	4

* The average load's proportion to the crowding threshold. Ridership service level improvements move the preliminary levels of service up one or two levels, e.g. a ridership service level improvement of 2 changes a 30 min. service to <15 or a 60 min. service to 15, etc.

Ridership*	Peak	Offpk	Night
110%	2	2	2
55%	1	1	1

Figures rounded for display purposes.
¹ Corridor was extended from Lake City to Northgate.
 The Kenmore-Totem Lake and Kennydale-Renton corridors are not currently served in their entirety.

Corridor Analysis continued

BETWEEN	AND	V/A	Connections		Loads at Preliminary Service Level*			Load-Based Service Level Improvements			Other Policy-based Night Service Additions				Service Level Improvements				Final Target Service Levels and Family				INVESTMENT NEED (after subtracting Mar & Sep 2018 investments)	INVESTMENT PRIORITY
			MAJOR ROUTE	PEAK	OFFPEAK	NIGHT	PEAK	OFFPEAK	NIGHT	PRIMARY CONNECTIONS BETWEEN URBAN CENTERS	CORRIDOR HAS 15 MIN PEAK SERVICE	ADD WHAT FREQUENCY?	PEAK	OFFPEAK	NIGHT	PEAK	OFFPEAK	NIGHT	RESULTING SERVICE FAMILY					
Renton	Burien	S 154th St	F Line	21%	26%	16%	-	-	-	60	30	30	-	-	-	<15	15	15	Very Frequent	-	-			
Renton	Black Diamond ¹	Maple Valley	143/907	30%	3%	N/A	-	-	-	-	-	-	-	-	-	30	30	0	Local	3,600	35			
Renton	Beacon Hill	West Hill, Rainier View	107	64%	42%	35%	1	-	-	-	-	-	-	-	-	<15	15	30	Frequent	6,700	31			
Renton	Renton Highlands	NE 4th St, Union Ave NE	105	19%	13%	25%	-	-	-	30	30	-	-	-	-	15	15	30	Very Frequent	6,400	22			
Renton	Seattle CBD	Marlin Luther King Jr Way S, I-5	101/102	123%	42%	47%	2	-	-	60	30	30	2	-	-	<15	15	30	Very Frequent	-	-			
Renton	Seattle CBD	Skyway, Martin Luther King Jr Way S S, Beacon Hill	106	78%	78%	30%	1	-	-	-	-	-	-	-	-	<15	15	30	Very Frequent	-	-			
Renton Highlands	Renton	NE 7th St, Edmonds Ave NE	908	2%	3%	N/A	-	-	-	30	30	-	-	-	-	15	30	30	Frequent	7,400	45			
Richmond Beach	Northgate	Richmond Beach Rd, 15th Ave NE	348	27%	30%	23%	-	-	-	-	-	-	-	-	-	15	30	30	Frequent	6,500	23			
Roosevelt	UW	University Way														-	-	-	-	-	-			
Sand Point	Fremont ²	View Ridge, NE 65th St, Cowen Park	62	252%	67%	28%	2	1	-	-	-	-	-	-	-	<15	15	30	Very Frequent	-	-			
Sand Point	University District	NE 55th St	74	66%	6%	N/A	1	-	-	30	30	1	-	-	-	<15	15	30	Very Frequent	15,300	41			
Shoreline	University District	Jackson Park, 15th Ave NE	373	67%	N/A	N/A	1	-	-	-	-	-	-	-	-	<15	15	30	Very Frequent	27,400	14			
Shoreline CC	Greenwood	Greenwood Ave N	5	45%	33%	36%	-	-	-	-	-	-	-	-	-	15	30	30	Frequent	-	-			
Shoreline CC	Lake City	N 155th St, Jackson Park	330	8%	18%	N/A	-	-	-	-	-	-	-	-	-	30	30	0	Local	3,100	37			
Shoreline CC	Northgate	N 130th St, Meridian Ave N	345	24%	20%	18%	-	-	-	-	-	-	-	-	-	15	15	30	Very Frequent	7,600	19			
Totem Lake	Seattle CBD	Kirkland, SR-520	255	130%	54%	37%	2	-	-	60	30	30	2	-	-	<15	15	30	Frequent	-	-			
Tukwila	Des Moines	McMicken Heights, Sea-Tac	156	12%	20%	10%	-	-	-	60	30	30	-	-	-	15	30	30	Frequent	5,100	9			
Tukwila	Fairwood	S 180th St, Carr Road	906	8%	13%	N/A	-	-	-	-	-	-	-	-	-	15	15	30	Frequent	12,700	28			
Tukwila	Seattle CBD	Pacific Hwy S, 4th Ave S	124	26%	16%	12%	-	-	-	60	30	30	-	-	-	15	15	30	Very Frequent	-	-			
Twin Lakes	Federal Way	S 320th St	187	29%	12%	18%	-	-	-	-	-	-	-	-	-	30	30	0	Local	1,300	49			
Twin Lakes	Federal Way	SW Campus Dr, 1st Ave S	903	15%	6%	N/A	-	-	-	-	-	-	-	-	-	30	30	0	Local	1,600	47			
University District	Bellevue	SR-520	271	86%	44%	42%	1	-	-	60	30	30	1	-	-	<15	15	30	Very Frequent	-	-			
University District	Seattle CBD	Broadway	49	66%	39%	70%	1	-	-	-	-	-	-	-	-	<15	15	15	Very Frequent	-	-			
University District	Seattle CBD	Eastlake, Fairview	70	119%	43%	61%	2	-	-	60	30	30	2	-	-	<15	15	15	Very Frequent	-	-			
UW Bothell	Redmond	Woodinville, Cottage Lake	931	23%	N/A	N/A	-	-	-	-	-	-	-	-	-	60	60	0	Hourly	3,600	33			
UW Bothell	University District	Kenmore, Lake Forest Park, Lake City	372	133%	43%	75%	2	-	-	-	-	-	-	-	-	<15	15	15	Very Frequent	3,600	15			
UW Bothell/CCC	Kirkland	132nd Ave NE, Lake Washington Tech	238	23%	25%	N/A	-	-	-	-	-	-	-	-	-	30	30	0	Local	-	-			
UW Bothell/CCC	Tablequah	Valley Center	118	69%	15%	18%	1	-	-	-	-	-	-	-	-	30	60	0	Local	1,300	51			
West Seattle	Seattle CBD	Fauntleroy, Alaska Junction	C Line	98%	49%	48%	1	-	-	-	-	-	-	-	-	<15	15	15	Very Frequent	-	-			
White Center	Seattle CBD	16th Ave SW, South Seattle College	125	44%	16%	12%	-	-	-	-	-	-	-	-	-	15	15	30	Very Frequent	9,500	17			
Woodinville	Kirkland	Kingsgate	236	21%	14%	14%	-	-	-	-	-	-	-	-	-	30	30	0	Local	-	-			

Ridership*			Peak	Offpk	Night
110%			2	2	2
55%			1	1	1
Above Target					
At Target					
Below Target					
			420,100†		

* The average load's proportion to the crowding threshold. Ridership service level improvements move the preliminary levels of service up one or two levels, e.g. a ridership service level improvement of 2 changes a 30 min. service to <15 or a 60 min. service to 15, etc.

† The two corridors served by route 50 have identical investment needs. This total is therefore not the sum of all values in this column.

Figures rounded for display purposes.

¹ Corridor was truncated. Demand-response service in place between Black Diamond and Enumclaw.

² Corridor was extended from Cowen Park to Fremont.

Appendix J: Investment Needs

Priority 1 - Crowding

Route	Daily One-way Trips Needed	Hours
5X	1	400
13	1	200
14	1	300
15X	1	600
17X & 18X	2	800
33	1	300
40	1	600
41	1	300
63X	2	800
77X	2	800
114	1	700
120	1	500
123	1	400
268	1	600
271	1	400
312X	1	500
D Line	3	1,000
E Line	1	400
		9,600

Priority 2 - Reliability

Route	Hours
2	50
3	50
5	1,400
7	400
8	2,100
10	450
11	500
12	300
13	50
17X	250
18X	250
21	750
22	50
24	350
26X	800
28X	50
31	350
32	100
33	100
36	1,100
40	3,400

Priority 2 - Reliability continued

Route	Hours
44	50
48	100
60	100
62	900
63	400
64	400
67	550
76	250
106	1,600
107	400
118	50
124	200
125	50
131	700
132	450
143	250
148	50
153	250
157	250
166	100
168	350
169	300
181	100
183	50
186	250
187	250
197	250
208	350
221	300
232	250
234	50
238	250
241	250
243	250
244	500
277	250
301	250
308	250
309	250
342	250
372	250
E Line	250
	25,450

Priority 3 - Service Growth

Connections					
Between	And	Via	Major Route	Hours	Priority
Northgate	Seattle CBD	Green Lake, Wallingford	26	13,400	1
Burien	Seattle CBD	1st Ave S, South Park	131	8,600	2
Kent	Seattle CBD	Tukwila	150	9,100	3
Redmond	Totem Lake	Willows Road	930	11,200	4
Kent	Renton	84th Ave S, Lind Ave SW	153	13,000	5
Auburn/GRCC	Federal Way	15th St SW, Lea Hill Rd	181	7,200	6
Federal Way	Kent	Military Road S	183	6,800	7
Issaquah	Overlake	Sammamish, Bear Creek	269	14,400	8
Tukwila	Des Moines	McMicken Heights, Sea-Tac	156	5,100	9
Madison Park	Seattle CBD	Madison St	11	2,900	10
Magnolia	Seattle CBD	34th Ae W, 28th Ave W	24	11,400	11
Capitol Hill	White Center	South Park, Georgetown, Beacon Hill, First Hill	60	7,800	12
Burien	Seattle CBD	Des Moines Mem Dr S, South Park	132	16,100	13
Shoreline	Univeristy District	Jackson Park, 15th Ave NE	373	27,400	14
UW Bothell	University District	Kenmore, Lake Forest Park, Lake City	372	3,600	15
Eastgate	Bellevue	Newport Way, S. Bellevue, Beaux Arts	241	5,400	16
White Center	Seattle CBD	16th Ave SW, South Seattle College	125	9,500	17
Bellevue	Renton	Newcastle, Factoria	240	10,100	18
Shoreline CC	Northgate	N 130th St, Meridian Ave N	345	7,600	19
Overlake	Bellevue	Sammamish Viewpoint, Northup Way	249	11,200	20
Aurora Village	Northgate	Meridian Ave N	346	8,600	21
Renton	Renton Highlands	NE 4th St, Union Ave NE	105	6,400	22
Richmond Beach	Northgate	Richmond Beach Rd, 15th Ave NE	348	6,500	23
Avondale	Kirkland	NE 85th St, Redmond Way, Avondale Rd NE	248	4,300	24
Alki	SODO Station	Alaska Junction	50	8,200	25
Admiral District	Southcenter	California Ave SW, Military Rd, TIBS	128	9,400	26
Green River CC	Kent	132nd Ave SE	164	4,100	27
Tukwila	Fairwood	S 180th St, Carr Road	906	12,700	28
Fairwood	Renton	S Puget Dr, Royal Hills	148	3,800	29
Kent	Burien	Kent-DM Rd, S. 240th St, 1st Ave S	166	6,000	30
Renton	Beacon Hill	West Hill, Rainier View	107	6,700	31
Redmond	Duvall	Avondale Rd NE	224	7,600	32
UW Bothell	Redmond	Woodinville, Cottage Lake	931	3,600	33
Enumclaw	Auburn	Auburn Way S, SR 164	186/915	3,500	34

Investment Needs, Priority 3 - Service Growth continued

Connections					
Between	And	Via	Major Route	Hours	Priority
Renton	Black Diamond	Maple Valley	143/907	3,600	35
Issaquah	North Bend	Fall City, Snoqualmie	208	10,200	36
Shoreline CC	Lake City	N 155th St, Jackson Park	330	3,100	37
Kenmore	Shoreline	Lake Forest Park, Aurora Village TC	331	9,600	38
Colman Park	Seattle CBD	Leschi, Yesler Way	27	9,200	39
Mount Baker	Seattle CBD	31st Ave S, S Jackson St	14	8,000	40
Sand Point	University District	NE 55th St	74	15,300	41
Discovery Park	Seattle CBD	Gilman Ave W, 22nd Ave W, Thorndyke Ave W	33	3,900	42
Overlake	Bellevue	Bell-Red Road	226	14,900	43
Eastgate	Bellevue	Somerset, Factoria, Woodridge	246	15,400	44
Renton Highlands	Renton	NE 7th St, Edmonds Ave NE	908	7,400	45
Othello Station	SODO Station	Columbia City Station	50	8,200	46
Twin Lakes	Federal Way	SW Campus Dr, 1st Ave S	903	1,600	47
Northeast Tacoma	Federal Way	SW 356th St, 9th Ave S	182	2,300	48
Twin Lakes	Federal Way	S 320th St	187	1,300	49
Auburn	Pacific	Algona	917	3,100	50
Vashon	Tahlequah	Valley Center	118	1,300	51
Kenmore	Totem Lake	Finn Hill, Juanita	-	9,500	52
Kennydale	Renton	Edmonds Ave NE	-	7,200	53
				420,100	



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