



Pierce Transit Comprehensive Local Fixed-Route Analysis

Final Report

March 2017



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1 INTRODUCTION

In April 2016 the Pierce Transit Board of Commissioners voted to hire 35 employees and restore 59,000 annual service hours that were eliminated during the Great Recession. The adopted plan called for 10,000 additional service hours in September 2016, with 35,000 restored in March 2017, followed by 10,000 more in September 2017.

This report summarizes the comprehensive analysis of the Pierce Transit system (*2016 Route Analysis: Moving Forward*) performed in 2016, including an existing route-by-route analysis, service area market analysis (e.g. transit propensity for communities of concern), and stakeholder and public engagement.

The report concludes with the service changes developed through the comprehensive analysis process (including any changes ultimately approved by the Pierce Transit Board of Commissioners) for September 2016 and March 2017 service changes. This analysis did not generate recommendations for September 2017, though it sets the stage for Pierce Transit to build on the success of the first two.

2016 Route Analysis: Moving Forward

The *2016 Route Analysis: Moving Forward* was the public facing campaign for Pierce Transit's 2016 comprehensive analysis of its existing bus service and gathering via open houses and online the public's ideas for where Pierce Transit should prioritize transit investments. During outreach nearly 1,000 responses were received and the two most-requested improvements were increased frequency (having the bus arrive more often) and a longer span of service on weekdays.

On Dec. 12, 2016 Pierce Transit's Board of Commissioners voted unanimously in favor of implementing the March 2017 preferred alternative (with certain changes) that was developed through the comprehensive analysis. The plan adopted by the Board also supports a new partnership with GO Transit, a Joint Base Lewis-McChord service funded through a partnership between Pierce County and JBLM.

For the March 2017 service changes Pierce Transit will conduct a wide variety of outreach efforts to inform the public about route changes, including advertisements, information on buses, direct rider outreach, transit displays and outreach to affected groups.

REPORT STRUCTURE

This Final Report summarizing the comprehensive analysis of Pierce Transit's fixed-route system consists of three chapters in addition to the introduction:

- Chapter 2 presents key findings from the existing conditions analysis of the Pierce Transit service area, including a demographic-based market analysis, travel pattern assessment, route-by-route analysis, and transfer analysis.

- Chapter 3 reviews the stakeholder and public outreach conducted over 2016 that led to development of investment priorities.
- Chapter 4 describes the service changes that were developed for September 2016 (implemented already) and March 2017 (scheduled for implementation as of publication of this final report).

2 EXISTING CONDITIONS KEY FINDINGS

The first technical element of the comprehensive analysis of Pierce Transit's fixed route system was to conduct a thorough evaluation of existing conditions including a demographic-based market analysis and route-by-route assessment of all fixed routes. The purpose was to summarize the baseline conditions in which Pierce Transit operates and provide a comprehensive evaluation of existing service characteristics and system performance. This analysis served as a foundation for understanding unmet needs and development of initial service recommendations.

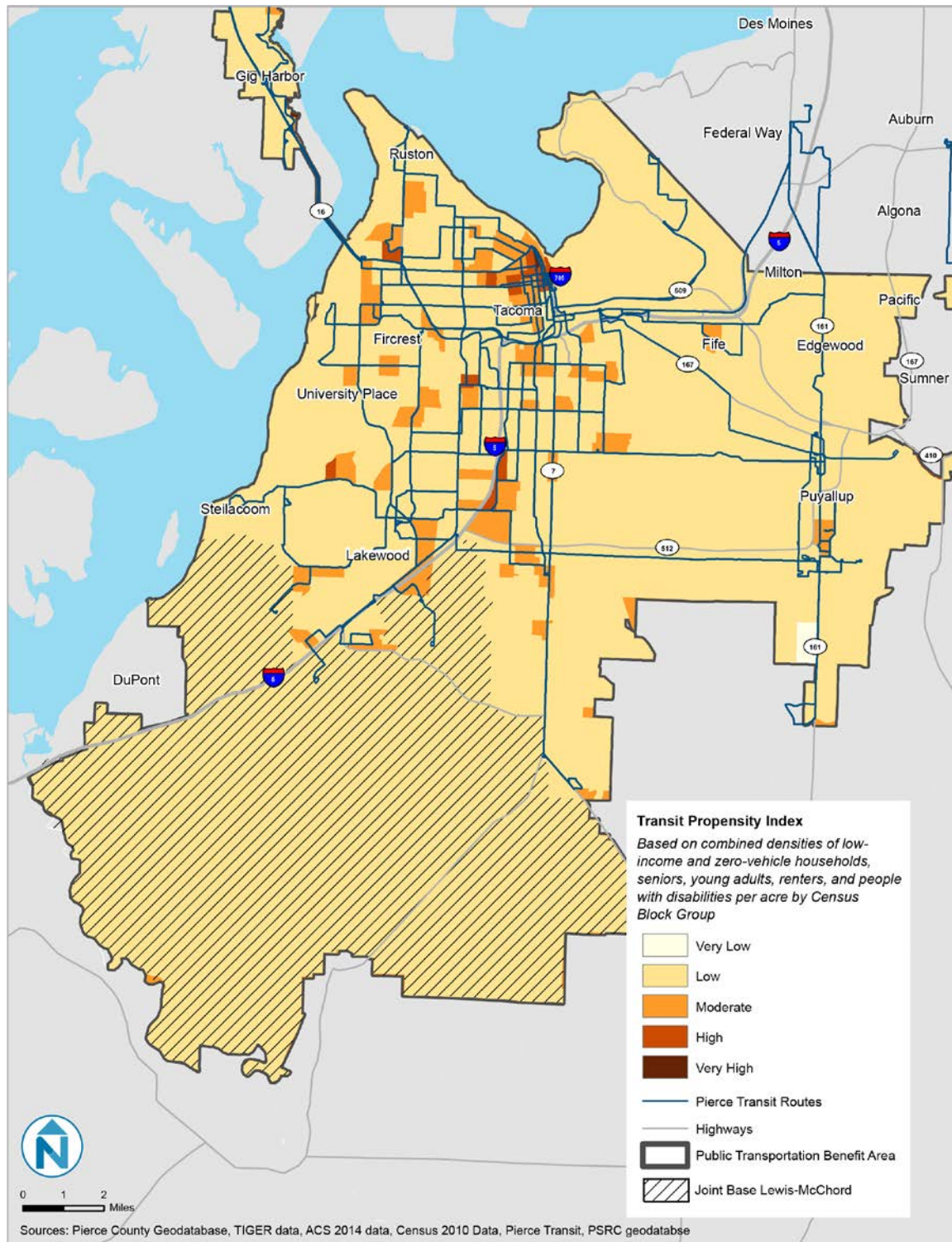
This chapter summarizes the key analytical focus and findings from the existing conditions analysis. The full analysis can be found in the *Comprehensive Local Fixed-Route Analysis Existing Conditions Report* (Nelson\Nygaard, May 2016).

MARKET ANALYSIS

A transit propensity map, shown in Figure 2-1, was created by combining densities of seniors, young adults, low-income households, households without vehicles, rental households, and people with disabilities. Overlaid with the fixed-route system, this analysis shows that the areas with most the most need (and most likelihood to support transit) are concentrated in Downtown Tacoma, with additional pockets scattered throughout the service along I-5, in the West End, South End, and University Place. From a transit accessibility perspective, Pierce Transit is already serving areas of greatest need for transit – there are no major existing gaps in coverage for communities of concern.

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Figure 2-1 Transit Propensity Index: 2016 Routes



TRAVEL PATTERNS

Trip data from the Puget Sound Regional Council's (PSRC) 2014 Regional Travel Study was analyzed in order to assess major travel flows within the region. For this analysis, five destination clusters were identified within the Public Transportation Benefit Area (PTBA) based on employment densities. These include: Downtown Tacoma, South Tacoma, Lakewood, Puyallup, and Fife.

- The majority of trips to Downtown Tacoma originate from tracts also located within Downtown Tacoma and the Hilltop neighborhood.
- Trips to South Tacoma largely originate within South Tacoma and Central Tacoma.
- Trips to Lakewood predominantly begin in the residential parts of Lakewood.
- Puyallup-bound trips originate largely in Puyallup tracts, as well as parts of Waller, Summit, and South Hill.
- Trips to Fife originate primarily along an east-west corridor between the Tacoma Dome area and Edgewood/Pacific/Sumner, including Fife itself.

FIXED-ROUTE ANALYSIS

Pierce Transit operates 36 fixed routes within the PTBA. Fixed-route services operated by Pierce Transit vary based on route design, function, span of service (hours of operation), and headway (time between buses). Pierce Transit fixed routes are classified into the following groups:

- **Trunk routes** serve high volume corridors and provide the most frequent service within urbanized portions of Pierce County. Trunk routes are Pierce Transit's most intensive services.
- **Urban routes** serve arterial streets within urbanized areas. They operate most days of the week, providing somewhat frequent service on weekdays with some night and weekend service.
- **Suburban routes** are minor routes that serve suburban neighborhoods. Typically, they operate every 60 minutes or less and may not provide weekend service.
- **Express routes** connect transit centers or park-and-ride lots with major transit destinations, offering travel times comparable to automobiles.

Service attributes for each specific route type are summarized in the following table.

Figure 2-2 Route Types

Route Type	Service Attributes		Routes in Operation		
	Span	Headway (Weekday)	Weekday	Saturday	Sunday
Trunk	All-Day	15-30 minutes	4	4	4
Urban	All-Day	30-60 minutes	25	25	23
Suburban	All-Day	30-60 minutes	4	3	3
Express	a.m. and p.m. peak	Select trips	3	0	0
Total			36	32	30

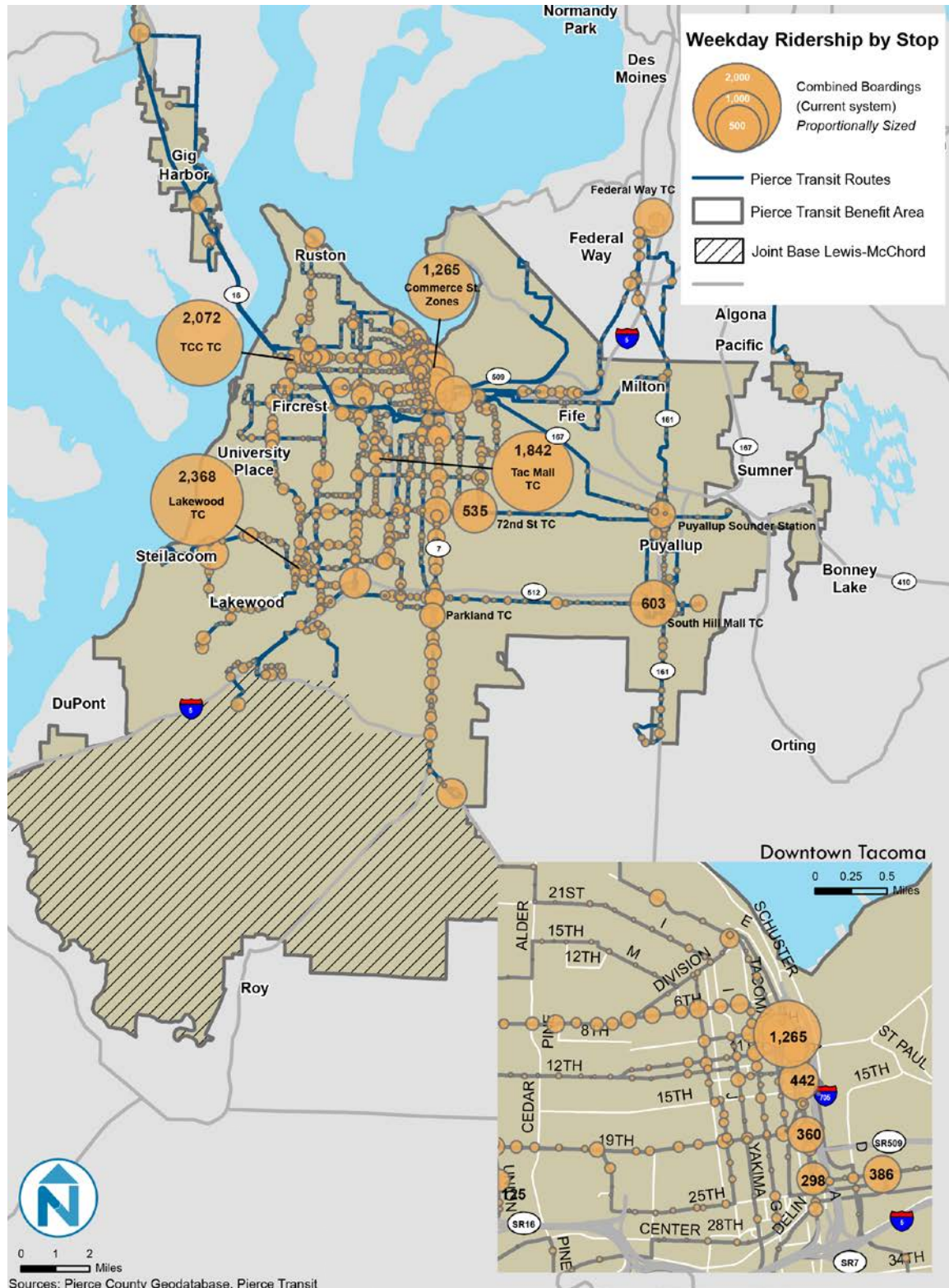
System and Route Performance

Overall performance of the system and route performance at the systemwide level were analyzed. Performance indicators include ridership, productivity (boardings per revenue hour), and on-time performance. Historic ridership and revenue hour trends were also analyzed in an effort to demonstrate how service reductions have affected ridership in the past (and how service could be increased to most effectively win back riders).

System Ridership

Figure 2-3 shows average weekday daily ridership by stop for all routes in the system. While the overall magnitude of boardings is smaller for Saturday and Sunday service, the distribution of ridership within each day type remains largely consistent (not pictured).

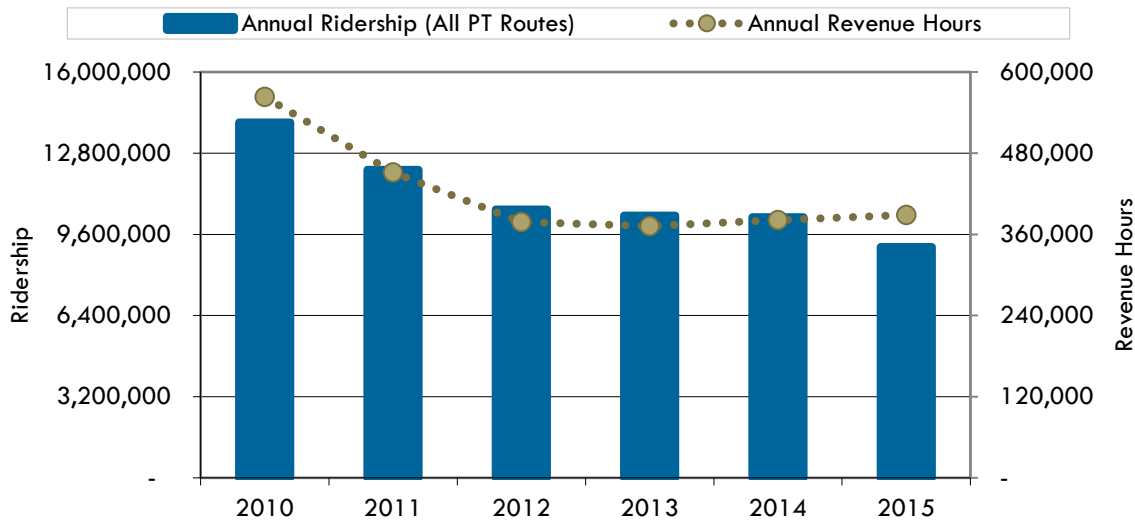
Figure 2-3 Weekday System Ridership by Stop: October 2015



Historic Trends

Historical system ridership and annual revenue hours (hours that the bus is in service including layover) are shown in Figure 2-4. Overall, ridership has declined over the past five years as annual revenue hours have been decreased. Further analysis revealed that ridership on some routes was more sensitive to service reductions than others. Routes 55, 202, 1 and 52 saw the greatest loss of ridership compared to revenue hours cut.

Figure 2-4 Historical System Ridership and Revenue Hours



Route Ridership and Productivity

Figure 2-5 shows average total ridership by route. In general, the four trunk routes (Routes 1, 2, 3, and 4) carry more riders compared to routes from other service types.

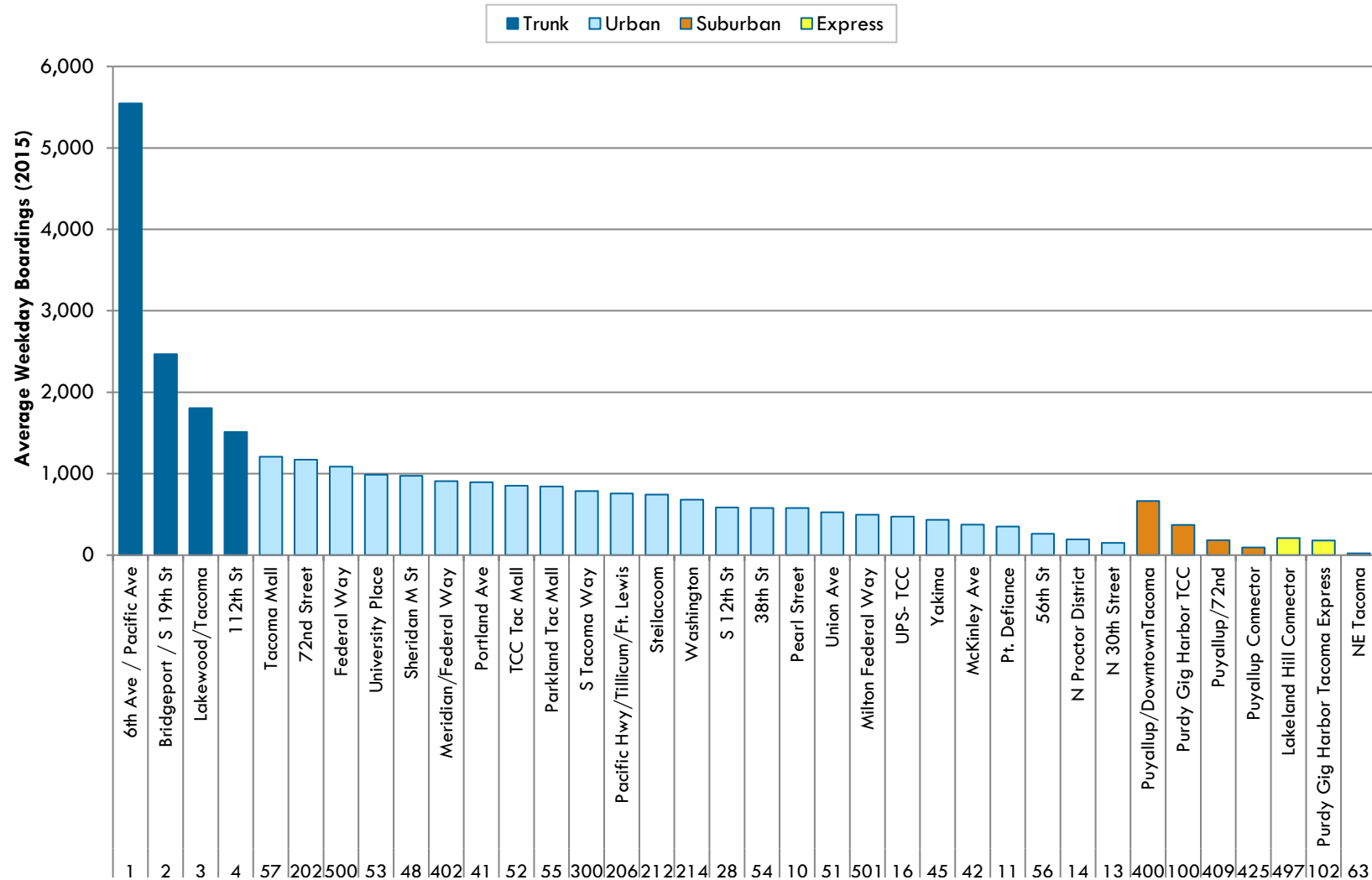
Productivity, unlike overall ridership, is more evenly distributed across service types and individual routes (see Figure 2-6). However, trunk routes as a group are more productive than urban routes, which are in turn more productive than suburban and express routes.

Schedule Adherence

Figure 2-7 shows weekday on-time performance for all routes. Weekday routes collectively run on time at a rate of 88%, with early and late running each occurring at a rate of 6%. The routes with the best on-time performance are 56, 497, and 52 (none of which operate within Downtown). The worst performing routes are 102 and 402 which have high rates of early running.

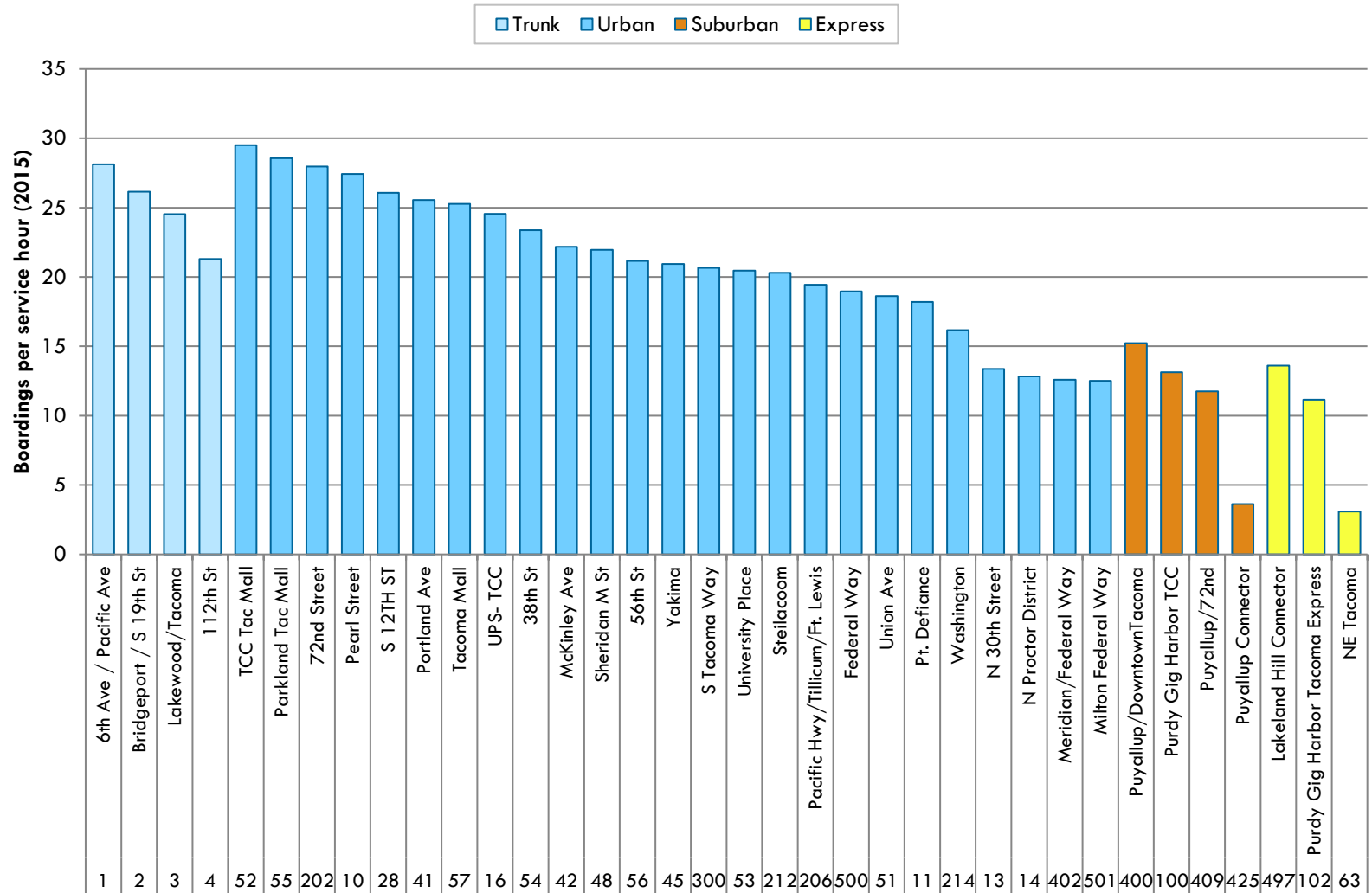
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Figure 2-5 Average Weekday Boardings by Route (2015)



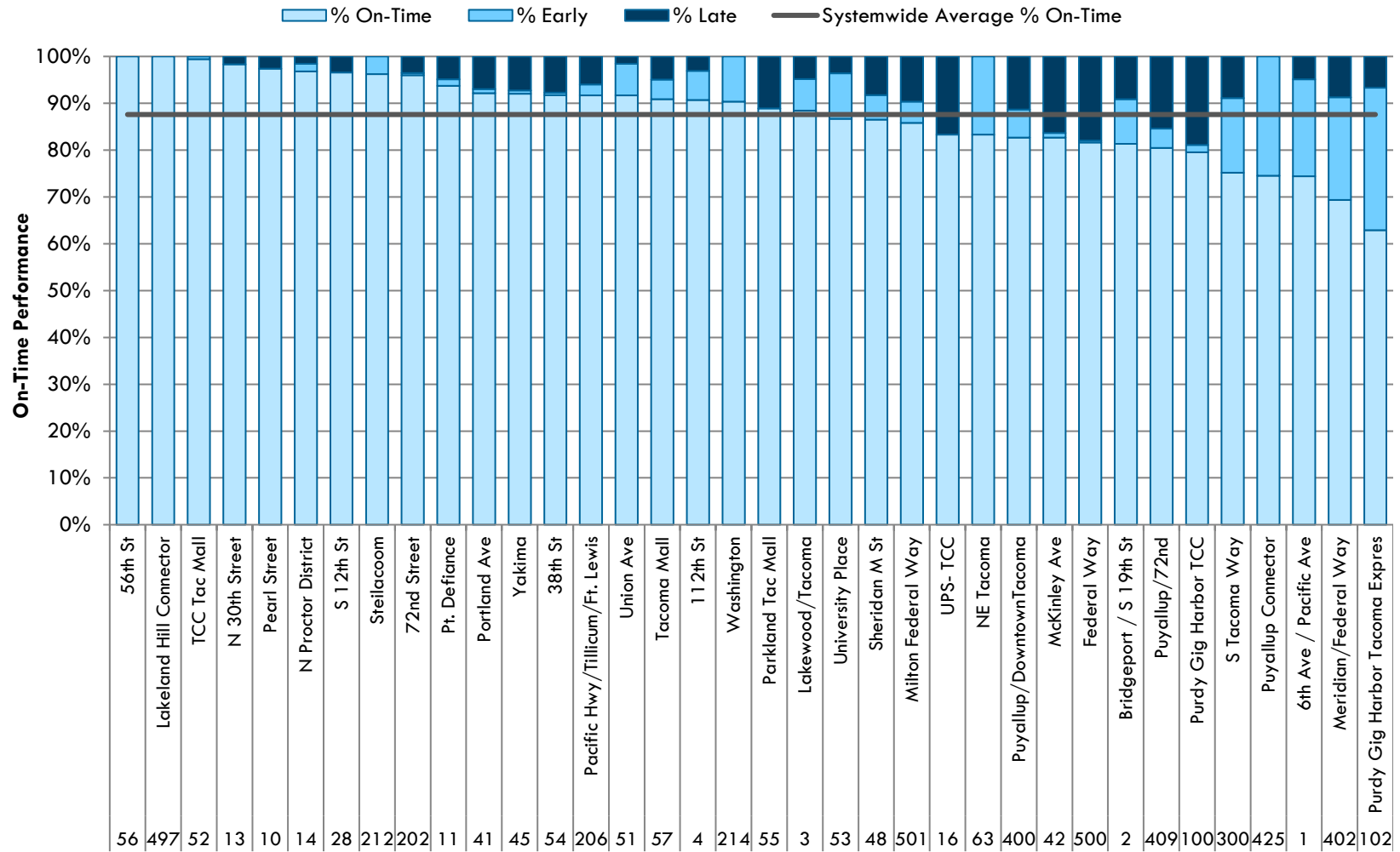
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Figure 2-6 Weekday Productivity by Route (2015)



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Figure 2-7 Average On-Time Performance by Route



Route Profiles

Lastly, we conducted a detailed assessment of Pierce Transit's weekday fixed routes, including alignment characteristics, service span, headway, destinations served, ridership, productivity, and schedule adherence. Ridership maps depicting boardings and alightings at each stop for each direction were created for each route for weekdays, Saturdays, and Sundays. These detailed route profiles were used to inform service improvement recommendations.

TRANSFER ANALYSIS

An analysis of transfer patterns helped the project team identify successes and issues with transfers today, and how they can be designed in the future to best complement network optimization and service improvement recommendations. The analysis considered magnitude, wait time/quality, and reliability of transfers. The full transfer analysis can be found in *Pierce Transit Transfer Analysis Technical Memorandum* (Nelson\Nygaard, May 2016). The transfer analysis revealed the following key findings:

- Transfers to or from three of Pierce Transit's four trunk routes (Routes 1, 2, and 3) make up the majority of transfers.
- Seven of the top ten transfer pairs are on-street transfers (not at a transit center).
- There is a wide variation of wait times, especially for on-street transfers. On average, a Pierce Transit customer needing to transfer can expect to wait 10 minutes or more for their connecting bus.
- Many transfers are reliable. In other words, transfers that the schedule indicates are possible were actually being made based on real-time arrival and departure data.
- On-street transfers were found to be more reliable than transfers at transit centers when the transfer window is scheduled at five minutes or less. Additionally, there were specific problem areas identified, such as the inability to regularly make transfers from/to Route 2 at the Lakewood Mall Transit Center.

3 STAKEHOLDER AND COMMUNITY OUTREACH KEY FINDINGS

Input from community members at in-person open houses, stakeholder discussions, online surveys, and board outreach helped to shape service changes and the adoption of a preferred alternative for route restructuring. Overall, nearly 1,000 responses from the community were received and the two most-requested improvements were increased frequency (having the bus arrive more often) and a longer span of service on weekdays.

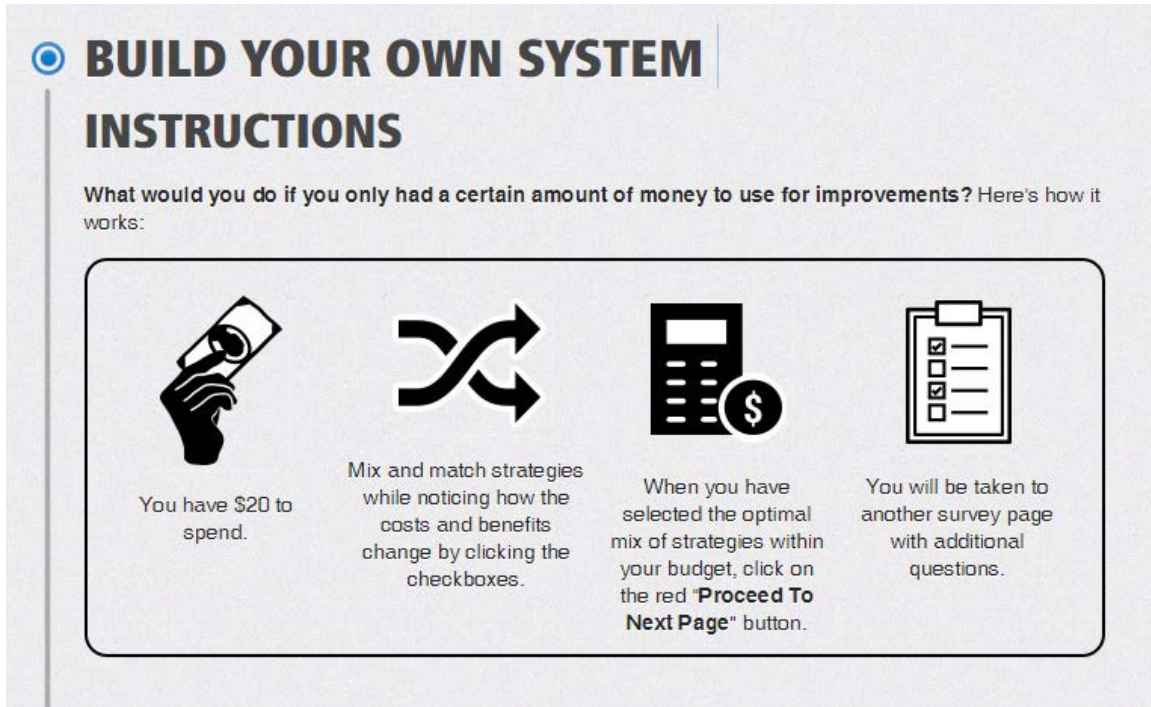
METHODS

Multiple outreach methods were used to gain an understanding of customers unmet needs and improvement priorities. Outreach occurred before initial alternatives were developed (Build Your Own System Survey) and continued after initial alternatives were developed.

Build Your Own System

The Build Your Own System (BYOS) is an online participatory budgeting survey that allows individuals to identify their transit priorities given a fixed budget. Figure 3-1 shows the instructions given to survey respondents prior to taking the survey.

Figure 3-1 Instructions for the Online BYOS Survey



There were 861 responses, of which the top three desired transit improvements were:

1. Provide more frequent service on weekdays
2. Provide earlier and later service on weekdays
3. Introduce service to new areas

Figure 3-2 presents the full list of potential improvements available in the survey, as well as the percent of respondents who identified them as priorities.

Figure 3-2 Build Your Own System Results

Strategy	Description	Y	N	Percent "Yes"*
Provide more frequent service on weekdays	Routes operate more frequently than they do today. For example, a route that currently runs every 30 minutes would run every 15 minutes.	591	270	69%
Provide earlier and later service on weekdays	Routes run earlier and later than they do today. For example, a route that currently runs between 6am-8pm would run between 5am-10pm.	568	293	66%
Introduce service to new areas	Expand service to areas or destinations that are currently unserved.	445	416	52%
Provide more frequent service on weekends	Routes operate more frequently on Saturdays and Sundays. For example, a route that currently runs every 60 minutes would run every 30 minutes.	422	439	49%
Provide earlier and later service on weekends	Route run earlier and later than they do today. For example, a route that currently runs between 9am-7pm would run between 8am-9pm.	411	450	48%
Provide real-time info at bus stops	Real-time bus arrival information signs would be provided to allow riders to see when the next bus is coming.	330	531	38%
Provide more direct service to downtown Tacoma	More service is added and routes are reconfigured to improve access and reduce the number of transfers to reach downtown Tacoma.	319	542	37%
Reduce travel time by removing stops	Routes have fewer stops, resulting in higher speeds and reduced travel time. Average walk distance to a transit stop would be increased.	312	549	36%
Add more bus service to rail stations	The number of bus trips to Sounder Stations for regional connectivity to Sounder trains and Sound Transit Express buses would be increased.	305	556	35%
More shelters at bus stops	More shade and shelter at bus stops improve conditions when waiting for the bus and attract new customers.	303	558	35%
Improve lighting at bus stops	Illuminated bus stops provide improved customer security and operational safety.	289	572	34%
Provide more community-based circulator service	Increase the number of local circulator services, for example the Puyallup Connector and Gig Harbor Trolley.	216	645	25%
Wi-Fi on bus	Offer free Wi-Fi internet service onboard to improve passenger experience.	199	662	23%
More benches at bus stops	More benches at bus stops improve conditions when waiting for the bus and attract new customers.	193	668	22%
Install bike racks at bus stops	Additional bike racks at stops to encourage ridership and free bike capacity on buses.	135	726	16%

Public Open Houses

Six public open houses were held between July and October 2016 to gather input on the two proposed restructuring services alternatives. Open houses were held in various locations around the county, including:

- Pierce Transit's offices in Lakewood
- Puyallup Library

- Hilltop Community Health Clinic
- Wheelock Library
- Salishan Family Investment Center

Open houses were advertised through on-board posters and rider alert brochures, posts on the Pierce Transit website, print advertising in eight local newspapers, audio announcements on-board buses, a news release, and social media.

Stakeholder Outreach

Multiple stakeholder outreach meetings were held in October and November 2016 to gather feedback about the two proposed alternatives for service restructuring. Stakeholder outreach meetings or briefings were held with the following groups:

- Pierce County Chief Appointed Officials Meeting
- City of Tacoma Planning Commission
- Regional Mobility Access Partnership Chamber of Commerce Meeting
- Tacoma Transportation Commission
- North Tacoma Neighborhood Council
- New Tacoma Neighborhood Council
- South Tacoma Neighborhood Council
- Downtown on the Go
- Metro Parks Tacoma
- Partner Café

WHAT PIERCE TRANSIT HEARD

Pierce Transit heard a common theme of desired improvements from early public outreach, stakeholder discussions, and Board outreach. Improved route frequency and expanded span of service were the two most desired improvements. The Board also strongly indicated a desire to improve ridership levels. Improved frequencies generally lead to bigger ridership gains than expanded span of service.

This early input was used to develop four different investment priorities for the March 2017 improvement alternatives. They are as follows:

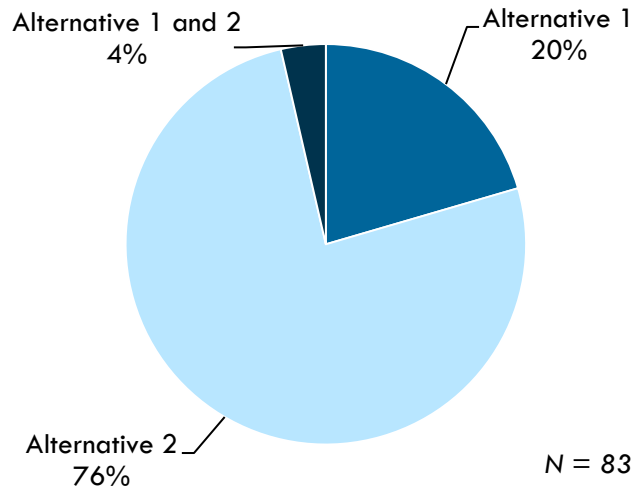
- Upgrade urban routes to 30-minute weekday peak frequency
- Upgrade urban routes to 30-minute weekday midday frequency
- Extend weekday urban route spans to 10 p.m.
- Extend urban route Saturday span to 10 p.m.

PUBLIC RESPONSES TO ALTERNATIVES

Over 300 people provided feedback on the proposed alternatives through public open houses, stakeholder outreach efforts, comments on the website, phone calls, and letters. Of those who commented on the proposed alternatives, 20% preferred Alternative 1, which included select frequency and span improvements without significant route changes. Approximately 76%

preferred Alternative 2, which included significant route alignment changes and more extensive frequency and span improvements. About 4% liked both Alternatives 1 and 2 (see Figure 3-3).

Figure 3-3 Alternative Preferences

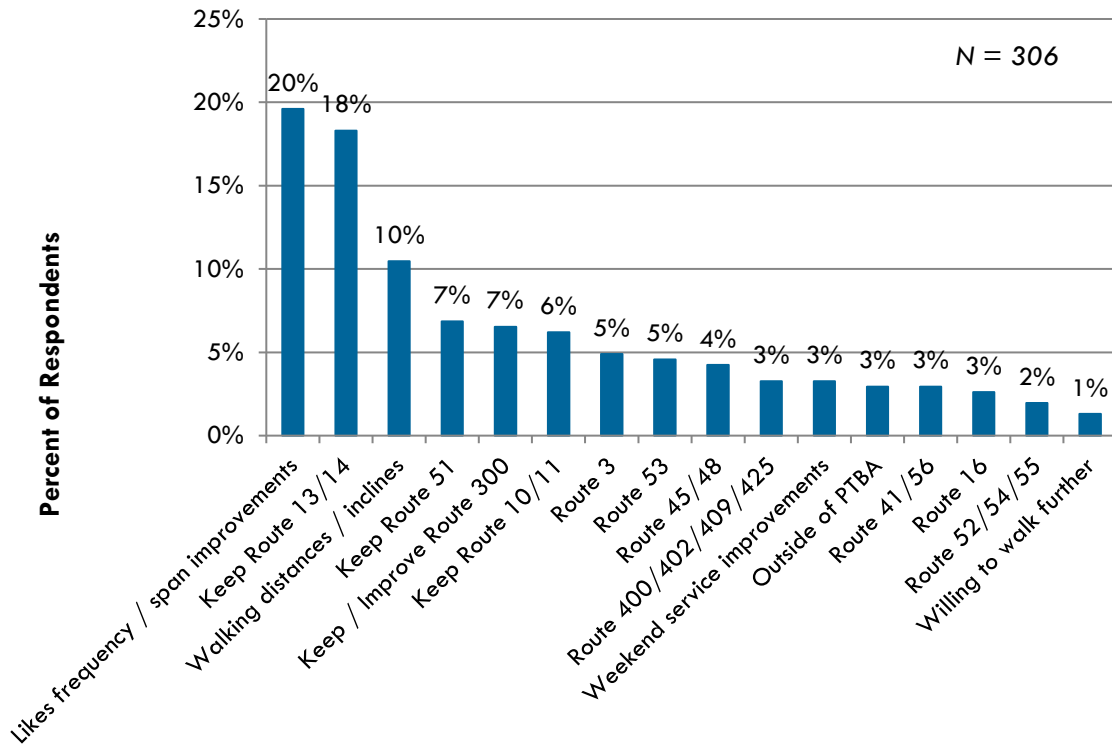


Individual comments were largely supportive of frequency and span improvements in the proposed alternatives (see Figure 3-4). Members of the public also made comments about proposed changes to specific routes. Common responses were:

- Retain service on Route 13, Route 14, and Route 51
- Retain service and increase frequency and span on Route 300
- Retain service and modify alignment on Route 10 and Route 11

Categories of responses of individuals are summarized in Figure 3-4. Adjustments, such as maintaining service on Route 13, were made to the service alternatives as a result of the public outreach.

Figure 3-4 Response Categories of Individual Comments



SERVICE CHANGE NOTIFICATION

Pierce Transit will conduct a variety of outreach efforts to inform the public about route changes coming in March 2017, via advertisements, information on buses, direct rider outreach, transit displays and outreach to affected groups.

4 SERVICE CHANGES

This section details the service changes implemented by Pierce Transit in September 2016 and those planned for March 2017 as part of *2016 Route Analysis: Moving Forward*. The September 2016 service changes comprised the first of three rounds of service hour restoration planned by Pierce Transit through 2017.

In September 2016, 12,000 service hours were restored. In 2017, Pierce Transit will improve routing and restore 35,000 service hours in March. An additional 10,000 hours are planned for September 2017. The restoration of service hours is a demonstrable commitment to restoration of service to pre-Great Recession levels.

SEPTEMBER 2016 SERVICE CHANGE

In September 2016, 12,000 service hours were restored to the Pierce Transit fixed-route system. This service hour restoration focused on frequency and span improvements to existing routes. These changes therefore did not require extensive community outreach or a Title VI analysis (such as would be required for route restructuring, route addition, route elimination, etc.).

Existing ridership patterns were examined to highlight the best opportunities for September 2016 service additions. The patterns suggested that improving service on trunk routes (specifically Routes 1 and 2) would provide the most immediate systemwide benefits, being that they carry a substantial portion of overall system ridership and generate the most transfer activity. Service improvements to these routes will have a positive ripple effect throughout the system since approximately half of all system transfers involve Routes 1 and 2.

Along with improved midday service for Route 1 and 2, Pierce Transit extended evening service for routes that do not currently operate until 9 p.m., including Route 4, 10, 13, 14, and 54. Finally, Saturday service on Route 500 was identified as a candidate for improved frequency. It is the most productive route in the Pierce Transit system on Saturdays and operated at hourly headways, while many less productive routes operate every 30 minutes.

Figure 4-1 Summary of September 2016 Service Changes

Route	Improvement	Estimated Extra Annual Hours
1 WD	Midday frequency to 15 minutes	5,100
2 WD	Midday frequency to 20 minutes	2,800
500 SAT	30 minute frequency all day	700
4 WD	Extend service until 9 p.m. (30 minute frequency)	1,300
10 WD	Extend service until 8 p.m. (30 minute frequency)	800
13 WD	Additional evening trips	500
14 WD	Additional evening trips	400
54 WD	Additional evening trips	400
Total		12,000

MARCH 2017 SERVICE CHANGE ALTERNATIVES

For the first round of 2017 service improvements, Pierce Transit considered two primary approaches for investing resources. The first was to add service back to the existing network. From an implementation and a messaging standpoint, this is the easiest path. The ridership growth resulting from this investment strategy are also relatively easy to predict, as historic ridership patterns are an indicator of the potential level of success.

The second approach was to restructure service to better reflect changing travel patterns and needs. Restructured service, along with the investment of additional hours, would allow Pierce Transit to improve service levels that appeal to a larger audience and more rapidly grow system ridership. Based on these two approaches, two draft alternatives were considered as part of the 2017 service changes. This section provides an overview of the two approaches, followed by a detailed description of the preferred alternative that was eventually approved by the Pierce Transit Board of Commissioners and is scheduled for March 2017 implementation.

Alternative 1: Upgrade Existing Network

Alternative 1 focused on the directive to add back service to Pierce Transit's existing service network. The top priorities for additional investment are ensuring that all urban routes have 30-minute peak service and then every urban route having 30-minute midday service.

Without route consolidation, the addition of 35,000 annual service hours allows for frequency improvements for thirteen routes. All urban routes (Routes 1 through 57) would have peak frequencies of 30 minutes or better. The highest midday ridership routes would also be improved to frequencies of 30 minutes or better. No weekday evening or any weekend improvements in span or frequency were feasible in Alternative 1, as all resources would be required for frequency improvements.

Alternative 2: Restructure Service

This alternative combines a system restructure that reduces route duplication with frequency and span improvements. Like Alternative 1, it invests an additional 35,000 hours of service. While coverage is reduced in some areas, passengers will benefit from 30-minute frequency on all trunk and urban routes (Routes 1-57, 202-214, 402, 500) with the exception of Route 501, as well as a longer span of weekday service.

In Alternative 2, a total of 21 routes have improved span and frequency. The all-day 30-minute frequency on urban routes extends from approximately 6 a.m. – 6 p.m. The longer span of service was designed so urban routes would all operate until 10 p.m. Additionally, two routes have earlier service.

MARCH 2017 PREFERRED ALTERNATIVE

Alternative 2, with some modifications, was approved by the Pierce Transit Board of Directors on December 12, 2016, as the Preferred Alternative for service changes to be implemented in March 2017. The most significant difference between Alternative 2 and the adopted Preferred Alternative was the retention of weekday service on Route 13. During the public comment period on the proposed service changes, almost one-quarter of the comments received addressed the proposed elimination of the Route 13. In response to these public comments and requests, the Board elected to retain Route 13, which will run on weekdays with hourly service. The retention of weekday service on Route 13 allows for continuation of service to Old Town, whose proposed elimination was a focal point for many respondents. The adopted plan also includes a few minor changes from the “Alternative 2” draft plan, including:

- Continuing Route 3 to the Tacoma Mall to address ADA access concerns at 48th St. and Pine/Oakes;
- Adjusting alignments of Routes 3 and 4 to serve the SR-512 Park & Ride; and
- Making minor routing adjustments that allow for safe bus turning movements.

The remainder of this section describes the individual route changes that will be implemented as part of the March 2017 service changes. Routes without any changes are introduced first, followed by an in-depth description of each route modification (e.g. routing, span, or frequency).

Routes with No Changes

Ten Pierce Transit routes did not generate recommendations for routing, frequency, or service span changes during the alternatives development process. These routes will remain unchanged when the Preferred Alternative is implemented in March 2017. Most of these routes had September 2016 improvements, or are in the more suburban areas of NE Tacoma, Milton, Fife, and Puyallup with low ridership demand.

In addition, Route 13 will remain unchanged over today’s alignment. During the public comment period on the proposed route restructure, almost one-quarter of the comments received addressed the possible elimination of the Route 13. In response to these public comments and requests, the Pierce Transit Board elected to retain Route 13, which will operate on its current alignment, frequency, and span on weekdays. Saturday service on Route 13 would be discontinued.

Routes with no recommended changes in the Preferred Alternative include:

- Route 1
- Route 2
- Route 13 (except for elimination of Saturday service)
- Route 63
- Route 100
- Route 102
- Route 400
- Route 409
- Route 425
- Route 497
- Route 501

Routes Eliminated

When the Preferred Alternative is implemented in March 2017, the following routes will be eliminated and those resources then reallocated into existing routes for improved frequency, span and coverage.

Route 14: Proctor District

Route 14 is one of the lowest productivity routes operated by Pierce Transit. While some route segments have some riders, others, such as the extension to Tacoma Dome, carry very few riders. Large stretches of both routes are duplicated by existing service. Route 14 should be consolidated with Route 11 and 16 service. Route 13 will continue to provide a direct connection between North Tacoma and the Tacoma Dome on weekdays.

Route 51: Union Avenue

Route 51 is one of the lowest productivity urban routes operated by Pierce Transit. It provides a crosstown service between North Tacoma and Lakewood. Most of the existing alignment is duplicated by other routes. Route 51 does not have a defined market. Virtually all of Route 51's alignment would continue to have service. In Lakewood, Routes 206 and Route 2 service would still be available to current Route 51 riders. North of Lakewood, Routes 53 and 52 provide coverage.

Route 56: 56th St

Route 56 is a crosstown connecting the 72nd Street Transit Center and the Tacoma Mall. Route 56 service on 56th Street will be replaced by an extended Route 41, which will operate more frequently and with a longer span of service.

Route 300: South Tacoma Way

Route 3 would replace Route 300 service on South Tacoma Way between the SR 512 park-and-ride and the Tacoma Mall. A restructured Route 206 would replace Route 300 service south of the SR 512 park-and-ride. Access to Joint Base Lewis-McChord would no longer be provided by Pierce Transit. Instead, connections from SR-512 to the McChord Commissary would be made via

the JBLM GO Transit Route 2, which began operating in 2016. To connect the area around the McChord Commissary with other parts of Lakewood, Pierce Transit and GO Transit are collaborating on a new service which would make a direct connection between the McChord Commissary and Lakewood Transit Center. At this time of writing plans have not yet been finalized.

Routes with Frequency or Span Changes Only

The following routes will see improved frequency of service or extended weekday service span with the March 2017 service changes. No route restructuring is planned for these routes:

Route 28: S 12th Ave

Route 28 span and frequency will be improved on weekdays so that it operates every 30 minutes between 6:40 a.m. and 6:42 p.m. and has service until 10:00 p.m. rather than 8:38 p.m.

Route 42: McKinley Avenue

Route 42 span and frequency will be improved so that it operates every 30 minutes between 6 a.m. and 6 p.m. weekdays and has service until 10 p.m. Weekend service levels will be comparable to today's service levels. .

Route 45: Yakima Avenue

Route 45 span and frequency will be improved so that it operates every 30 minutes between 6 a.m. and 6 p.m. weekdays and has service until 10 p.m. Additionally, Route 45 will be coordinated with the restructured Route 48 schedule so that between S. 38th and downtown Tacoma, Yakima Avenue has all-day 15-minute service on weekdays. These changes will create a high-frequency corridor on Yakima Avenue between downtown and S. 38th Street will improve transfers and attract more riders. Weekend service levels would be comparable to today's service levels.

Route 52: TCC-Tacoma Mall

Route 52 will operate longer hours, with service until 10 p.m.

Route 55: Parkland-Tacoma Mall

Route 55 will operate longer, with service until 10:15 p.m. rather than the current 9:10 p.m.

Route 57: Tacoma Mall

Evening service for Route 57 will extend to 10:00 p.m.

Route 212: Washington

Evening service spans for Route 212 will extend to 10:00 p.m. rather than to 9:03 p.m.

Route 214: Steilacoom

Evening service spans for Route 214 will extend to 10:00 p.m. rather than to 8:20 p.m.

Route 400: Puyallup / Downtown Tacoma

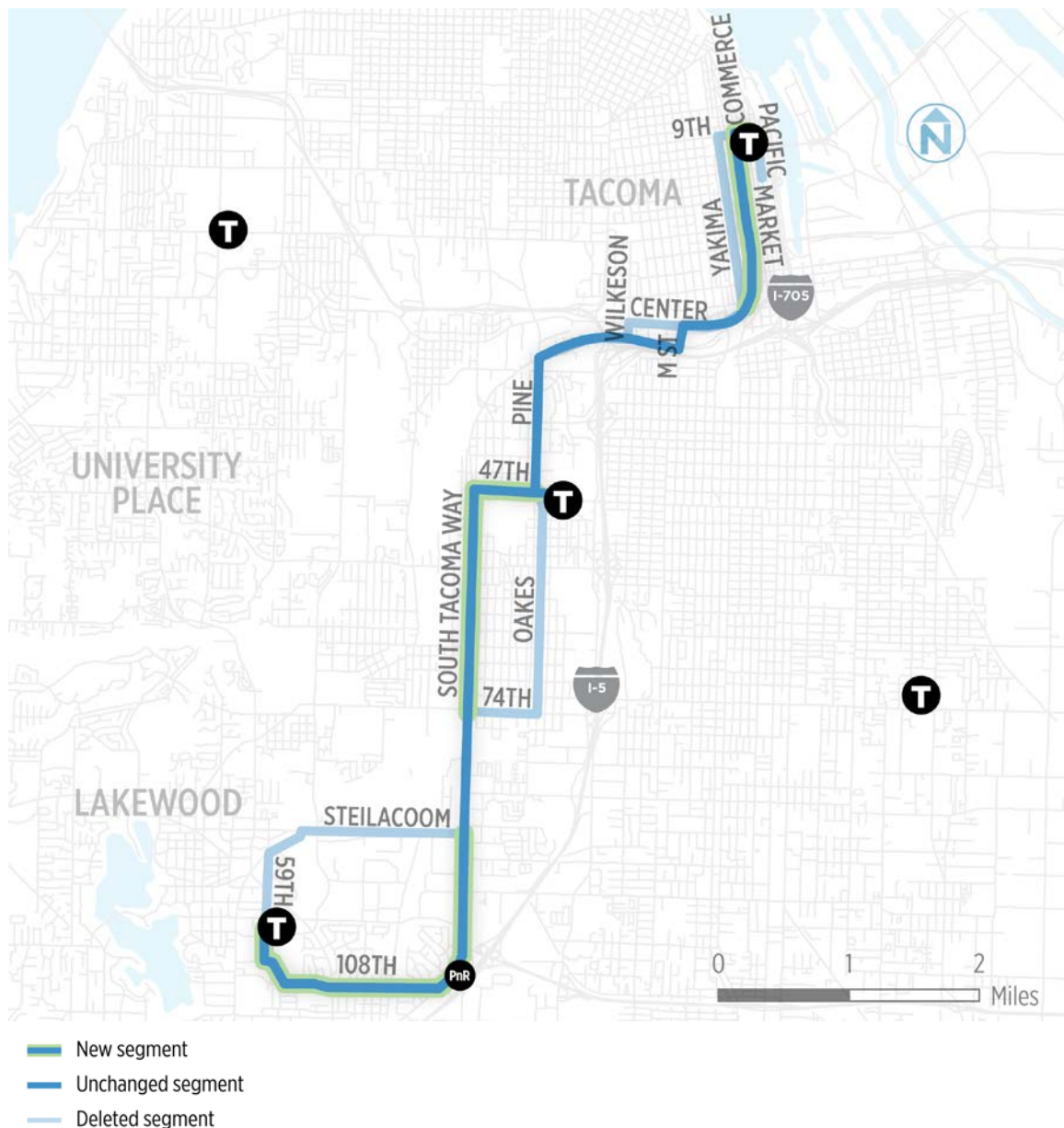
Route 400 will experience increased frequencies: headways will improve from 30 minutes to 20 minutes during peak hours. No span of service changes are planned for Route 400.

Routes with Modified Alignments

Route 3: Lakewood-Tacoma

The span and frequency of Route 3 will be similar to current levels on both weekdays and weekends. With respect to alignment, Route 3 will be revised to create a more direct, faster route between downtown Tacoma, Tacoma Mall, SR-512 Park-and-Ride, and Lakewood Transit Center via South Tacoma Way and 108th Street SW. This will provide more service along major arterials and help enhance regional mobility by improving better access between key destinations. As a result, Route 3 will no longer provide service along Oakes St or Steilacoom Blvd. Service along the former will be provided by Route 53, while service along the latter will be served by Route 48.

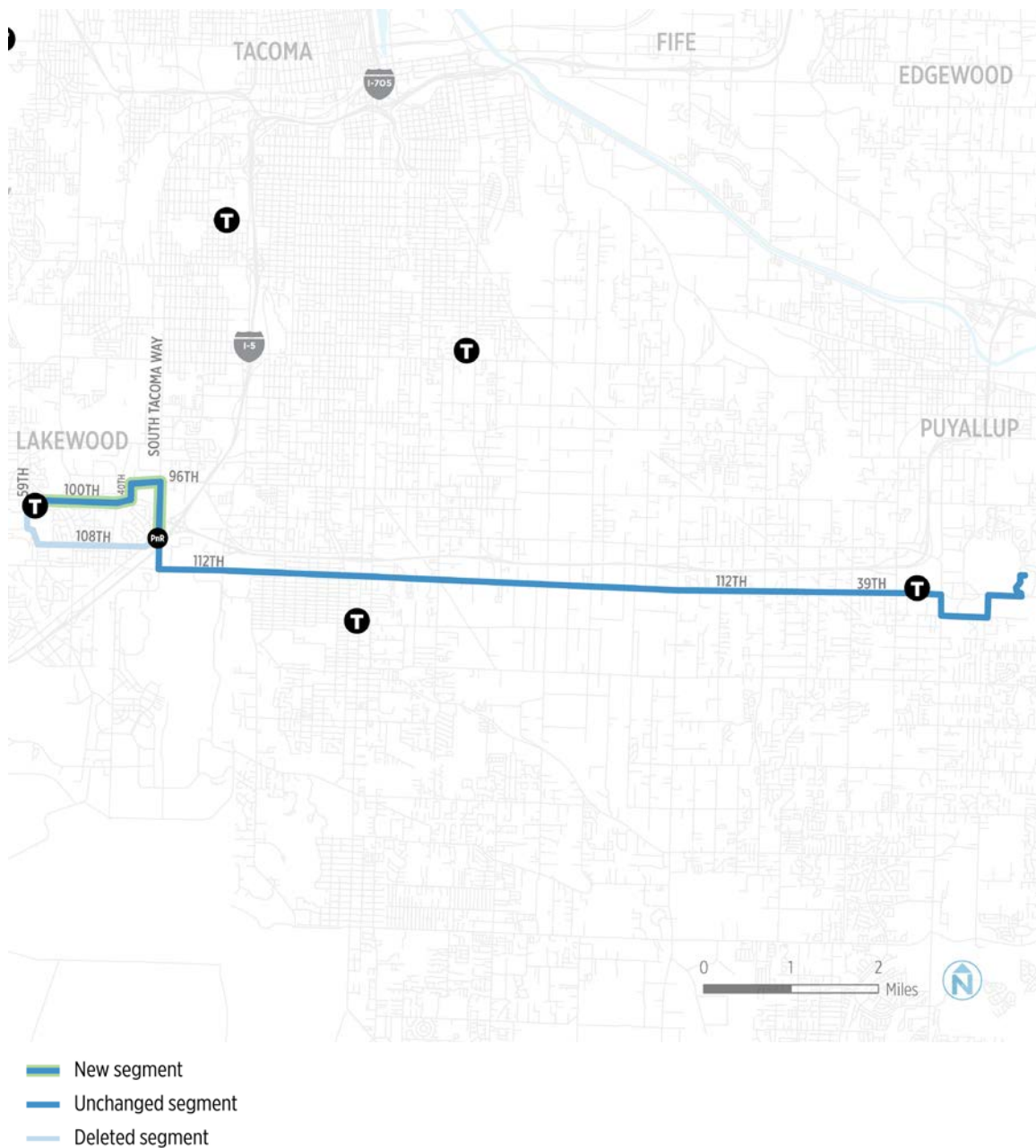
Figure 4-2 Route 3 Changes



Route 4: 112th Street

Route 4 will experience slight changes to its span and alignment. In terms of span, it will provide service one hour later in the evening (until 10:00 p.m.). In terms of alignment, Route 4 will operate along 100th St SW between Lakewood Transit Center and SR-512 Park-and-Ride. Service along 108th St SW will be provided by Route 3. No changes to frequency are planned for Route 4.

Figure 4-3 Route 4 Changes



Route 10: Pearl Street

Route 10 span and frequency will be improved so that it operates every 30 minutes between 6 a.m. and 6 p.m. on weekdays and has service until 10 p.m. Route 10 will be revised to improve directness of service, simplify the alignment, and focus on the higher demand areas. This will provide more direct service by eliminating the one-way couplet. Market research has shown that one-way mid-route alignments separated by a quarter mile reduce ridership. While some existing passengers on Vassault Street will need to walk further to access Route 10, overall ridership should increase on Route 10.

Figure 4-4 Route 10 Changes



Route 11: Pt. Defiance

Route 11's span and frequency will be improved so that it operates every 30 minutes between 6 a.m. and 6 p.m. weekdays and has service until 10 p.m. The alignment of Route 11 will be adjusted to better serve higher ridership areas and reduce duplication with other routes. During weekdays, Route 11 will interline with Route 41 at 10th and Commerce, resulting in a one-seat ride from the North End to Tacoma Mall. Additionally, existing Route 11 passengers will continue to have Route 1 service on 6th Street and fall within a quarter-mile (i.e. a five-minute) walk of enhanced service on Proctor Street.

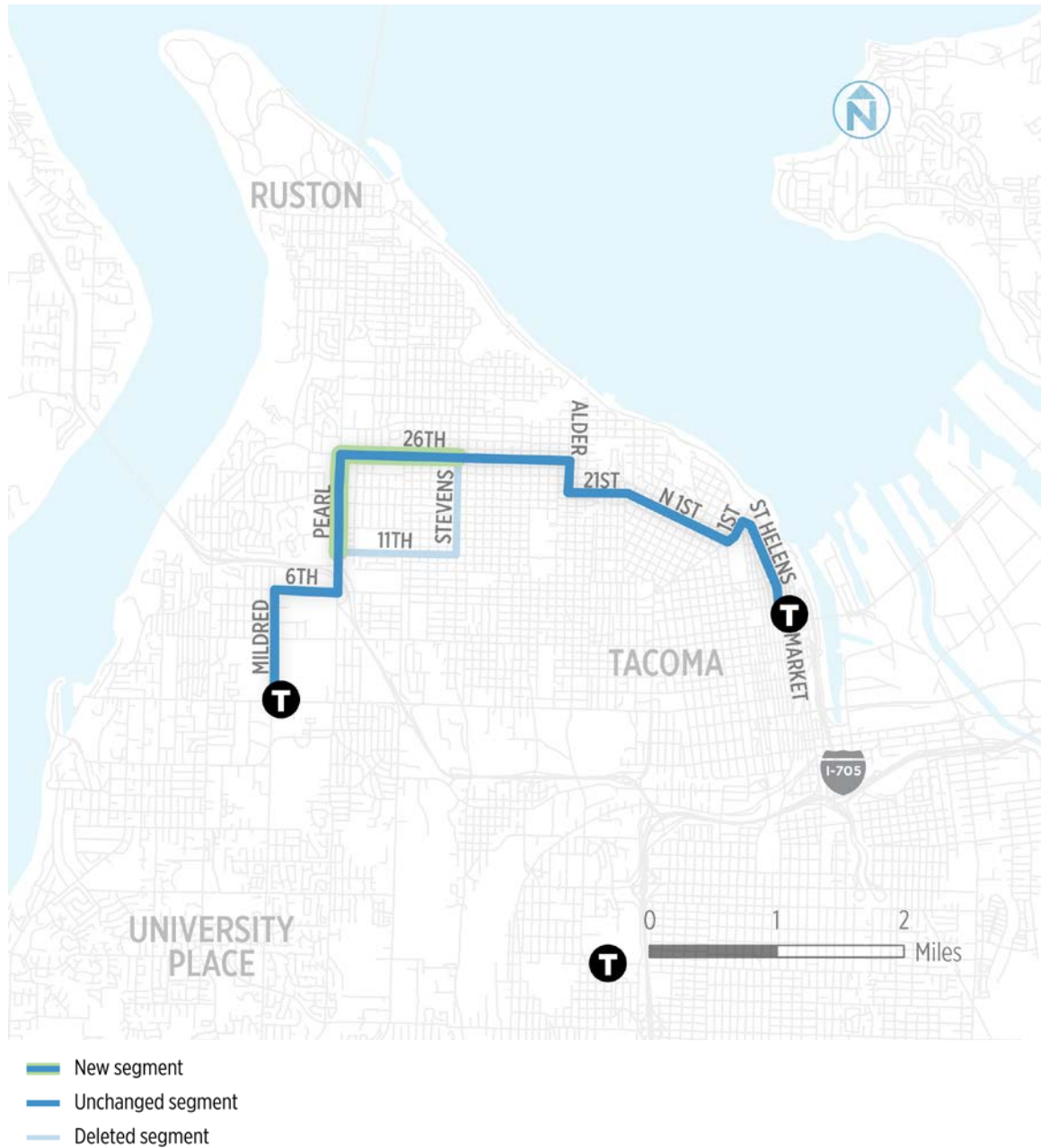
Figure 4-5 Route 11 Changes



Route 16: Downtown Tacoma

Route 16 span and frequency will be improved so that it operates every 30 minutes between 6 a.m. and 6 p.m. weekdays and has service until 10 p.m. The alignment of Route 16 will be adjusted to better serve higher ridership areas. Route 16 will now operate on 26th Street between Pearl and Proctor Streets to better connect higher density residential and commercial areas on Pearl Street to downtown Tacoma.

Figure 4-6 Route 16 Changes

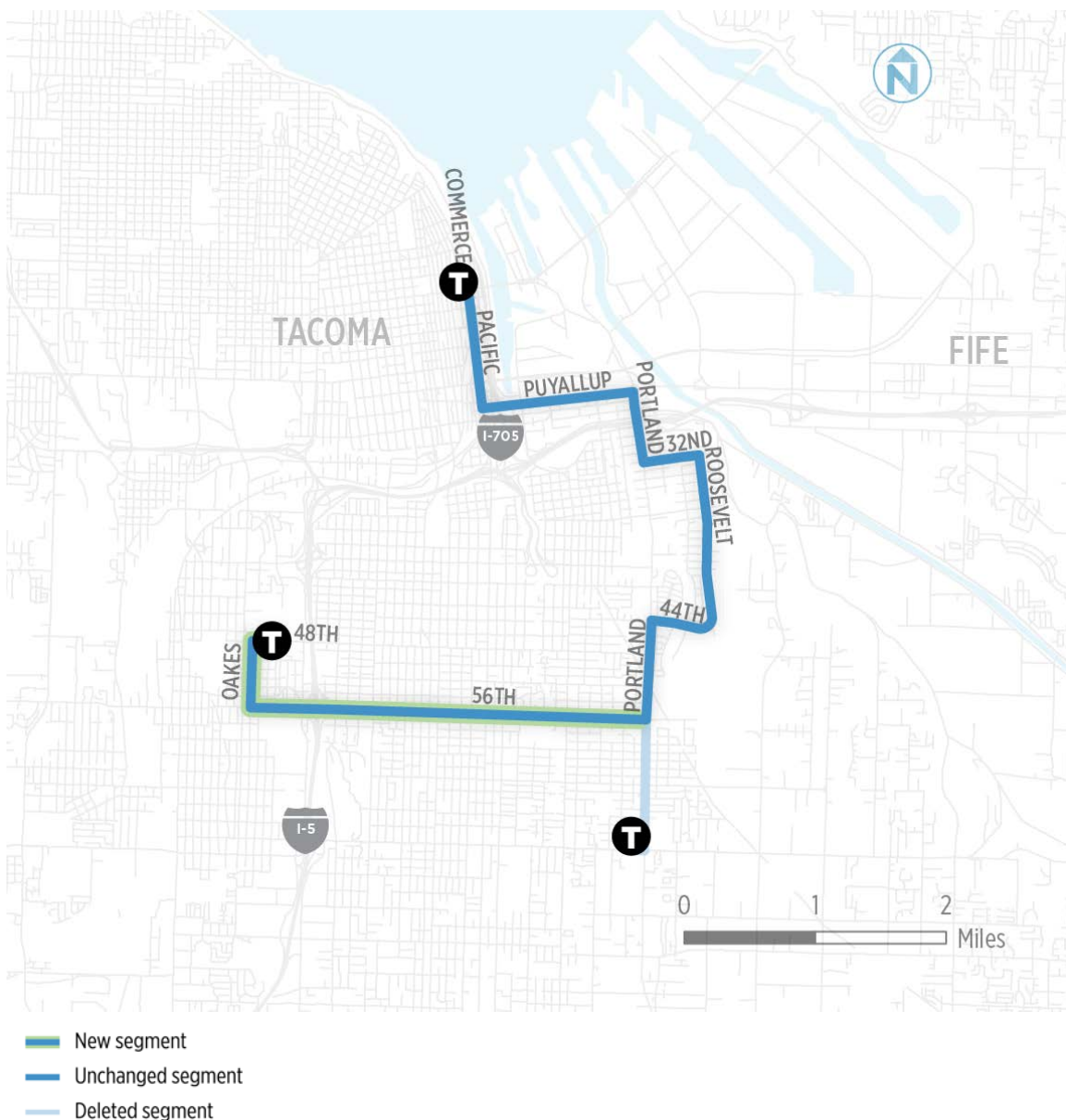


Route 41: Portland Ave

Route 41 currently connects East Tacoma with downtown Tacoma. In order to provide Salishan residents a more direct connection to the Tacoma Mall, Route 41's southern terminus will be shifted away from the 72nd Street Transit Center and instead travel along the S. 56th Street corridor currently served by Route 56. Additionally, all weekday Route 11 trips will interline with Route 41, providing a one-seat ride to the North End from East Tacoma and Tacoma Mall. The consolidated Route 41 will operate weekdays until 10 p.m.

Service between downtown Tacoma and 72nd Street Transit Center will continue to be provided by Route 42. Service between Tacoma Mall and 72nd Street Transit Center will continue to be provided by Route 54.

Figure 4-7 Route 41 Changes



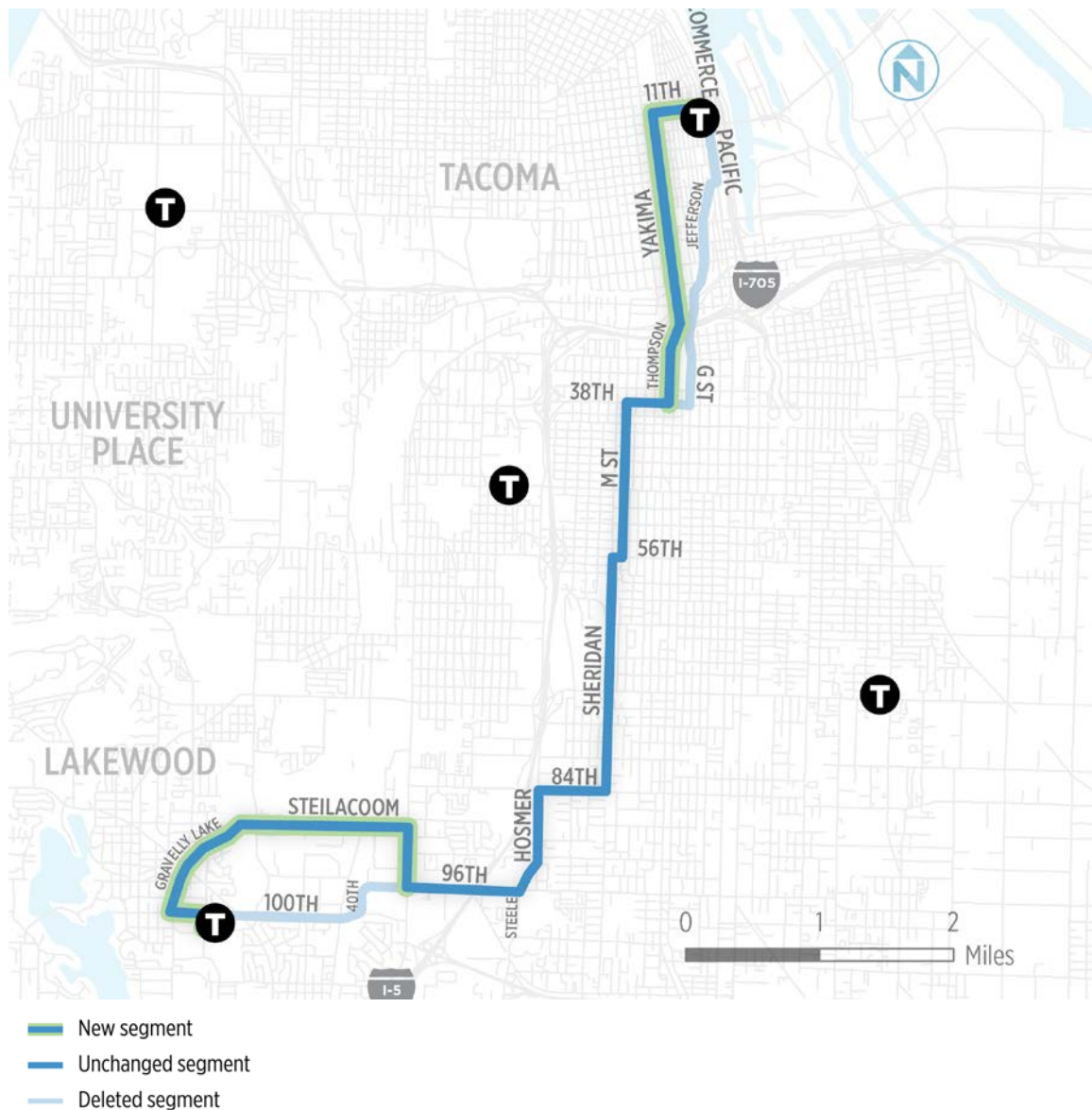
Route 48: Sheridan-M St

Route 48's span and frequency will be improved so that it operates every 30 minutes between 6 a.m. and 6 p.m. weekdays and has service until 10 p.m.

In order to create a high-frequency corridor connecting S. 38th Street and downtown Tacoma, Route 48's alignment will be modified to use Yakima Avenue. The schedule between S. 38th Street and downtown should be coordinated with Route 45, so that between the two routes service operates every 15-minutes during the day (approximately 6 a.m. to 6 p.m.) and every 30-minutes during off-peak times.

In Lakewood, in conjunction with the Route 3 restructure, Route 48's alignment will utilize Steilacoom Boulevard between S. Tacoma Way and the Lakewood Transit Center. Route 3 will serve the existing 100th Street alignment.

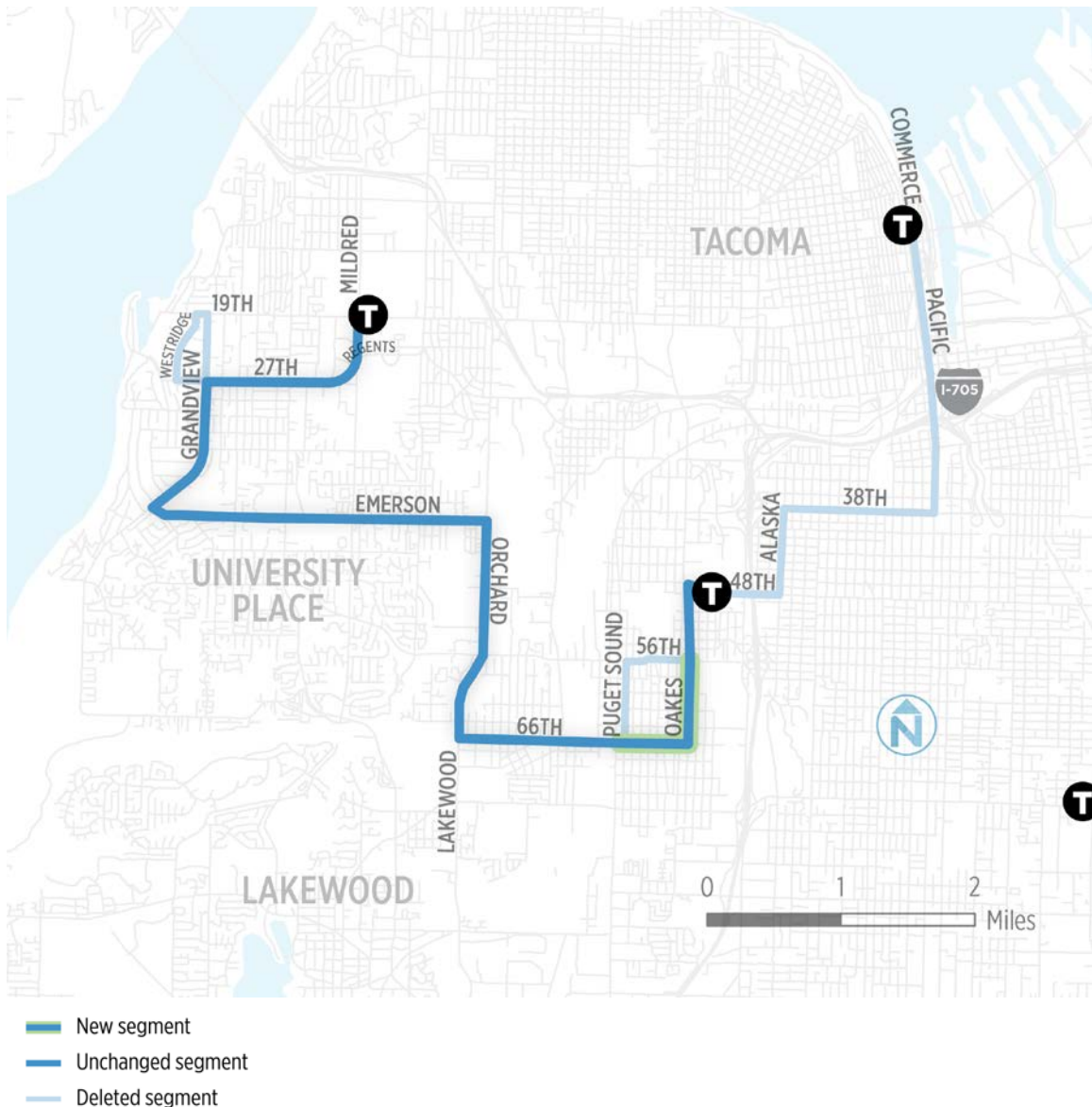
Figure 4-8 Route 48 Changes



Route 53: University Place

Route 53 currently operates like two separate routes that interline with each other. At the Tacoma Mall Transit Center, two thirds of the existing ridership turns over. Between the Tacoma Mall Transit Center and downtown Tacoma, Route 53 duplicates multiple other routes. It does not have a unique market connecting the Mall to either East Tacoma or from East Tacoma to downtown Tacoma. In order to reduce duplication of service, Route 53 will operate only between TCC and the Tacoma Mall Transit Center. It will also be rerouted along Oakes Street to provide coverage where Route 3 was realigned along S. Tacoma Way. The restructured Route 41 will continue to provide a link between the Tacoma Mall Transit Center and East Tacoma. Routes 1, 45, and 48 will continue to provide service between East Tacoma and downtown Tacoma. Route 53's frequency would be improved to every 30-minutes between 6 a.m. and 6 p.m. and would operate until 10 p.m.

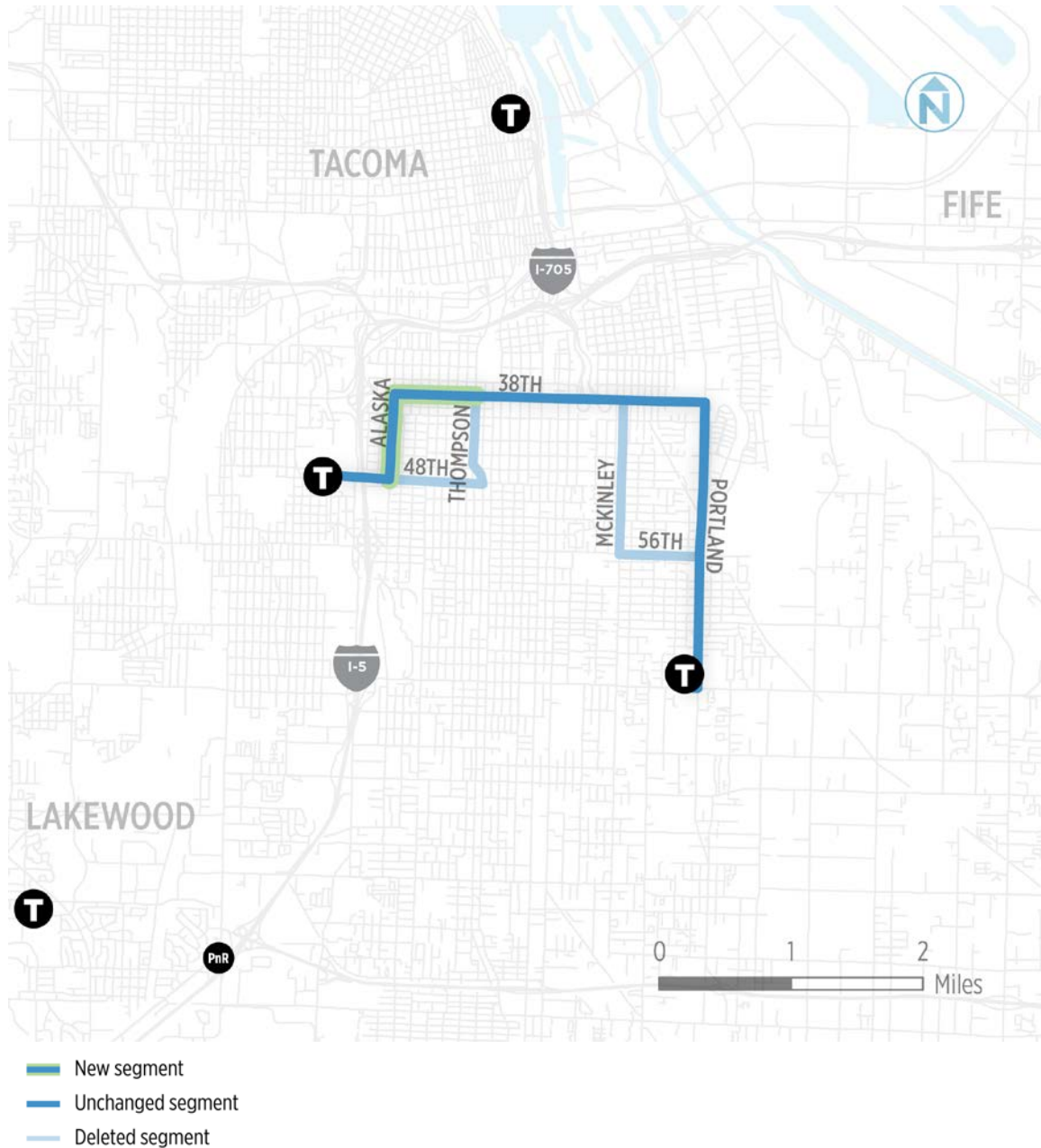
Figure 4-9 Route 53 Changes



Route 54: 38th Street

Route 54 will be restructured to serve Alaska St, S 38th St, and Portland Ave. In so doing, it will reduce duplication with routes 42, 45, and 48, and provide a more direct connection between 72nd Street Transit Center and Tacoma Mall. It will also operate later on weekdays, with service until 10:00 p.m. instead of 8:32 p.m.

Figure 4-10 Route 54 Changes



Route 206: Pacific Hwy/Tillicum/Madigan

Route 206 connects the Lakewood Transit Center with Madigan Hospital. It also serves multiple low-income areas. Route 206 passes within one-third of a mile of the Springbrook neighborhood, which currently has Route 51 connecting it with the Lakewood Transit Center. In order to reduce duplication of service, Route 206 will deviate into the Springbrook neighborhood via Bridgeport Way and Lincoln Ave. This will add several minutes to existing Route 206's travel time to points further south. However, in conjunction with the routing change, Route 206's midday frequency would be improved to every 30 minutes, and service would operate until 10 p.m. on weekdays. Connections to McChord field via the Bridgeport may be provided by new JBLM GO Transit service.

Figure 4-11 Route 206 Changes



5 SUMMARY OF MARCH 2017 SERVICE CHANGES

This section summarizes the Preferred Alternative in terms of routing, span, and frequencies as it will be implemented in March 2017.

ROUTING CHANGES

With the March 2017 service changes, riders will see alignment changes to 10 routes. Figure 5-1 presents the Pierce Transit system map as it will look on March 12, 2017. It also highlights current network segments that will no longer be served. Figure 5-2, Figure 5-3, and Figure 5-4 present more detailed route maps for North Tacoma, East Tacoma, and Lakewood, respectively.

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Figure 5-1 March 2017 Service Changes System Map

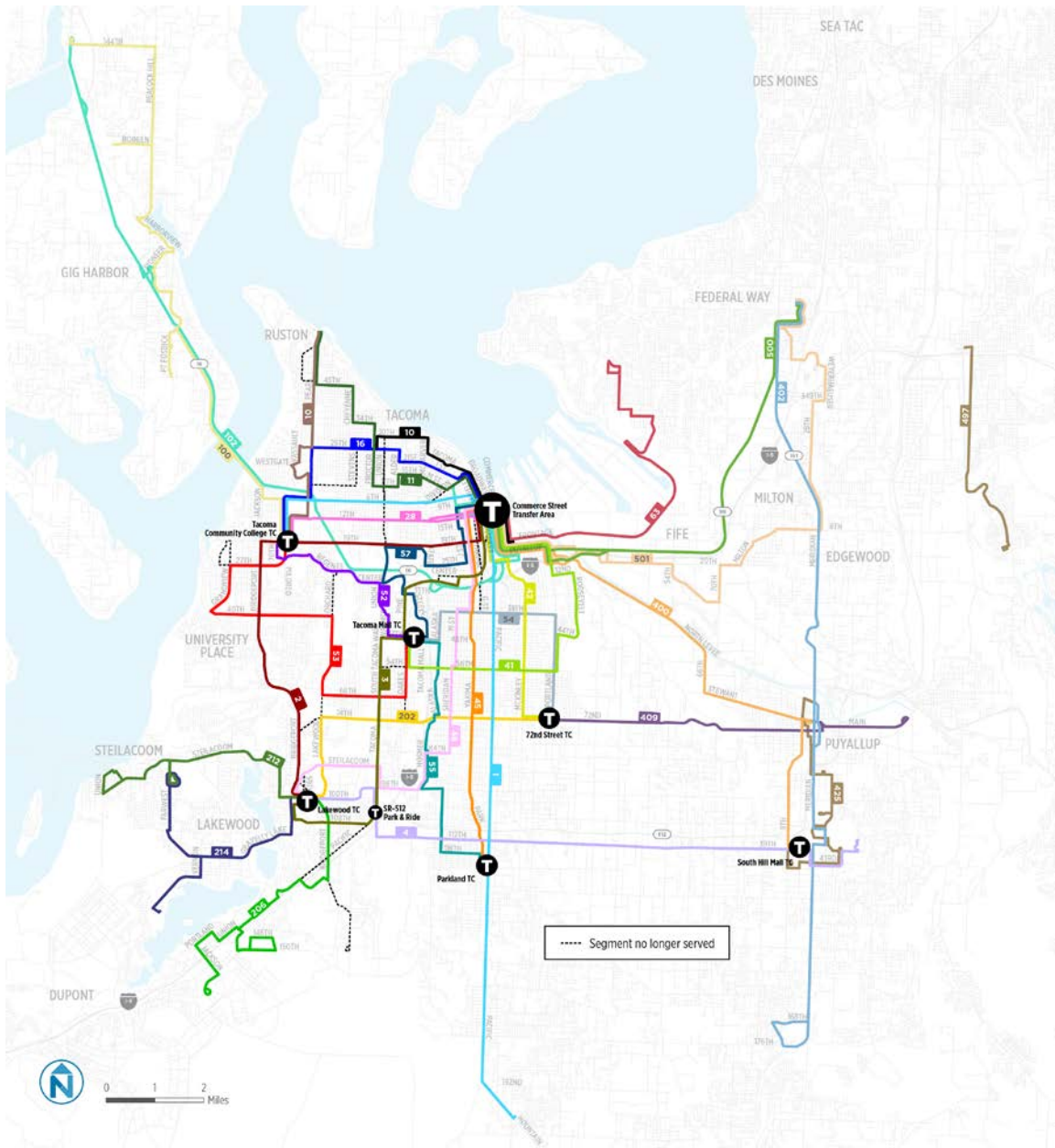


Figure 5-2 March 2017 Service Changes, North Tacoma

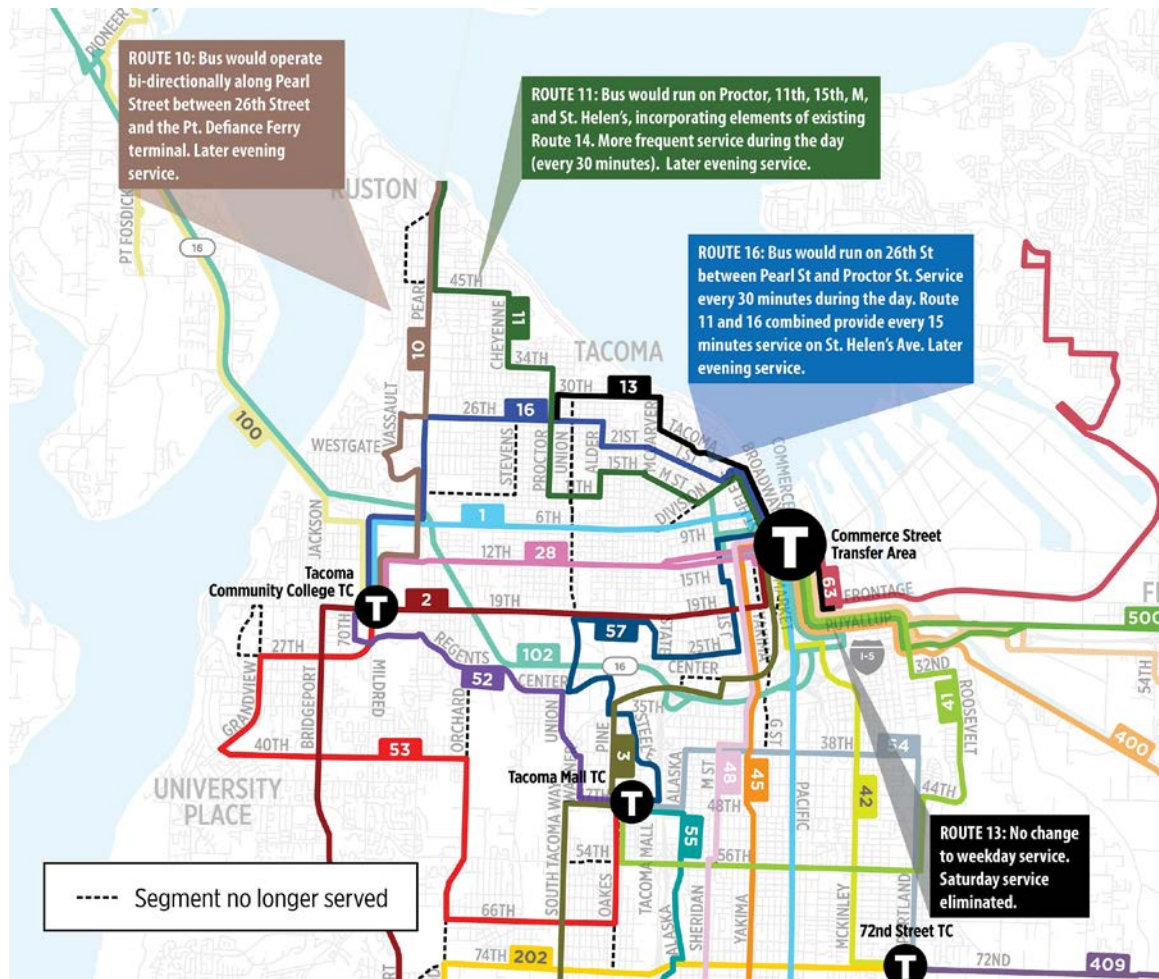


Figure 5-3 March 2017 Service Changes, East Tacoma

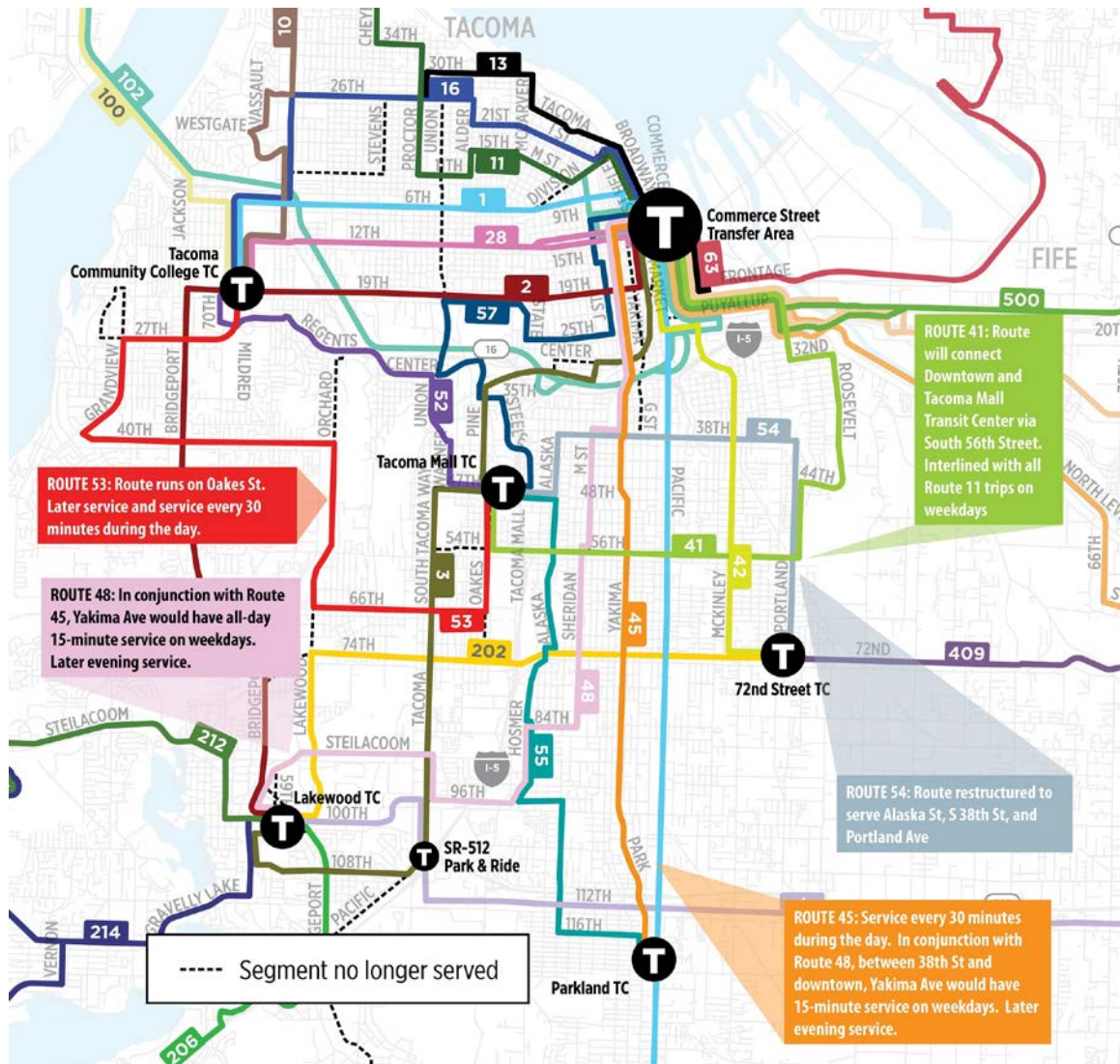
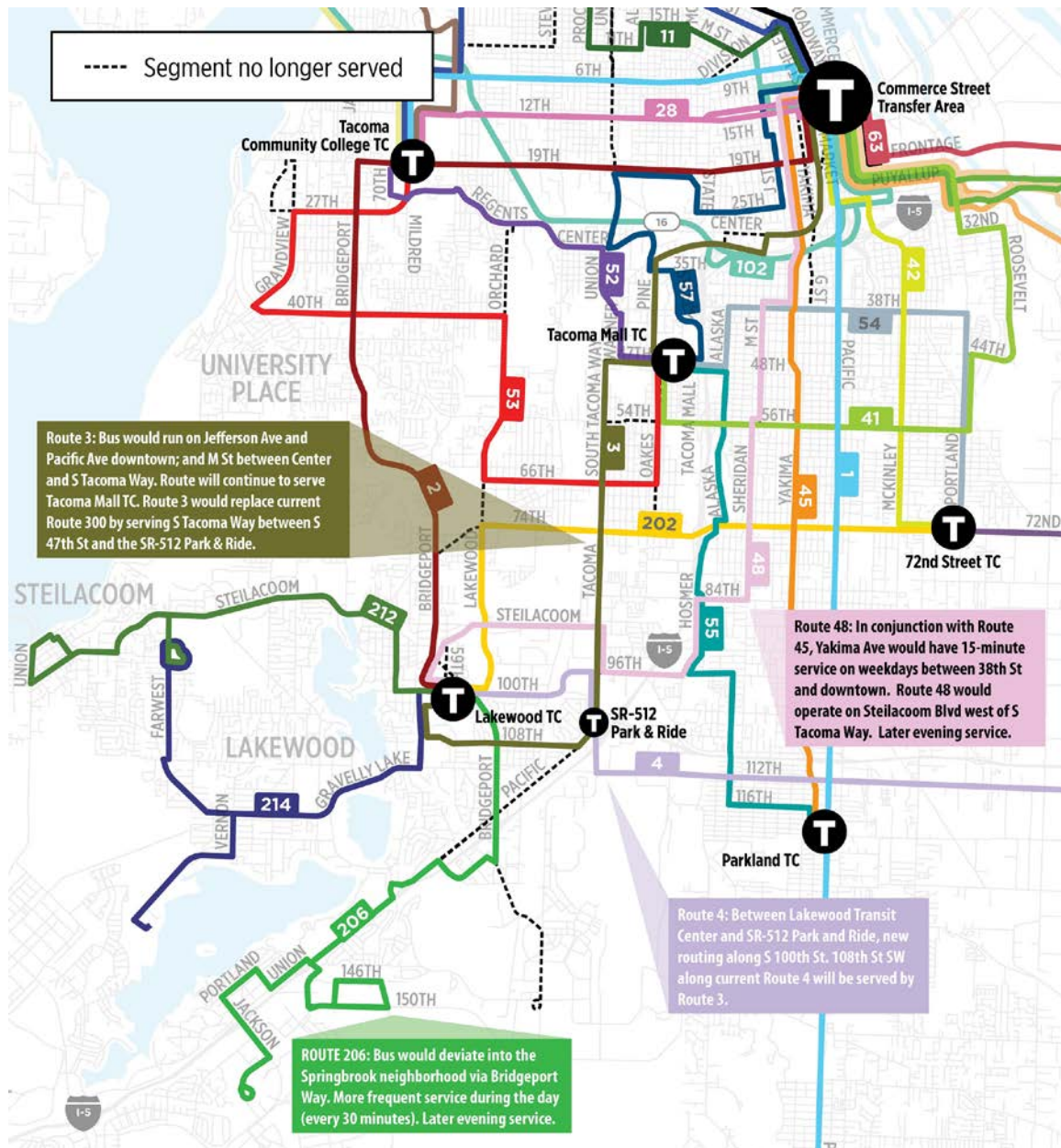


Figure 5-4 March 2017 Service Changes, Lakewood



SPAN AND FREQUENCY CHANGES

A total of 21 routes have improved span and frequency. The March 2017 service changes will introduce all-day (approximately 6 a.m. – 6 p.m.) 30-minute frequency on urban routes (Routes 1-57, 202-214, 402, 500), as well as a longer span of service until 10 p.m. on those routes (except Route 402). Two routes have earlier service. Improvements to route frequency and/or span are shown in **bold**.

Figure 5-5 Preferred Alternative Summary Table

Route	Peak Frequency	Midday Frequency	Evening Frequency	Weekday Span
1 6th Ave / Pacific Ave	15	15	30-60	4:30 a.m. to 11:30 p.m.
2 Bridgeport / S 19 th St	20	20	30-60	5:45 a.m. to 11 p.m.
3 Lakewood / Tacoma	30	30	30-60	5:15 a.m. to 10:10 p.m.
4 112 th St	30	30	30	6:15 a.m. to 10 p.m.
10 Pearl St	30	30	30-60	6:15 a.m. to 10 p.m.
11 Pt Defiance	30	30	60	6:15 a.m. to 10 p.m.
13 N 30 th St	60	60	60	5:45 a.m. to 7:15 p.m.
16 UPS – TCC	30	30	60	6:45 a.m. to 10 p.m.
28 S 12 th St	30	30	60	6:45 a.m. to 10 p.m.
41 Portland Ave	30	30	60	5:45 a.m. to 10 p.m.
42 McKinley Ave	30	30	60	5:10 a.m. to 10 p.m.
45 Yakima	30	30	60	5:45 a.m. to 10 p.m.
48 Sheridan M St	30	30	60	5:20 a.m. to 10 p.m.
52 TCC – Tacoma Mall	30	30	60	6:15 a.m. to 10 p.m.
53 University Place	30	30	60	6:15 a.m. to 10 p.m.
54 38 th St	30	30	60	6:00 a.m. to 10:00 p.m.
55 Parkland – Tacoma Mall	30	30	60	6:15 a.m. to 10:15 p.m.
57 Tacoma Mall	30	30	60	5:30 a.m. to 10 p.m.
63 NE Tacoma	3 a.m. / 3 p.m. trips	-	-	Peak only
100 Purdy Gig Harbor – TCC	60	60	60	6:45 a.m. to 7:30 p.m.
102 Purdy Gig Harbor / Tacoma Express	4 a.m. / 5 p.m. trips	-	-	Peak only
202 72 nd St	30	30	30-60	6 a.m. to 10 p.m.
206 Pacific Hwy / Tillicum / Ft Lewis	30	30	30-60	5:30 a.m. to 10 p.m.

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Route	Peak Frequency	Midday Frequency	Evening Frequency	Weekday Span
212 Steilacoom	30	30	60	5:30 a.m. to 10 p.m.
214 Washington	30	30	30-60	6:15 a.m. to 10 p.m.
400 Puyallup / Downtown Tacoma	20	60	60	4:45 a.m. to 9 p.m.
402 Meridian / Federal Way	30	30	60	5 a.m. to 9 p.m.
409 Puyallup / 72 nd	60	60	60	6:45 a.m. to 7:15 p.m.
425 Puyallup Connector	30	30	-	9:15 a.m. to 6:30 p.m.
497 Lakeland Hill Connector	8 a.m. / 8 p.m. trips	-	-	Peak only
500 Federal Way	30	30	60	5:15 a.m. to 11 p.m.
501 Milton / Federal Way	60	60	60	6 a.m. to 9 p.m.