

APPENDIX I

CONCEPTUAL STATION LOCATIONS

This document provides the methodology used to select potential conceptual station locations along each of the Stream corridors and lists the recommended station locations for each corridor.



PierceTransit

Stream

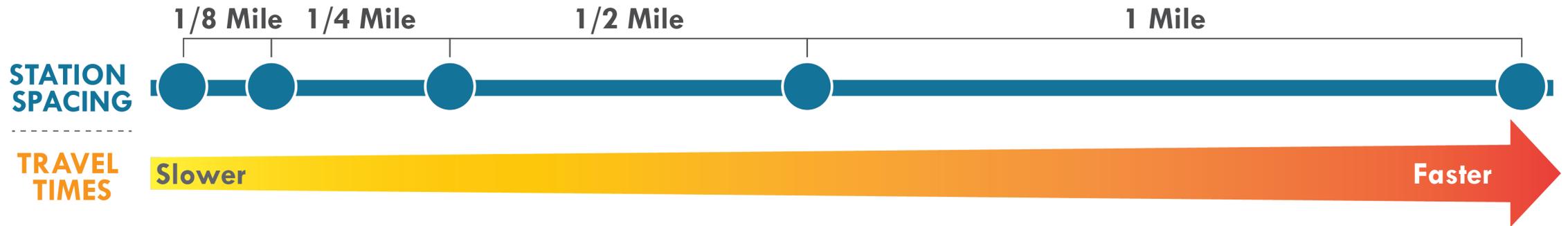
SSES Conceptual Station Locations

March 2022

Overview

- Conceptual Station Spacing Overview & Methodology
- Conceptual Station Locations
 - Corridor A
 - Corridor B
 - Corridor C
 - Corridor D

CONCEPTUAL STATION SPACING



- Conceptual station locations were identified for each corridor for analysis and prioritization.
- Station spacing is the distance between stations along a transit route in the same direction.
- Longer spacing results in faster travel times since the bus is stopping less, and Shorter spacing reduces walking distances from a station to a destination. Shorter spacing results in longer travel times since the bus is slowing down, stopping, and speeding back up more frequently.

STATION STANDARD

Locate stations with average station spacing of $\frac{1}{2}$ mile. The minimum is $\frac{1}{4}$ mile.

Land use and other context factors must be considered in determining final station spacing.

Shorter spacing can be considered in these environments:

- Corridors with dense, consistently built-up development with high transit demand may require spacing approximately every $\frac{1}{3}$ mile.
- Areas where multiple high demand destinations are located, and additional stops would likely increase ridership.
- Areas with steep grades or topographic features that make access challenging.

Longer spacing can be considered in these environments:

- Corridors with low densities or auto-oriented land uses may warrant station spacing of $\frac{1}{2}$ mile up to 1 mile.
- Areas where station access is limited by topography or street connectivity.
- Corridors served by “underlay” or other local service.

METHODOLOGY

The following are the proposed steps to identify station locations for candidate Stream corridors. This process uses many of the same factors used for the Bus Stop Balancing Project.

1. Place anchor stations (stations that are a given due to high ridership) based on existing ridership.

- Highest existing ridership.

2. Place additional stations between anchors using spacing standard.

- Aim for half-mile spacing.
- Closer spacing (0.25 to 0.35 miles) is acceptable in dense areas with high transit demand, or where multiple high-demand destinations are within proximity to each other.
- Longer spacing (0.5 to 1.0 mile) is acceptable in lower density, auto-oriented areas, or where station access would be limited by topography or street connectivity.

METHODOLOGY

3. Adjust stations based on local context. Shift stations to maximize access and ridership.

- Location of existing stop.
- Street connectivity.
- Pedestrian access and safe crossings.
- Large trip generators.
- Transfer points to other routes or modes.
- Land uses likely to generate more trips (multi-family housing, commercial centers, colleges, hospitals, etc.).
- Grade.
- Areas with high equity needs.
- Future transit services and investments.

4. Calculate overall corridor station spacing and refine station locations accordingly.

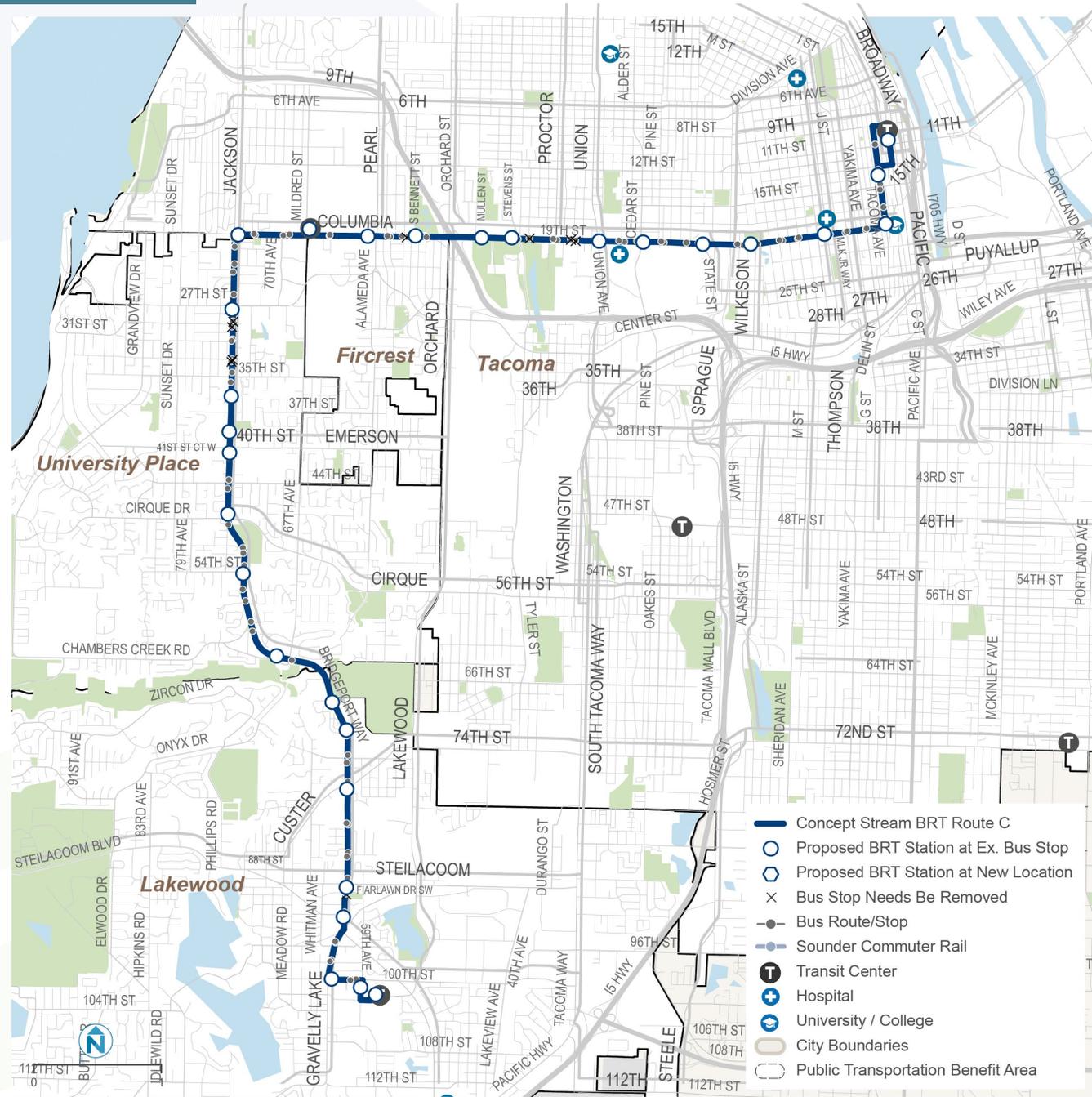
- If average corridor spacing is well above or below the standard, review stations and identify potential locations for additional stations, fewer stations, or station relocation.

Existing:

- Stop spacing today: **0.19 Mile** (988 feet).
- **64** stop pairs (127 stops).

Conceptual Locations For Analysis:

- **29** future stations (1 station represents a pair).
- Average station spacing: **0.43 Mile.**



CONCEPTUAL SPACING

Corridor A

Listed in the northbound direction

ID	Name	Spacing	Ridership (nb/sb/total)	Stop Modification
A-1	Lakewood TC	-		458 Existing
A-2	59th between 100th and Lakewood TC Blvd	0.30		139 Existing
A-3	100th St SW & Gravelly Lake Dr SW	0.20		73 Existing
A-4	Bridgeport Way W & 93rd St SW	0.49		37 Existing
A-5	Bridgeport Way W & Steilacoom	0.21		42 Existing
A-6	Bridgeport Way W & Custer Rd W	0.69		37 Existing
A-7	Bridgeport Way W & Meadow Pk Rd	0.42		68 Existing
A-8	Bridgeport Way W & WalMart	0.57		53 Existing
A-9	Bridgeport Way W & 67th Ave W (Fred Meyer)	0.50		68 Existing
A-10	Bridgeport Way W & 54th St W	0.70		9 Existing
A-11	Bridgeport Way W & Cirque Dr W	0.40		49 Existing
A-12	Bridgeport Way W & 40th St W	0.50		101 Existing
A-13	Bridgeport Way W & driveway between 40th and 37th	0.15		92 Existing
A-14	Bridgeport Way and Market St	0.35		44 Existing
A-15	Bridgeport Way W & 27th St W	0.60		74 Existing
A-16	19th St S & Bridgeport Wy	0.50		16 Existing
A-17	TCC Transit Ctr	0.60		857 Existing
A-18	19th St S & Visscher St	0.40		14 Existing
A-19	19th St S & S Shirley St/Columbia Street	0.40		9 Existing
A-20	19th St and Mullen St	0.40		25 Existing
A-21	19th St S & S Stevens St	0.30		155 Existing
A-22	19th St S & S Union Ave	0.62		161 Add new BRT Station
A-23	Consolidate S Lawrence & S Cedar St @ S 19th St	0.31		83 Consolidate S Lawrence & S Cedar St @ S 19th St
A-24	19th St S & Trafton St	0.50		96 Existing
A-25	19th St S & Wilkeson St	0.40		30 Existing
A-26	19th St S & J St	0.52		124 Existing
A-27	Market St & S 19th St	0.40		155 Existing
A-28	Market St & S 13th St	0.40		32 Existing
A-29	Commerce St TC - Zone C	0.30		336 Existing

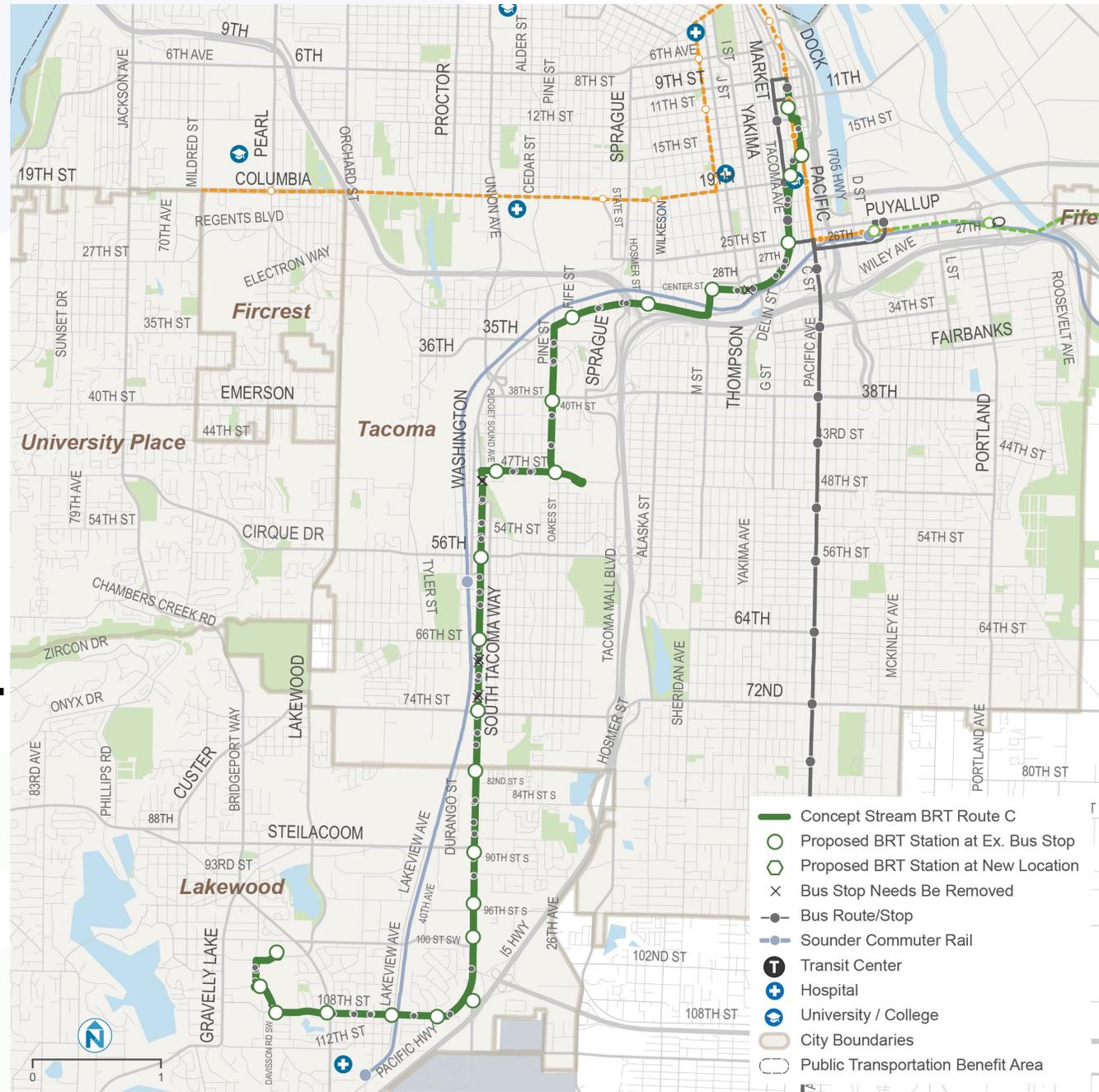


Existing:

- Stop spacing today: **0.20 Mile** (1,067 feet).
- **56** stop pairs (112 stops).

Conceptual Locations For Analysis:

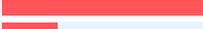
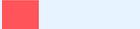
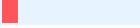
- **24** future stations (1 station represents a pair).
- Average station spacing: **0.46 Mile.**



CONCEPTUAL SPACING

Corridor B

Listed in the northbound direction

ID	Name	Spacing	Ridership (nb/sb/total)	Stop Modification
B-1	Lakewood TC	-	 384	Existing
B-2	Main St SW & 59th Ave SW	0.35	 33	Existing
B-3	108th St SW & Main St SW	0.24	 20	Existing
B-4	108th St SW & Bridgeport Way	0.36	 65	Existing
B-5	108th St SW & Lakeview Ave SW	0.45	 33	Existing
B-6	108th St SW & Rowland Ave SW	0.32	 39	Existing
B-7	SR 512 Park & Ride	0.31	 172	Existing
B-8	S Tacoma Way & 100th St SW	0.49	 46	Existing
B-9	S Tacoma Way & 96th St S	0.24	 35	Existing
B-10	S Tacoma Way & Steilacoom	0.34	 69	Consolidate 88th and 90th at Steilacoom
B-11	S Tacoma Way & S 80th S	0.53	 40	Existing
B-12	S Tacoma Way & S 74th St	0.42	 70	Existing
B-13	S Tacoma Way & S 66th St	0.50	 53	Existing
B-14	S Tacoma Way & S 56th St	0.58	 122	Existing
B-15	47th St S & Puget Sound Ave	0.73	 31	Existing
B-16	47th St S & Oakes St (Tacoma Mall TC)	0.41	 45	Existing
B-17	Pine St S & S 38th St	0.50	 118	Existing
B-18	S Tacoma Way & Fife St	0.66	 13	Existing
B-19	S Tacoma Way & Wilkeson St	0.55	 3	Existing
B-20	Center St & M St	0.62	 5	Existing
B-21	Jefferson Ave S & S 25th St	0.74	 58	Existing
B-22	Jefferson Ave S & S 19th St	0.47	 51	Existing
B-23	Pacific and 17th	0.21	 31	Existing
B-24	Commerce St TC - Zone C	0.47	 287	Existing

Stop Spacing

<0.2 miles 0.21-0.29 miles 0.30 - 0.60 miles 0.61 - 0.75 miles >0.75 miles

Existing:

- Stop spacing today: **0.24 Mile** (1,249 feet).
- **38** stop pairs (75 stops).

Conceptual Locations For Analysis:

- **18** future stations (1 station represents a pair).
- Average station spacing: **0.52 Mile.**



CONCEPTUAL SPACING

Corridor C

Listed in the southbound direction

ID	Name	Spacing	Ridership (nb/sb/total)	Stop Modification
C-1	Puyallup Station	-		161 Existing
C-2	Meridian S & Elm Place	0.30		23 Existing
C-3	Meridian S & 9th Ave SW	0.40		9 Existing (*NB stop is in stop removal list)
C-4	Meridian S & 15th Ave SE	0.50		24 Existing (Moving stop to 15th Ave)
C-5	Meridian S & 23rd Ave SW	0.53		16 Existing
C-6	31st Ave SE & Meridian S/31st Ave SE & 4th St PI SE	0.60		50 Existing
C-7	35th Ave SE & 5th St SE	0.30		10 Existing
C-8	South Hill Mall TC	0.85		418 Existing
C-9	Meridian S & 47th Ave SE/120th St E	0.83		14 Existing
C-10	Meridian Ave E & 128th St E	0.53		32 Existing
C-11	Meridian Ave E & 136th St E	0.47		27 Existing
C-12	Meridian E & 144th St E	0.50		22 Existing
C-13	Meridian Ave E & 156th St E	0.75		13 Existing
C-14	Meridian Ave E & 163RD ST E	0.54		8 Existing
C-15	Meridian E & 171st St Ct E	0.42		35 Existing
C-16	176th St E & Gem Heights Dr E	0.59		30 Existing
C-17	168th St E & Gem Heights Dr E	0.65		5 Existing
C-18	168th St E & 97th Ave Ct E	0.37		1 Existing
C-19	Meridian Ave E & 168th St E	0.36		10 Existing
C-20	3rd St SE & 4th Ave SE	0.33		8 Existing

Stop Spacing

<0.2 miles 0.21-0.29 miles 0.30 - 0.60 miles 0.61 - 0.75 miles >0.75 miles

Existing:

- Stop spacing today: **0.24 Mile** (1,285 feet).
- **58** stop pairs (115 stops).

Conceptual Locations For Analysis:

- **25** future stations (1 station represents a pair).
- Average station spacing: **0.58 Mile.**



CONCEPTUAL SPACING

Corridor D

Listed in the eastbound direction

ID	Name	Spacing	Ridership (eb/wb/total)	Stop Modification
D-1	Lakewood Mall Transit Center	-		370 Existing
D-2	59th Ave SW & 100th St SW	0.25		74 Existing
D-3	100th St SW & Kline St SW	1.00		19 Existing
D-4	96th St SW & S Tacoma Wy	0.70		35 Existing
D-5	S Tacoma Way & Perkins Ln SW	0.45		7 EB - Existing; WB - add new station
D-6	SR 512 P-R	0.27		187 Existing
D-7	S Tacoma Way & 112th St S	0.36		22 Existing
D-8	112th St S & Steele St S	0.80		29 Existing
D-9	112th St S & Ainsworth Ave S	0.56		73 Existing
D-10	112th St S & 8th Ave Ct S	0.50		10 Existing
D-11	112th St & Pacific Ave	0.50		362 Existing
D-12	112th St E & D St E/5th Ave E	0.35		33 Existing
D-13	112th St E & Golden Given Rd	0.85		38 Existing
D-14	112th St E & 18th Ave E	0.50		52 Existing
D-15	112th St E & Waller Rd	0.83		33 Existing
D-16	112th St E & Vickery Ave E	0.48		10 Existing
D-17	112th St E & Canyon Rd	1.00		84 Existing
D-18	112th St E & 62nd Ave E	0.41		7 Existing
D-19	112th St E & Woodland Ave	0.53		8 Existing
D-20	112th St E & 78th Ave E	0.50		3 Existing (moving stops to 78th)
D-21	39th Ave SW & 89th Ave Ct E	0.82		5 Existing
D-22	South Hill Mall TC	0.50		496 Existing
D-23	43rd Ave SE & 103rd Ave Ct E	0.65		8 Existing (*WB stop is in stop removal list)
D-24	39th Ave SE & 10th St SE	0.65		2 Existing
D-25	Pierce College - Puyallup	0.50		176 Existing

Stop Spacing

<0.2 miles 0.21-0.29 miles 0.30 - 0.60 miles 0.61 - 0.75 miles >0.75 miles

