



Sounder Commuter Rail Service

Eno Max Presentation, August 07, 2019

 **SOUNDTRANSIT**

Outline of Discussion

- Overview
- Ridership/Performance
- Challenges
- ST3
- Stations/Partnerships
- Next Steps



Sounder Service Overview

Objective is to provide safe and reliable service to commuters

South Line

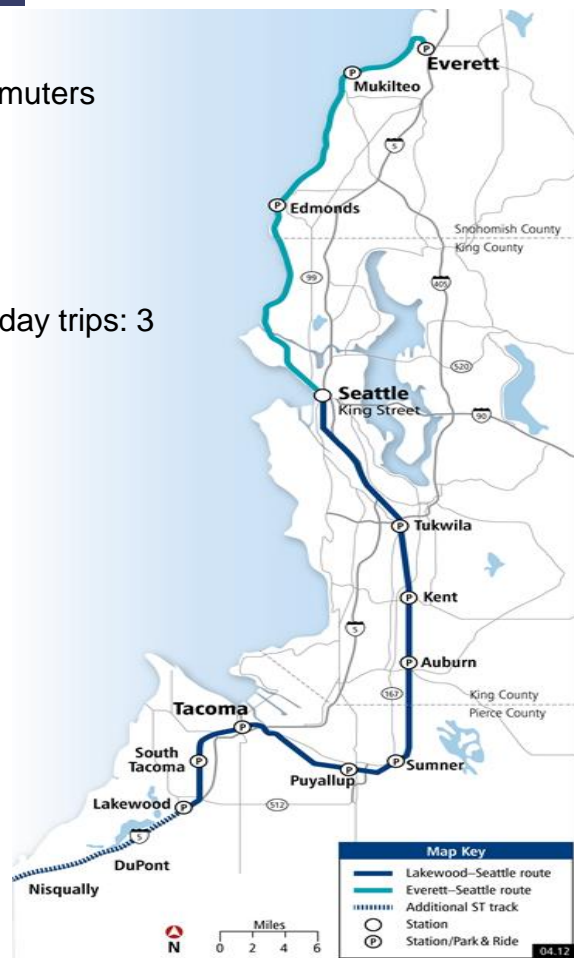
- Lakewood to Seattle
- 48.7 Miles
- 7 Trainsets (7 cars in each trainset)
- 26 weekday trips (10 peak round trips include mid-day trips: 3 reverse non-peak trips)

North Line

- Everett to Seattle
- 34.2 Miles
- 4 trainsets (Two – 2 car & Two – 3 car trainsets)
- 8 weekday trips (4 round trips)

Advantages of Sounder

- 1000+ people per train
- Focus on Commuter hours
- Farther-Faster than any other mode



BNSF Agreements - Operations

BNSF provides:

- Train Crews
 - Locomotive Engineers,
 - Conductors
- Centralize Dispatch from Ft Worth, TX
- 74 miles of track & signals (ROW)
- PTC back-office support

Features of Agreement:

- Incentive/penalty payments
- Based on Monthly OTP
- Target of 95% overall OTP
- Special Event Service



Amtrak Agreement - Maintenance



Amtrak provides:

- Preventative Maintenance (also inspection & repairs)
- Layover Service (Cleaning)
- Spare Parts Management
- PTC Maintenance
- Fueling of Equipment
- Rail Plus Partnership

SWI Agreement – Maintenance of Way

Stacy Witbeck/Liberty Electric Provides:

- FRA required track and signal systems inspection
- Rail preventive Maintenance and Repairs
- Emergency inspection, improvement projects and third party extra work request
- Utilizes ST-EAMS system for maintenance and inventory control
- Annual required inspections, testing, including Geometry Car and Rail Flaw detection
- Vegetation control



Hallcon Agreement – Station Agents

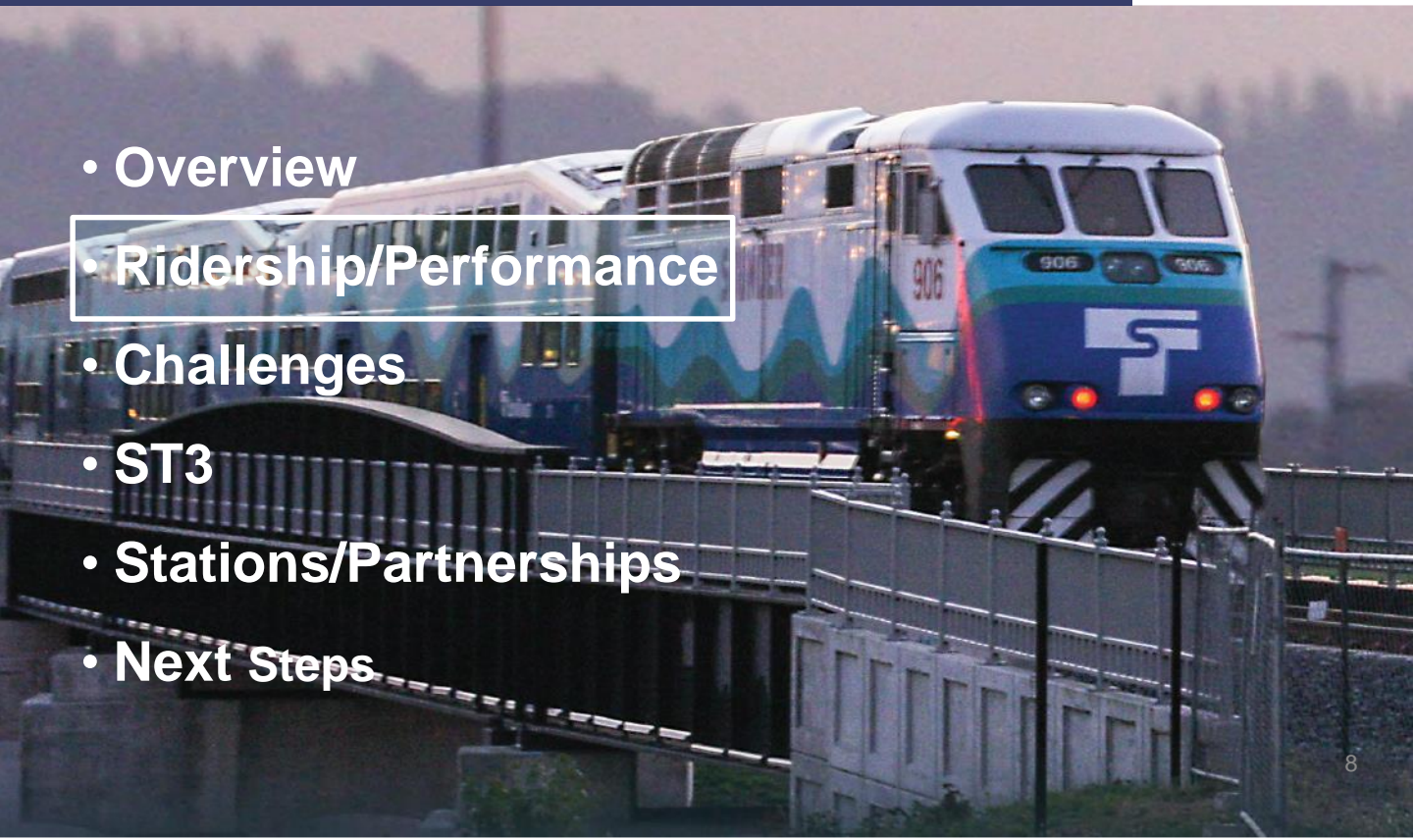
Station Agents provide:

- Uniformed Station Agents at all 12 Sounder platforms and SeaTac Link station
- Quality customer service:
 - ORCA/ticket purchasing
 - Trip planning/directions /alternate transportation
- Platform safety
- Real-time arrival announcements

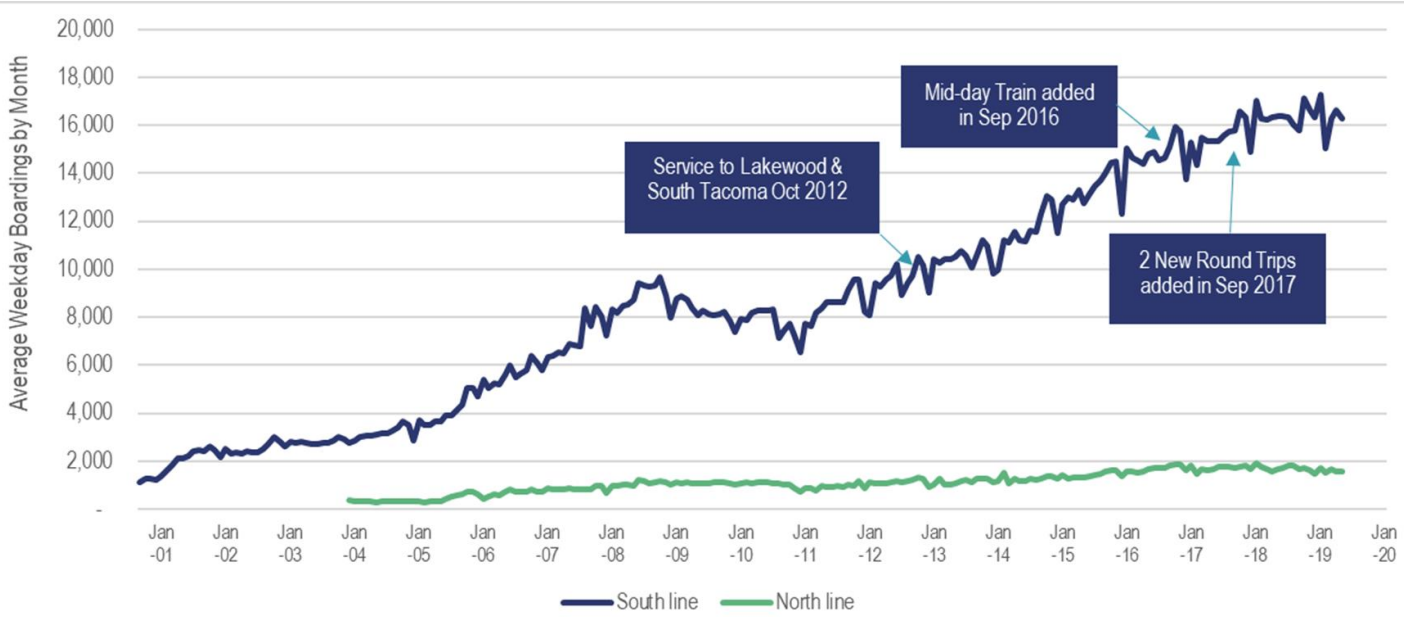


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Souder Ridership Trends

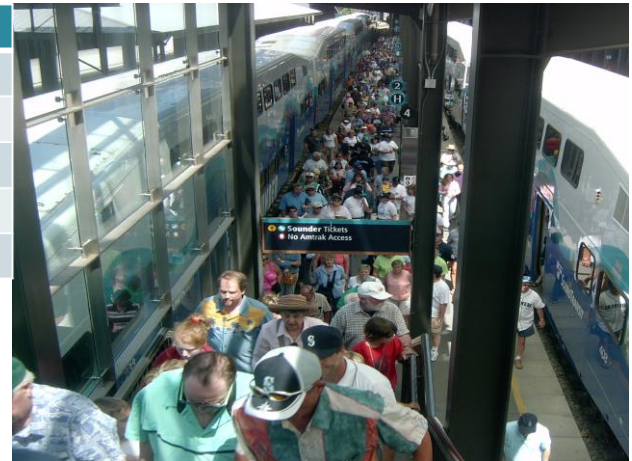


Sounder Ridership

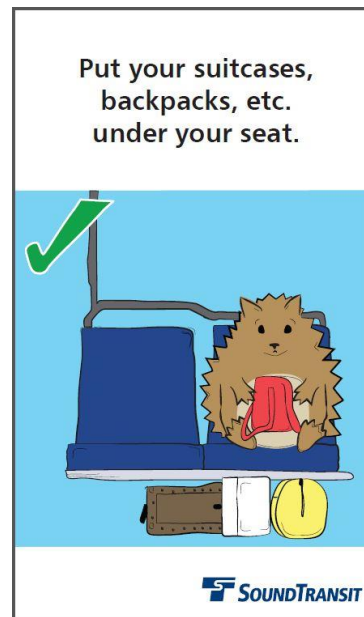
Sounder Annual Boardings

Description	2015	2016	2017	2018
North-line	392,193	463,152	460,958	454,051
South-line	3,459,638	3,848,961	3,984,610	4,177,475
Total	3,851,831	4,312,113	4,448,568	4,631,525
Growth	+13%	+11%	+3%	+4%

- Steady Growth
- Requires Advance Planning
- Constrained by:
 - Train trips and car capacity
 - Station Access/Parking
 - Freight Requirements



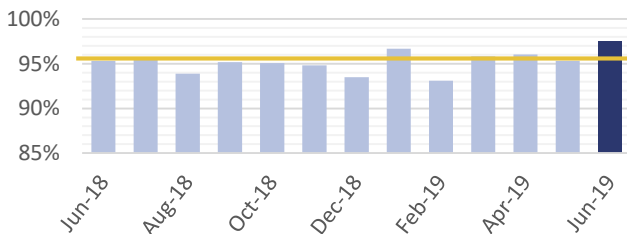
Capacity Optimization: Outreach



On-Time Performance

June On-Time Performance	97.5%
2019 Year to Date	95.8%
Scheduled Trips Operated	99.4%
2019 Year to Date	99.4%

Past 12-Months



Past 12-Months



A trip is considered on time if it arrives at its terminal station within 5 minutes of the scheduled arrival. Cancelled trips are not included in OTP calculations. Sounder's On-Time Performance target is 95%.

A trip is considered annulled if it does not serve any of its scheduled stops. Partially operated trips are counted in On-Time Performance. Sounder's percentage of scheduled trips operated target is 99.4%.

Program Overview – Major Initiatives In-Process



- **Positive Train Control**
- **Souder South Expanded Service**
- **Souder Maintenance Base (ECD 2023)**
- **Souder Fleet Expansion**
- **Additional Tracks at Amtrak's Holgate Yard**

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Challenges

- Meeting Demand of Ridership
- Share right-of-way with freight trains
- At grade crossings
- On-Time Performance/Track Maintenance
- Less Nimble during incidents
- Subject to Domino effect with service characteristics
- Regulatory Compliance (PTC)
- Landslides



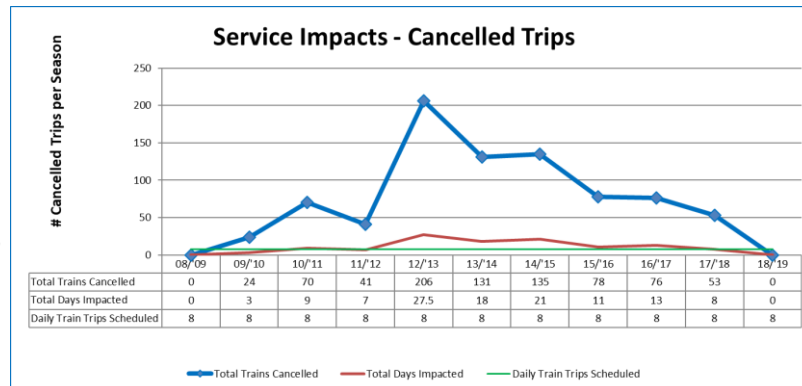
PTC Overview

Positive train control uses GPS, radio communications, and onboard and wayside computer equipment to enforce speed limits and authority limits should the operating engineer fail to take appropriate action under the prevailing conditions



Landslides – Challenge Turned to Win

- Most landslides affecting passenger rail occur along coastal bluffs in Snohomish County
- More than 450 Sounder trains in the past five years have been cancelled due to landslides
- Participate in Landslide Mitigation Work Group
- Successfully mitigated to **Zero** blocking slides this season



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▶ **Projected Growth 4 million by 2040**

Souder: The Region's Commuter Rail

ST3



November 2016

- 10-Car Platforms
- SL System Enhancements
- Extension to Dupont

KEY

ST3 PROJECTS

- Link Light Rail
- Bus Rapid Transit
- Sounder Rail
- Proposed shoulder-running buses / speed and reliability improvements
- Environmental Study
- Future investment study

CURRENT AND PLANNED SERVICE

- Link Light Rail
- Sounder
- ST Express Bus



STATIONS

- New Station
- New station / added parking
- Improved station
- Major Rail Transfer



Moving more people

What does it take to move 800 people?

  **½ commuter rail train (4 cars) or
1 light rail train (4 cars)**

          **10 buses**

500 cars*



**US Department of Transportation: Average vehicle occupancy of 1.6 persons*

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ST3 Plan

Light rail highlights

- 62 new miles for a 116-mile regional system
- 37 new stations
- North to Everett, south to Tacoma, east to Redmond, Issaquah, and south Kirkland, west to Ballard & West Seattle
- Tacoma Link to Tacoma Community College
- Daily boarding's: 561,000-695,000 by 2040

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ST3 Plan

Other highlights

- Sounder south line extended service to DuPont & capacity improvements
- BRT (Bus Rapid Transit) on I-405/SR 518 & SR 522/145th
- Bus on shoulder opportunities and bus speed and reliability improvement projects
- Planning studies
- Access improvements to Sounder & Link stations

Sounder South Capacity Expansion

Overview

- **Extended platforms** to accommodate longer trains (up to 10-car train sets)
- **Potential track and signal upgrades** for possible additional trips
- **Access improvements** for pedestrians, bicyclists, buses and cars



Platform extension

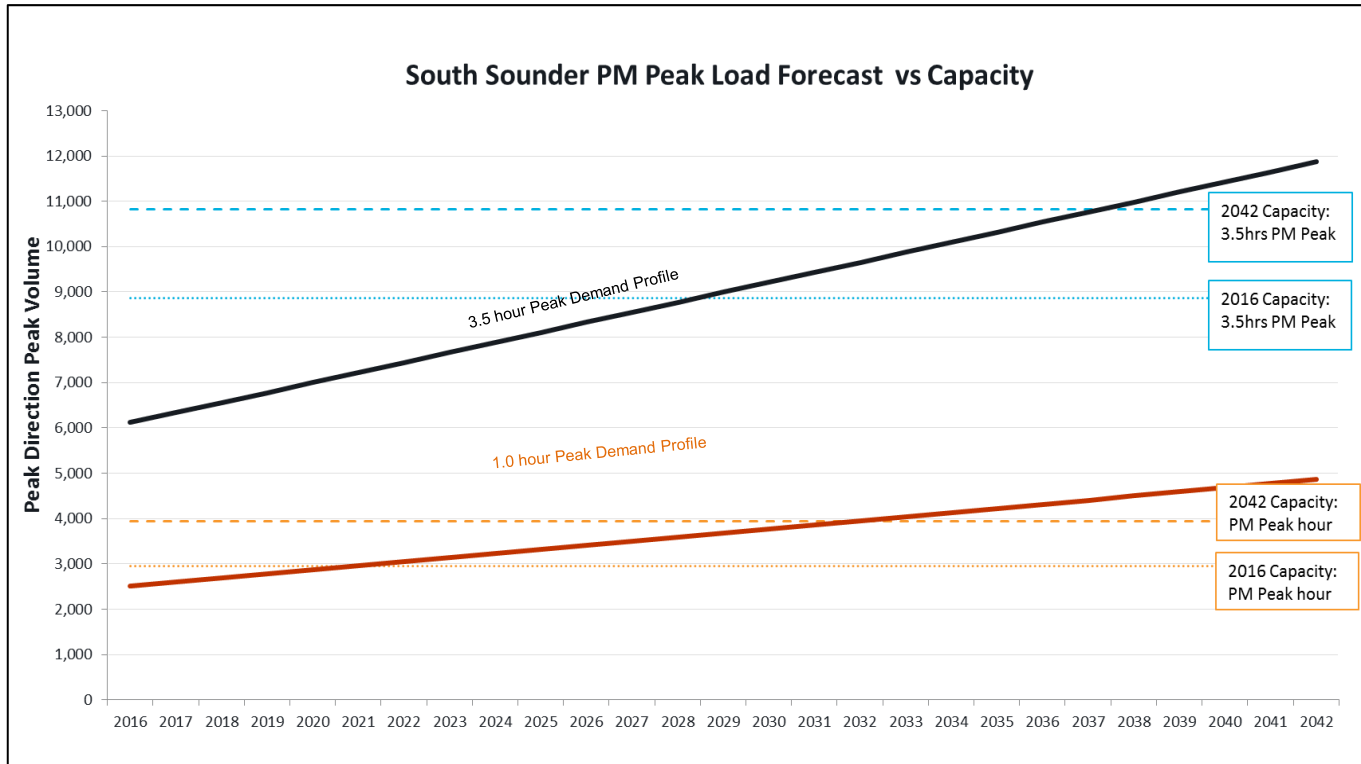


Track improvements



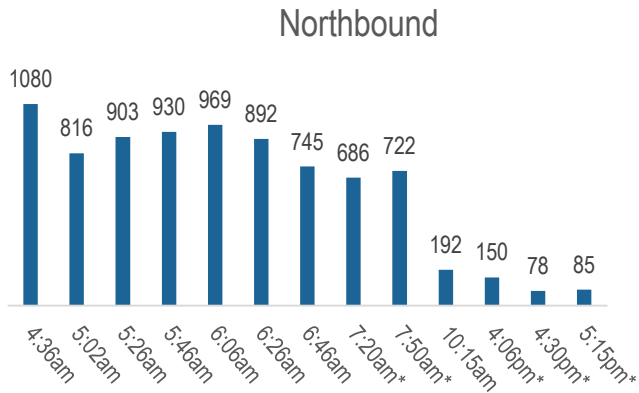
Station access

Fig 6.15: Forecasted Ridership Growth Profile (2016-42)

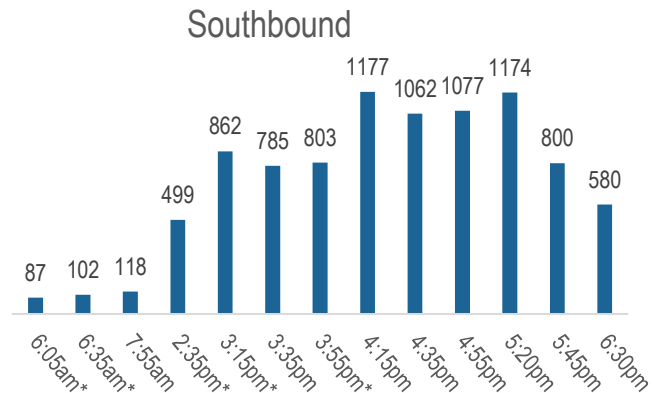


Things to Consider about Expansion: Ridership demand is strongest in the peak

Average weekday boardings by train, January 2019



*Train departs from Tacoma Dome Station



*Train terminates at Tacoma Dome Station

KEY

PROPOSED ST3 PROJECTS

- Link Light Rail
- Bus Rapid Transit
- Sounder Rail
- Proposed shoulder-running boxes / speed and reliability improvements

CURRENT AND PLANNED SERVICE

- Link Light Rail
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STATIONS

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NOTE: All routes and stations are representative.



Sounder

Sounder South Line Lakewood

Two new stations with parking at Tillicum and DuPont to serve Joint Base Lewis-McChord

Sounder South Line Capital Improvements Program

Capital projects such as track improvements and platform extensions for longer trains to serve 40% more riders, and parking and access projects to meet growing demand

Sounder North Line Capital Improvements Program

New parking and access investments at Edmonds and Mukilteo stations

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King Street Station – Central Regional Hub

Multi-Modal Station, adjacent are:

- Amtrak
- Light Rail
- Streetcar
- Bus Hub

In close proximity to:

- Stadiums
- Layover Yard
- Freight/Port Activity



SCR Southline Stations



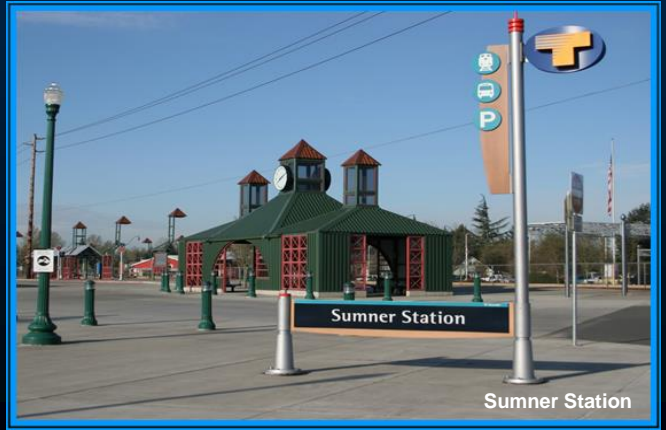
Tukwila Station



Kent Station



Auburn Station



Sumner Station

SCR Southline Stations, *continues*



Puyallup Station



Tacoma Dome Station



South Tacoma Station



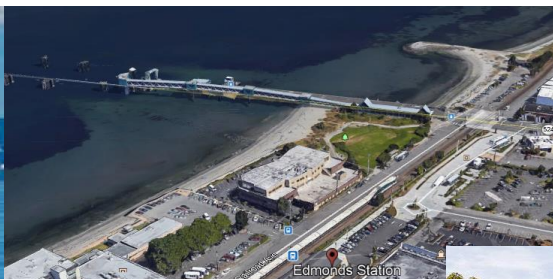
Lakewood Station

Sounder North-line



Edmonds Station – Partnerships

- Service began December of 2003
- Served by Amtrak as WSDOT Ferries



Mukilteo Station – Multimodal

- Service began 5/2008
- WSDOT Ferries Adjacent



Everett Station – Multimodal

- Service began 12/203
- Multi-modal Station



- Community Transit
- Everett Transit
- Greyhound
- Amtrak
- Dept. of Employment Security



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Sounder: The Region's Commuter Rail

Next Steps:

- **Planning for Growth – ST3 Sounder Expansion**
- **Performance – Customer Satisfaction**
- **On-Time Performance Improvement**
- **Landslides – Continuous Mitigation**
- **Outreach/Construction**
- **Safety – PTC, SSP, Outreach**



 **SOUNDTRANSIT**
RIDE THE WAVE