

The **Trainmaster**

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POLSON No. 90 AWAITING RESTORATION

Text and Photo By T. Trent Stetz



Polson Logging No. 90 at Garibaldi, Oregon in August 2019 (Photo by T. Trent Stetz)

Polson Logging No. 90 is a 90-ton 2-8-2 steam locomotive built by Baldwin Locomotive Works in Philadelphia, PA, in 1926. She was built for the Polson Logging Company of Hoquiam, Washington, where she remained active on their roster until Polson was purchased by Rayonier Inc. in 1945. She continued to haul logs under the Rayonier name until Rayonier made the decision to move to diesel motive power in 1962. On March 31, 1962 No. 90 was one of two steam locomotives chosen to pull the last steam hauled log trains on the line at a special “Farewell to Steam” event that was attended by a large number of railfans, local citizens, and state officials.

Upon retirement Rayonier were unwilling to simply scrap a fully working locomotive, so she was offered for sale at her scrap value of \$1250. She was purchased by the Lions Club of Garibaldi in 1963, and in 1964 was moved to Garibaldi with the generous help of several different railroads in a show of support for the preservation effort. Once in Garibaldi the No. 90 was placed on display as a tourist attraction and there became a landmark of the town and county. The salt air and wet, coastal winters have been hard on No. 90 over the years since then.

In May 2019, ownership of No. 90 was transferred to Oregon Coast Scenic Railroad (OCSR) for rehabilitation and, ultimately, restoration back to service. OCSR was granted a year to raise funds to perform an initial cosmetic restoration of the locomotive and to erect a better protective fence for the locomotive. Part of OCSR’s commitment goes beyond simply rehabilitation of the engine for display. OCSR plans to place No. 90 in rotation as the next steam locomotive to be restored back to full operation on the Oregon Coast.

Text based on information from www.savethepolson90.org and article by Martin E. Hansen from a May 16, 2019 article which appeared in the *Tillamook Headlight Herald*. Visit the website for fund-raising information.

NRHS RAILCAMP VISITS ORHC

Text by Dave Larsen & Photos by Dale Birkholz

The National Railway Historical Society sponsors an educational program for high school students called RailCamp. The program is held at two sites. This year RailCamp-East was held in Newark, Delaware and RailCamp-Northwest was held in Tacoma, Washington. Each RailCamp lasts one week. Attendees are chosen by competitive application.

Arlen Sheldrake was initially contacted by RailCamp because a field trip originally planned for the campers fell through. Arlen indicated that ORHF would be glad to host the group and its supervisors. The visit was planned for July 31st and the campers boarded the southbound Cascades for Portland. Unfortunately, the train was an hour and a half late.

Bruce Strange was tasked with meeting the group and guiding them back to the ORHC by MAX. He also accompanied them back to Union Station to board the northbound Coast Starlight. He had a long day.

Lunch was provided at Tilikum Station courtesy of the NRHS. ORHF President Roy Hemmingway provided an opening welcome.



Dick Samuels talks with the RailCampers

Al Baker, the NRHS National Representative, also made welcoming remarks. Other ORHF representatives were also in attendance.

After lunch we adjourned to the ORHC where we had a number of talks and demonstrations. Dick Samuels demonstrated his Jeep highrailer and talked about owning a railroad.

Randy Woehl, Steve Sedaker and Jim Vanderbeck talked about the SP&S 700 restoration.

Randy also explained the PRPA's interesting educational partnership for making new staybolts.



Doyle McCormack reviews the SP 4449

Doyle McCormack wowed the campers with extended visits to the SP 4449 cab. Jeff Wells did great work watching over the climbing guests.

Yours truly gave a talk on the PA and Dale Birkholtz took numerous photos. The day concluded with Jeff and Bruce leading two smaller groups on tours of the caboose and the Mt Hood and meeting back on the MAX platform in time to take the train back to Union Station to catch the Coast Starlight back to Tacoma.

The feedback from the RailCamp group was very positive and they would like to return next year. I am sure that ORHF would be glad to welcome them.



Steve Sedaker and Randy Woehl review the SP&S 700



RailCampers visit the Cab of the SP 4449

WITH A CHANGE IN OWNERS, SUDDENLY THESE ARE ALL OUT OF WORK!

by Martin E. Hansen

Ownership changes that occur in any company can mean changes in what had been normal operations. That was certainly true in the lumber industry as well. Logging railroads often suffered when a parent company was acquired by a competitor.

In November 1950 the Shevlin-Hixon Lumber Company announced that it had sold to neighboring Brooks-Scanion Lumber Co. This news rocked the still small mill town of Bend, Oregon where nearly everyone's livelihood depended on one or both of these huge pine mills.

The cut-and-run logging operations of both of these two lumber companies had worked to spell their eventual doom. Each company logged over 35 acres of timber each and every day with little if any replanting performed. This volume of cutting of old growth timber could not be sustained indefinitely. By 1950 it was decided that there was only enough timber remaining in the region for one of these two lumber companies to survive. The legend has it that was a coin toss to decide the surviving company and that Shevlin-Hixon lost that toss.

By 1952, when this photo was taken, the Shevlin-Hixon trains were no longer needed to go down the Great Northern mainline to Timbers Camp. These 7 S-H logging lokies were assembled in the Brooks-Scanion mill yard in preparation for them to be towed up the Oregon Trunk by the SP&S and into Portland where Alaska Junk Company would reduce them to small pieces of steel.



The lead engine in this line was former Shevlin-Hixon 90-ton Baldwin 2-8-2 No. 4. She had been in the shop at the time of the sale and when she emerged she was lettered for her new owner and given "S-H No. 4" as her road number. This was done to avoid confusion with Brooks-Scanion's existing 2-8-2 No. 4. S-H No. 4 was the only S-H engine to be lettered for the new owner or given such a designation.

This would be the first such string of steam logging lokies to be assembled for shipment from Bend to Alaska Junk in Portland but not the last. With the arrival of the two ALCO diesels later in 1952 to take over on the Brooks-Scanion logging railroad, the next year a string of Brooks-Scanion steam logging locomotive would be assembled and taken to Portland for the same fate as faced by these Shevlin-Hixon engines. Sad times indeed.

P.S. As you can see all the engines left for the scrappers with all the bells, whistles and number/builder's plates attached. Fortunately, some of these items were saved by railfans once the engines got to Alaska Junk. A few of them managed to make their way to my collection.

Reprinted with Martin's permission from his Trainorders.com 4/02/2018 posting.



PNW RAIL NEWS

by Arlen L. Sheldrake



▶ Sound Transit celebrates 10th anniversary; Link light rail opened July 18, 2009 with a 14-mile line from Westlake Center in downtown Seattle to Sea-Tac Airport.



▶ Sound Transit selects Stacy and Witbeck/Kuney, a Joint Venture, to build Downtown Redmond Link Extension. The 3.4-mile project will extend the Blue Line from the Redmond Technology Station to Downtown Redmond.

The total amount of the contract is \$729,266,000. The design-build contract includes all work to complete final design and construction of 3.4 miles of light rail guideway. The contract also includes design and construction of two stations, a 1,400-space parking garage, the overhead catenary system, traction power substations, train control and communications, special track work, utilities, and street and trail improvements. **Sound Transit news release 7/25/2019.**

▶ The Portland Bureau of Development Services issued a temporary certificate of occupancy - effective July 18th - that allows Zenith to transfer oil using two newly built racking platforms. Previously Zenith could unload 12 railcars at a time with one platform, but with three they will be able to service 36. The pre-existing platform will reopen after safety upgrades finish later this year. The facility is located on Northwest Front Avenue in Portland.



Portland Tribune 8/1/2019.

▶ Canadian Pacific moves record amount of Canadian grain and grain products during 2018-2019 crop year; prepared to ship 2019-2020 crop. CP moved more Canadian grain and grain products during the 2018-2019 crop year than any year in its history. The final tally for the crop year stands at 26.8 million metric tonnes of Canadian grain and grain products. On July 18th, Paterson Grain Foothills Terminal in Bowden, Alta., loaded the first Alberta-originated 8,500-foot High Efficiency Product (HEP) train comprised entirely of CP's new high-capacity hopper cars. The train carried more than 14,800 tonnes of grain to Vancouver [BC] for export. **Canadian Pacific news release 8/1/2019.**



▶ The September 2019 issue of Trains magazine has what I think is an excellent article explaining the current status of our Amtrak *Cascades* situation. **Cascades in limbo** by Bob Johnston explains the situation. Also in this issue on page 40 is a nice picture of Burt Lancaster and SP 4449 engineer Doyle McCormack from the movie *Tough Guys*.

▶ In support of an Oregon Department of Transportation (ODOT) grant application, Amtrak announced a matching \$750,000 contribution to reduce delays in the Pacific Northwest Rail Corridor. ODOT's grant application, if successful, will restore an out-of-service siding between Portland and Salem. Restoring this siding will improve on-time performance on a rail line segment where the largest cause of delay to Amtrak Cascades customer is freight train interference. The Oregon City Siding rehabilitation project was selected by ODOT to be one of three projects the agency will sponsor for the U.S. Department of Transportation's Better Utilizing Investments to Leverage Development (BUILD) Discretionary Grants program. Plans for restoring the Oregon City Siding include laying new track, ties and equipping both ends with power-operated switches and switch heaters to avoid snow delays in the winter. After the completion of the Oregon City Siding Project, ODOT will work to secure funding for an additional track on an adjacent three-mile section between Oregon City and an existing siding to the south. This two-phase project will result in five miles of a new double-track section between Portland and Salem, significantly reducing congestion and delays caused by freight trains and other Amtrak trains. **Amtrak 7/30/2019 news release.**



▶ A July 30th three-day visit to Leavenworth, Washington left me in awe of how this small community has transformed over the years. Hard to imagine that the current main road through downtown, State Highway 2, was seven tracks of the Great Northern Railway until they moved out in 1920s and realigned to the Icicle Canyon just outside of town. Our Volkswalk included passing the former passenger station, now Chumstick Grange #819, at 621 Front Street in the Bavarian themed downtown. The theme was developed in the early 1960s to revitalize a failed community...a highly successful venture if you ask me. Another highlight of the visit was the Icicle Village Resort, an easy walk from downtown on Highway 2. The Great Northern Railway theme is



highlighted throughout including a neat model train running around the hotel dining room wall just below the ceiling (the breakfast buffet is a delight!) and a picture of James J. Hill behind the cashier.

▶ On the way to Leavenworth we stopped in Toppenish and the Northern Pacific Railway Museum. This is very much worth a stop and more hours than we gave it. Very friendly staff and lots and lots of exhibits and rolling stock which, by the way, they

continue to acquire. Of special interest is their NP Travellers Rest exhibits. Museum hours are Tuesday through Saturday 10 to 4 and Sunday 12 to 4, May 1 to October 15. More information: www.nprymuseum.org.

► The story of George H. W. Bush's funeral train “*Uniting America: The President's Final Journey*” will have its first airing Sunday, August 11 at 8:30 a.m. ET/PT on Discovery. Led by Union Pacific's special George Bush No. 4141 locomotive, it was America's first presidential funeral train in nearly 50 years. The other showings:

- Science Channel, Tuesday, Oct. 1 at 6 p.m. (ET)
- American Heroes Channel, Saturday, Oct. 6 at 2 p.m. (ET)



Union Pacific news release 8/1/2019.

► The Joseph Branch Rails with Trails project withdrew its application for a six-mile trail along the Wallowa Union Railroad Authority tracks between Joseph and Enterprise. Ranchers had protested the idea claiming that traffic on the trail would interfere with their ranching activities, which is protected under Wallowa County's “Right to Farm” ordinance. The Joseph Branch Rails with Trails group will take a breather to determine the next steps. <https://www.josephbranchtrail.org> **Wallowa County Chieftain 7/30/2019.**



► The August issue of *The Manifest*, the newsletter of the Southern Oregon Railway Historical Society has a full-page notice asking for donations: “The Southern Oregon Railway Historical Society needs your help to finance the development of a tourist railway in the Rogue Valley. Purchase rail, ties, switches, rail components, & building materials. To donate or volunteer go to www.soc-nrhs.org.” SOC-RHS is in the process of restoring Willamette MEDCO No. 4. The newsletter also notes that a location for the proposed tourist railway is being pursued.

► On August 7th the Minister of Transport announced a major investment of C\$20 million to increase rail capacity near Abbotsford resulting in a significant increase in overseas trade to and from terminals in the Port of Vancouver [BC]. The project will twin approximately 5.6 kilometres of Canadian National Railway tracks eliminating the last section of single track within the 40-kilometre Canadian National corridor leading to the Port of Vancouver. The project will address bottlenecks along the rail corridor and increase capacity and fluidity to accommodate growth in train traffic to and from the expanding import and export terminals at Burrard Inlet and Roberts Bank. The work consists of engineering design; grading; the construction of track, bridge and retaining walls; as well as upgrading the signaling system. **Transport Canada news release 8/7/2019.**



PORT of
vancouver

Dan Rehwalt / June 1, 1929 – July 28, 2019 *In Remembrance*

Dan Rehwalt, of Eugene passed away July 28, 2019 at age 90. Born in Eugene June 1, 1929. Grew up in Westfir. Machinist by trade, Dan's favorite time was working on the Southern Pacific Railroad as a machinist as well as a brakeman. He worked as a machinist at the old Hines mill in Westfir, owned a machine shop in Florence, spent many years as a minister, was an accomplished author and was a Past Master of the Masons. Among Dan's many books:

- *The Light at the End and Other Railroad Stories.*
- *The Hill, Stories from the Southern Pacific Railroad Cascade Line.*
- *Smoke & Rat Holes, Stories of a Helper Station.*
- *Westsider: A Story of the Southern Pacific Portland Division Westside Line.*

► House Transportation and Infrastructure Committee Chairman Peter DeFazio and U.S. Rep. Tom Malinowski have asked federal officials for an update on a special permit by Energy Transport Solutions LLC to transport liquefied natural gas (LNG) by unit train. The U.S. Pipeline and Hazardous Materials Safety Administration (PHSMA) announced in June that Energy Transport Solutions had applied for a special permit to transport LNG in unit trains of tank cars. In a letter to the HMSA Administrator, DeFazio and Malinowski asked that if PHSMA is still considering the special permit before it receives safety test results, then a revised draft permit should be available to the public with the operating conditions that PHMSA and the Federal Railroad Administration are considering before the special permit is finalized. **Progressive Railroading 8/8/2019.**



► During the National Garden Railway convention SP 4449 charter consist setup, the NKP 190, the PA owned by Doyle McCormack, was moved to join the caboose on the display track in front of ORHC. In the near future the PNWC 600, Mount Hood will replace the 190, subject to available Docents, this will facilitate guided tours through both the caboose and Mt Hood. The Mt. Hood is an excellent exhibit car in that visitors can see all classes of bedrooms, historic dump to the ballast sinks/toilets, small galley, lounge and a very unique (inoperable) Farnsworth radio. The radio still has its frequency preset buttons for all the radio stations between Spokane and Portland; the Mt. Hood's home SP&S rails. Do you know who

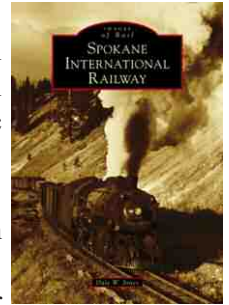
Farnsworth was?

▶ As the Port of Kalama moves forward with the purchase and installation of the SP&S No. 539 (NP 1762), be watching as they work to promote the locomotives history with both the Northern Pacific and Spokane Portland & Seattle Railway. While Kalama is certainly a NP town that the SP&S did not serve, the Port CEO, Mark Wilson, would also like to promote the Pacific Northwest history of the locomotive on the SP&S.



Mark Wilson email 8/13/2019.

▶ New Acadia Book, The History Press, being released September 9th: The **Spokane International Railway** by Dale W. Jones; 216 images, 128 pages. This book shares the story of the Spokane International Railway and traces its international and local connections with every major railroad in the Pacific Northwest. www.arcadiapublishing.com



▶ The Peninsular Railway and Lumbermen's Museum now has a new web site: www.simpsonrailroad.org. Also called the Simpson Railroad, it is a 501c3 non-profit organization dedicated to preserving the rich railroad and logging history of Washington State's Olympic Peninsula. One of their main goals is to preserve and operate the remaining 10 miles of the historic Simpson Timber Railroad as an excursion railroad. On August 9th the former GN coach 1212 arrived at the Museums Sortyard facility. Built in 1950 by American Car & Foundry for the Empire Builder. In recent years it was part of Country Village in Bothell. The current plan is to return the car to service in 2019.

▶ Another Volkswalk in Longview found a community event, Squirrel Fest, happening. Longview is somewhat famous for its squirrels and all the "over the street" bridges built specifically to ease the travels of their squirrel population. The event on August 17th included a steaming Long-Bell Lumber, Shay build No. 3249, providing cab tours, belching smoke and occasional whistles.



▶ Hood River County is preparing to move forward with seizure of Mt. Hood Railroad property for failing to pay property taxes for the last three years. In total, Mt. Hood Railroad owes \$210,135, which includes interest and fees associated with late payment. Mt. Hood Railroad has been owned by Permian Basin Railways, a subsidiary of Iowa Pacific Holdings, since 2008. Mt. Hood Railroad is delinquent on its tax accounts for the years 2016, 2017 and 2018. The Oregon Department of Revenue collects the funds with distribution to the county. The county is responsible for taking action on behalf of the state to collect late funds. **Hood River News 8/17/2019.**

▶ On April 22, 2017, Mt. Hood Railroad hosted a kickoff celebration for the year's excursion trips to the Upper Hood River Valley, marketed specifically as a fundraiser for the Hutson Museum in Parkdale under claims that all proceeds would go the museum. During the summer of 2016 the trains only went to Dee as the line to Parkdale was being used to store tank cars. With tickets for the day's excursion starting at \$40 each, the railroad took in approximately \$6,700 the day of the fundraiser, according to the museum. Over two years have passed, and that money, as well as other funds owed, have yet to be paid. The railroad and museum have shared a contract for public restrooms at the Parkdale station since the early '90s. The museum would operate the restrooms and the railroad would pay \$1,500 per year for maintenance. The museum has not received payment for the last two years. **Hood River News 8/28/2019.**

▶ The Treasure Valley Reload Center project now can move forward toward final design and construction now that the Oregon Transportation Commission has given it the green light. The project is being funded through the *ConnectOregon* program, under House Bill 2017, which appropriated \$26 million for it. The Malheur County Development Corporation was appointed by the Malheur County Court to oversee development of the project. The project money will be released in incremental steps upon approval of the commission as the project reaches specified milestones. The site is north of Nyssa. The commission also voted to move the Millersburg project north of Albany forward and not the competing Brooks project north of Salem. **The Argus Observer 7/19/2019.**



▶ Linn County Commissioners on August 20th approved a supplemental budget that paves the way for a \$10 million loan from the county's road fund for the possible purchase of the former International Paper Mill site in Millersburg, About 40 acres of the 190-acre property will be used to develop the Mid-Willamette Valley Intermodal Center. The county will hold the property until the Albany-Millersburg Economic Development Corp. signs a contract for the \$25 million in *Connect Oregon* funds from the Oregon Department of Transportation. **Albany Democrat-Herald 8/21/2019.**

▶ Another quote from one of the NRHS RailCamp Northwest organizers after their 7/31 ORHC visit: "We had a great time. Several of the campers expressed that they had already checked off a bucket list item by being able to see the 4449 and Rail Preservation Superstar, Doyle McCormack. We would like to work with you guys in the future. I will talk to you in the first of the year." **John Cox 8/17/2019 email.**



▶ WSDOT awarded \$37.5 million federal grant for train equipment. WSDOT received notification August 20th from the Federal Railroad Administration that it was awarded a \$37.5 million Federal-State Partnership



Washington State
Department of Transportation

for State of Good Repair grant to acquire at least three sets of new passenger rail cars for the Amtrak Cascades service. WSDOT plans to procure the new passenger train equipment as part of Amtrak's 2019-20 national equipment replacement contract. By participating in this national procurement process with other states that sponsor passenger service, WSDOT will be able to leverage the buying power of both Amtrak and other states. The new passenger rail cars are expected to be delivered from the selected manufacturer in the mid-2020s. The award of this grant will allow for the replacement of the WSDOT-owned Talgo 6 trainsets, including the two currently in service and the one lost in the derailment. In the interim, prior to delivery of the new equipment, Amtrak is working to identify temporary passenger equipment to replace the Talgo 6 train sets currently in service. This is consistent with the National Transportation Safety Board (NTSB) recommendations following its investigation of the 2017 derailment in DuPont. WSDOT continues to work with Amtrak, Sound Transit, and FRA to address other safety measures identified by NTSB in anticipation of the return of Amtrak Cascades services to the Point Defiance Bypass between Tacoma and Nisqually. A date for that shift to the Point Defiance Bypass has not yet been determined.

Washington State Department of Transportation 8/20/2019 email.

▶ BNSF and project partners are developing and will soon begin testing a battery-electric high-horsepower road locomotive.



In 2018, BNSF and Wabtec (formerly GE Transportation) joined forces to begin developing a 100-percent battery-electric road locomotive prototype that works with conventional diesel locomotives to make a battery-electric hybrid consist. The project is being supported by a grant from the California Air Resources Board as part of its Zero-and Near Zero-Emission Freight Facilities program. Once all the equipment and support systems are in place, the plan is to run tests between Stockton and Barstow, California – about 350 miles. The battery will recover energy through dynamic braking. Before the pilot testing of the locomotive can begin, a battery charger will need to be designed and installed at BNSF's Mormon Yard in Stockton later this year. The locomotive prototype will have a battery with approximately 20,000 cells, and future versions may have as many as 50,000 cells. **BNSF News Update August 2019.**

▶ All TriMet MAX trains across the tri-county area will arrive two minutes later than normal next month, a move the transit agency described as a “relatively minor adjustment” designed to help riders on its struggling WES commuter rail line. The delay reverses a previous schedule change that made transferring from the Westside Express Service commuter rail to light rail trains challenging, forcing some riders to have to run to make their connection. Delaying MAX trains across the region will help WES riders transfer to westbound light rail trains at the Beaverton Transit Center. In July, the line drew an average of 1,460 daily riders. The \$161 million rail line, which opened in 2009, has never lived up to its ridership goals. **The Oregonian 8/21/2019.**



▶ One of my favorite train viewing spots in Cascade Locks, Thunder Island Brewing, hosted a groundbreaking ceremony at their new site at 601 WaNaPa Street [“Main Street”] on August 20th. The new 10,000-square-foot building will showcase a 15-barrel custom system, a full restaurant, private event space and views of the Columbia River and Cascade Mountain Range. Completion is slated for Summer 2020. Thunder Island Brewing is currently located in temporary facilities leased from the Port with GREAT train viewing from their patio. **Hood River News 8/17/2019.**



▶ The passing of Edward J. Kamholz was noted last month. Some will remember that Ed was working to map all the Oregon railroads beginning from 1846. The project was called The Oregon Historical Railroads Project. Under contract with the Oregon Department of Transportation he had completed work on the Tillamook Branch and all the railroads that ever connected to that branch. PNWC archives volunteers are now working to determine if Ed's research materials can be obtained and added to the PNWC archives.

▶ Oregon DEQ is calling in a Group 1 of companies for a more in-depth analysis to determine whether these called-in facilities pose health risks and if their air permits should be revised. Under Cleaner Air Oregon, new facilities applying for an air permit in Oregon also need to identify potential air toxics emissions and assess associated risks before submitting their permit application. DEQ is currently working with eight new facilities, along with the existing nine called-in facilities. Included in the nine are: AmeriTies West [The Dalles], Owens-Brockway Glass Container, and Roseburg Forest Products – Medford. Facilities being called in by April 2020 include Stimson Lumber Company, Cascade Steel Rolling Mills, Boise Packaging & Newsprint, and Georgia-Pacific Toledo. **Oregon DEQ 8/26/2019 email.**



▶ Service for all four fair trains, which were scheduled to run between Anchorage and Palmer on August 24-25, has been canceled “due to resources stretched thin by ongoing weather and wildfire challengers” according to the Alaska Railroad. Rock slides, flooding and wildfire have been disrupting service. All four 140-seat trains were full. The 560 passengers who bought tickets will be refunded. Fair train service over the Labor Day holiday weekend is expected to run as scheduled. Hundreds of firefighters from multiple agencies are battling two major wildfires in the Matanuska-Susitna Borough, where the fair is held. **Anchorage Daily News 8/24/2019.**



▶ While one should always obey highway railway crossing signals and signs, on September 24th there will be special emphasis by local, state, federal and railroad police in enforcing crossing and trespass laws at key locations in communities [including Portland].



▶ It was a very busy week for many in PNWC as they worked to support all the activities during the August 25th week at and around the Oregon Rail Heritage Center. The week started with the Portland Bureau of Transportation's Sunday Parkways loop that included events in the ORHC parking lot and an early ORHC opening, then some 150 attendees at the late afternoon welcoming reception for the Association of Pedestrian & Bicycle Professionals conference. Then came the Wednesday Garden Railway convention SP 4449 charter event which included three roundtrips from ORHC to Oaks Amusement Park with the attendees touring ORHC and a meal at Oaks. The week concluded, sort of, with an ORHF membership ride behind the SP 4449 late Friday afternoon. LOTS of work preceded the week by the very small* number of PNWC rolling stock crew members (George Hickok, Keith Fleschner & Pete Rodabaugh) getting the 6200 & 6800 coaches operational. Others were involved in planning and other activities throughout the week. All reports from the Garden Railway organizer Bill Dervilleare that everything on the SP 4449 & ORHC end of their convention event were rated 10 on a 10-point scale. For many of us it was a long and toooo hot day, but the smiles and conversations with attendees from all over the world made the effort worthwhile. Then on Friday evening ORHF held a member event pulled by the SP 4449. All this was done in addition to ORHC being open the regular visitor hours. Thanks to ALL for the great and successful efforts! [*PNWC 2019 members, if any exist, must address this growing issue of how or if PNWC is going to continue in the business of rail car ownership....my opinion.]



▶ The October issue of Trains magazine has a very interesting article **Bridging the gap, The Pacific Northwest's shortline powerhouse delivers** by Robert, W. Scott. The text, map and pictures describe today's Puget Sound & Pacific operations with 4 subdivisions in western Washington.



▶ North Dakota: Study 'undermines' Washington state's rail law. The study analyzed oil from the Bakken, the Permian Basin in Texas and crude stored in the federal Strategic Petroleum Reserve, each with different vapor pressure. The Sandia National Laboratories study completed this month concluded that “vapor pressure is not statistically significant factor” in the severity of oil train crashes. Researchers conducted the studies by igniting pools of oil and creating fireballs while measuring the height of flames, burn rate and fireball dimensions, among other factors. The results from this work do not support a distinction for crude oils based on vapor pressure with regard to these combustion events according to the study. North Dakota says the study supports their petition to overturn Washington state's oil shipment safety restrictions. **The Oregonian 8/31/2019.**



▶ Former ORHC intern (2017) Brandon Geiger is now working for ODOT's Rail and Public Transit Division and is working on a project that is evaluating the status of the former stations of the Amtrak Pioneer which operated between 1977-1997. For each of the stations, Brandon will include a history of passenger rail. Brandon has reached out to PNWC for assistance. **Brandon Geiger 8/28/2019 email.**



▶ The Oregon Coast Scenic Railroad is holding a Polson No. 90 Fundraising Dinner on October 17th, 6:00 pm, at the Old Mill RV Park & Event Center in Garibaldi. This is the locomotive that the Oregon Coast Scenic Railroad acquired from the Garibaldi Lions. Further Information / donate / RSVP at: <https://www.savethepolson90.org>

The Yaquina Pacific Railroad Historical Society received a grant from The Siletz Tribal Charitable Contribution Fund in Nov. 2018 for “lumber and supplies to build and install four-car railroad play structure at railroad museum; Toledo, OR; \$3,767.50”. Tom Chandler is shown here working to complete the structure in August 2019. Photo by T. Trent Stetz.

A FIRE BUCKET STORY

by Brent Larson

I found this fire bucket during the early 1970s at one of the Tunnel No. 16 portals on the Southern Pacific Coos Bay Branch. The bucket was in one of the concrete water barrels located at the tunnel portal. It had no handle and was not painted. I painted it red, put a handle made of brazing rod and drilled drain holes in the bottom to use it as a planter.

What I was told was that the Fire Buckets did not have a flat bottom so that people in the fire line could not set them down. I have also seen regular pails but they had a rounded dome shaped bottom, possibly the same rationale.

The Southern Pacific Coos Bay Branch line ran from Eugene to Coos Bay. Tunnel 16 is located at Canary, the site of a former lumber mill and former small store. Canary Road is located off Highway 101 south of Florence. At the turnoff for Jessie M. Honeyman State Park on 101, Canary Road goes East past Woahink Lake.

At the time, 1972-75, I was working as a Welder/Carpenter on S.P. Bridge and Building (B&B) gang stationed at Canary. We worked out of an old baggage car while working on several tunnels in the area (16, 17 & 18). We would get to our work sites by motor car or crew truck. The tunnels were being raised about 7-10 inches so newer, taller box car could clear. The taller cars were being built to accommodate parts for Boeing's new 747 airplanes.

[The bucket has "S.P. Co" embossed into the side. This fire bucket has been donated to ORHF and will be incorporated into the Section House exhibit. Brent and wife Janet are long time (1984) PNWC members as is Janet's brother Pete Rodabaugh.]



Ticket Counter at Portland Union Station

by T. Trent Stetz



Current Ticket Counter Space at Union Station

As a followup to the ongoing Section 106 review for Portland Union Station, it was previously noted that the ticket counter was NOT part of the National Historic site listing. The design project team recommends preserving the existing, historic walnut ticketing counter to incorporate it as a feature into a new retail concession such as a café. A café alternative would provide a new passenger amenity and creates a high-quality amenity in a

prominent main concourse location. Preservation of the existing walnut ticket counter and other features would honor the historic use of this area and would add interest and character to the space. The ticket counter itself could be preserved as an unique seating area for patrons, providing table and work space with a view of the historic main concourse and train activities. There is a wide variety of potential variation in the design of this space, including incorporation of historic artifacts, exhibits, or art.

Material from this article sourced from prosperportland.us/portfolio-items/portland-union-station/. The Consulting Parties review will soon be concluded with the upcoming completion of the 75% Programmatic Agreement.



A Proposal for Re-use of the Ticket Counter Space



The Preferred Proposal for the Ticket Counter Area

August Membership Meeting Minutes

Pacific Northwest Chapter - National Railway Historical Society

Held on August 16, 2019

The August, 2019 membership meeting was called to order at 7:36pm by President Mark Reynolds.

Guest noted was son of Dennis Seacat, Andrew. Welcome to Andrew!

The monthly Treasurers report was given by Treasurer Keith Fleschner. He reported that funds from the Roger White estate have been received. He noted that all accounts balance. Doug Auburg made a motion to accept the report, David Cautley seconded and the membership voted to accept the report.

David Cautley reported that The Garden Railway Convention has a chartered rail excursion pulled by the SP 4449 on Aug 28th, with round-trips from ORHC to Oaks Park. Volunteer opportunities are available for this event. See ORHC Volgistics website; or for car hosting contact Laurie McCormack. Thanks to Chapter members for their work on preparing the cars for this event!

Mark Reynolds reported that the Turntable project is continuing toward the Design Review process with the City of Portland. Currently, the difference between the committed/received funds and the proposed project budget for Phase 1 is about \$1 million dollars.

Mark Reynolds thanked to volunteers who assisted with Chapter activities at Powerland Heritage Park at Steam-Up, including with concessions and sound system.

Bruce Strange provided a Chapter Library and Archives report. He noted that the Glacier Park relief map, dated 1911, has been donated to the National Parks Service for restoration and display within the park.

Trent Stetz noted that the next step in the Portland Union Station section 106 review is the completion of the Programmatic Agreement and the 30 day public comment period. Stay tuned for dates and ways to participate and provide feedback.

Mark Reynolds noted that the Oregon Zoo will be conducting on-site survey about Washington Park and future transportation planning thru Aug 17th.

Bruce Strange provide a summary of the NRHS RailCamp West day at ORHC on July 31st. He acted as chaperone to and from Portland Union Station. Presentations were given to the 12 RailCampers on the SP 4449 and SP&S 700. Mark Reynolds thanked the Chapter members who participated.

After review by the membership, since *The Trainmaster* was later than usual in completion and subsequent mailing for the August issue, The July minutes were called. Doug Auburg made a motion to approve the minutes, Rolf Schuler seconded and the membership voted to approve.

Mark Reynolds noted an ORHF member event will be held on Aug 30th at 4pm at ORHC. See the ORHF email announcement for information.

The Chapter *Unsung Hero* Award for August was awarded to Dave Larsen, for his efforts in providing the Chapter concessions activities at Steam-up 2019. Thank you Dave!

Jean Hickok noted that blue bags for can and bottle recycling are available, with proceeds benefiting the Chapter. Jean also noted that Holiday Express 2019 rack cards are available for distribution. Holiday Express tickets are on sale now.

Al Baker reported that the program for the evening will be a report by Dennis Seacat on the Golden Spike 150th Anniversary Celebration in Utah. Next month will be a video of a cab ride on the electrified section of the GN from 1953.

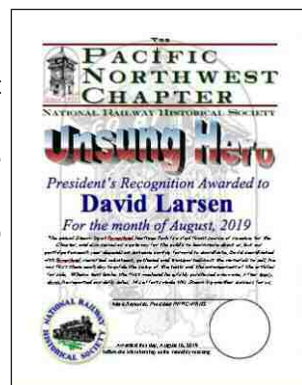
The meeting was adjourned at 8:27pm.

Snack time was provided by Jean Hickok. Thank You Jean!

The presentation by Dennis of photos and videos from the Spike 150 events in Utah from May was excellent. Thank you Dennis!



Mark Reynolds and Keith Fleschner



Dennis Seacat provided Photos and Video of the Spike 150 Event in Utah

Respectfully submitted by T. Trent Stetz

CHAPTER LIBRARY LOOKING FOR BOOKS

Do you have any railroad books you no longer need? Add them to the Chapter Library through a tax-deductible donation. The chapter has a wish list of books that it would like to add to its collection. If you can donate any of the items listed, please call 503-226-6747, or e-mail the library (library@pnwc-nrhs.org) by **Oct. 1st**.

Corbin's Road aka Spokane International Railway by Paul Rechnitzer, 2007

Delusions of Grandeur : The Olympic & Tenino Railroad by James S. Hanum, 2009

Forest Rails: Georgia-Pacific's Railroads by Russell Tedder, 2016

The McCloud River Railroads by Jeff Moore, 2016

Southern Pacific Through Passenger Service In Color by Greg Stout, 2015



A southbound Union Pacific manifest freight the afternoon of August 7th going by the Oregon Rail Heritage Center included several, new to me, coil steel cars. This quite new rail car is owned by Mitsui Rail Capitol (MBKX). Photo and caption by Arlen L. Sheldrake.

Bill of Lading

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Chapter Officers

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Vice President	George Hickok	503.649.5762
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Secretary	Jim Hokinson	503.635.4826
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Chuck Fagan (2nd Term)	2019-2021	
Bryan Ackler (2nd Term)	2018-2020	503.246.2165
David Cautley (2nd Term)	2018-2020	503.631.7516
Rolf Schuler (1st Term)	2017-2019	503.285.7941
Bruce Strange (1st Term)	2017-2019	503.901.7815

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Auditor	Bob McCoy	360.459.3251
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PACIFIC NORTHWEST CHAPTER TIMETABLE NO. 686

Membership Meetings: St. Mark's Lutheran Church, 5415 SE Powell Blvd. 7:30 pm
Guests Most Welcome! Chapter Meetings held on the 3rd Friday of each month.

September 20: *1953 Cab Ride Across GN's Electrified Subdivision:* Great pictures from east and west bound cab rides with many interesting scenes along the way (by Alfred B. Butler, Pullman, WA).

October 18: Do you have a topic to present?

Forward program ideas to Al Baker, 503.645.9079 or albaker33@comcast.net

Library and Archives MONDAYS: 10 am - 12 noon (starting Sept. 9th)

**NOTE
DAY
CHANGE**

Portland Union Station Annex, NW 5th and Irving, 503-226-6747, library@pnwc-nrhs.org.

Also by Appointment.
Researchers Welcome!
Books and DVDs/VHS are available for member check-out.

See thousands of books, periodicals, timetables, maps, photographs, and documents about railroads.
Catalog on chapter website at:
www.pnwc-nrhs.org/library_main.html

Board of Director's Meetings: **Sep. 12**, Thursday, Oregon Rail Heritage Center, 2250 SE Water Ave, 7:30pm
Oct. 10, Thursday, Oregon Rail Heritage Center, 2250 SE Water Ave, 7:30pm
(Open to all Chapter Members. Note **Location** for Chapter Board meetings)

NOTABLE NON-CHAPTER EVENTS:

Sep. 8-11 *Northern Pacific Railway Historical Association Convention*, Brainerd, MN, store.nprha.org/convention
Sep. 14 *GN Day in Sky*, Skykomish Historical Society & GNRHS, 9:30am – 4pm, Skykomish WA
Sep. 18-21 *HeritageRail Conference*, West Coast Railway Heritage Park, Squamish BC, www.atrrm.org
Sep. 19-22 *Fall Steam-Up*, Staver Locomotive, 2537 NW 29th Street, Portland, www.staverlocomotive.com
Sep. 19-21 *Spokane Portland & Seattle Railway Historical Society Convention*, Astoria OR, www.spsrhs.org
Sep. 22-29 *Rail Safety Week*, Operation Lifesaver, oli.org
Oct. 17 *Polson No. 90 Fundraising Dinner 2019*, 6 pm, Garibaldi OR, www.savethepolson90.org
Nov. 29 – Dec. 1; Dec. 7 & 8; Dec. 14 & 15 *Holiday Express at Oaks Park*, SP4449, www.orhf.org

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Feb. 6-8 *Portland Winter Light Festival*, Eastbank Esplanade, OMSI & ORHC areas, www.pdxwlf.com
Mar. 21 *Winterail*, Corvallis High School, Corvallis OR, www.winterail.com
May 13-16 *Union Pacific Historical Society Convention*, Cheyenne WY, www.uphs.org
Sep. 19-23 *Great Northern Railway Historical Society Convention*, Nelson BC, www.gnrhs.org
Oct. 21-24 *Southern Pacific Historical & Technical Society Convention*, Reno NV, spts.org

PNWC – NRHS MISSION

To preserve and interpret Pacific Northwest railroad history and historical artifacts for the education and enjoyment of current and future generations.

The MAX Tunnel Study

Examining the feasibility of faster light rail

Every day, thousands of people ride buses and MAX in Portland's central city.

People ride to work, to school, to the doctor, or to meet with friends, family and colleagues. For some, the central city is the final destination; others are passing through on their way to places like Hillsboro, Beaverton and Gresham.

The central city—the 14 neighborhoods closest to downtown on the east and west sides of the Willamette River—is the hub of our regional transportation system and a significant employment center. As the region has grown, the central city has become a transit bottleneck, impeding travel into and through the city's core. In downtown Portland, MAX trains merge and cross each other's tracks in several places, and trains share space with cars, bikes and pedestrians, slowing everyone down.

All of the region's light rail lines cross the river at the same place: the Steel Bridge. Built in 1912, the bridge can only carry one train at a time in each direction, and only at reduced speeds. Slowdowns at the Steel Bridge and in downtown don't just impact the central city—they ripple throughout the entire region, impacting people's ability to get where they need to go, and impacting businesses' ability to deliver goods and services.



One MAX train every 90 seconds / 40 MAX trains per hour

At the busiest hours of the day, 40 light rail trains must cross the river and traverse downtown—one train every 90 seconds. As the region grows and demand for light rail increases, the region will need at least 64 MAX trains through downtown every hour, more than one train every minute.

A long-term solution for faster travel

In the future, we will need MAX trains to move into and through the city core quickly, reliably and frequently, which will make transit accessible to more people. The time has come for a long-term solution.

An initial study (undertaken last year by TriMet) indicated that a tunnel underneath the central city could save MAX Blue and Red line riders close to 15 minutes. This would improve travel for many regional residents, like people living in East Portland traveling to employment centers in Washington County. The MAX Tunnel Study will identify opportunities and challenges with building a tunnel.

"We need to plan for the next big projects. We need a Willamette tunnel (and frankly, run the MAX under all of downtown)... Go bigger—don't just settle."

-Metro area resident



Connecting people

The goals of the MAX Tunnel Study are:

- 1 Improve people's mobility**
By reducing travel times to and through the Portland central city and improving transit reliability, we connect people more quickly to jobs, school, families, recreation and communities.
- 2 Support the region's economy**
Faster travel times between homes and jobs helps both people and businesses.
- 3 Minimize environmental impacts**
By reducing people's reliance on cars, we can reduce greenhouse gas emissions from transportation, currently the single largest source of emissions in Oregon.
- 4 Create a more resilient transportation system**
A new tunnel will be able to withstand a major earthquake and help the region prepare for getting the transportation system up and running after a natural disaster.
- 5 More time to enjoy life**
When people spend less time in traffic, they have more time to spend with friends and family and to do the things they love.

Improving Light Rail Speed, Reliability and Capacity

The MAX Tunnel Study is led by Metro in coordination with TriMet, and city and county partners. The project is exploring the potential for a central city tunnel to improve transit as the region grows. The study aims to clearly define the problem, consider goals and identify viable alternatives for additional study.

Engagement & Next Steps

The tunnel study is an opportunity to learn what the community thinks of a tunnel and understand what it would take to start a more formal planning process. Planning for a transportation improvement of this size requires significant funding and years of effort. At this early stage, Metro and TriMet need to learn how much funding would be required to move ahead and what people in the community want to know.

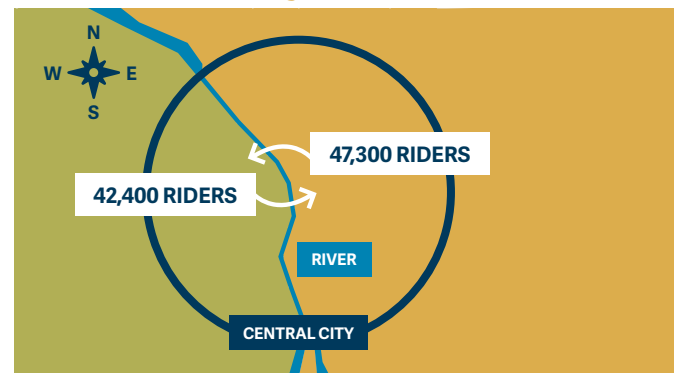
Metro seeks community feedback during the summer of 2019. Questions include:

- Are we on the right track?
- Are our goals something you can agree with?
- What needs more study and consideration if this moves forward?

Timeline

Tunnel study comment period	Budget estimate & strategy for planning phase created	Seek funding for planning and design
JUNE/ JULY	AUGUST/ SEPTEMBER	FUTURE

Transit demand by 2040



Contact info

To learn more www.oregonmetro.gov/maxtunnel



Estimated capital construction and operating costs

The 2019 study confirms the projected construction costs of between \$24 and \$42 billion, as determined in the 2017-2018 feasibility study. The anticipated \$160 and \$250 million in annual ticket revenue would be used to offset the operating and maintenance (O&M) costs.

Funding and financing for the project is expected to include investments from both the public and private sectors. The ideal combination of investments requires further analysis to identify both short-term and long-term strategies, including funding for upfront capital costs and ongoing operating costs not covered by ticket sales.

Ridership and revenue

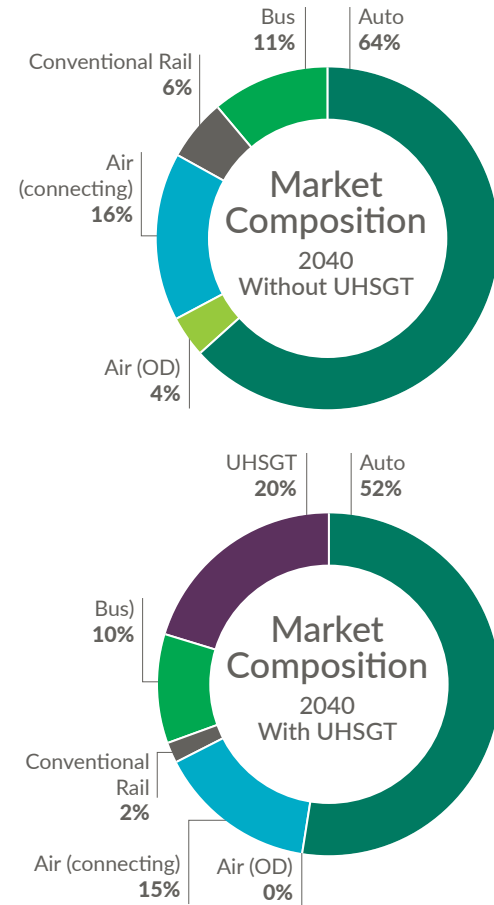
The 2019 Business Case Analysis estimates that between 12 and 20 percent of total current intercity trips would shift to UHSGT. The biggest shift would come from those who currently drive in private vehicles, with an estimated 12 percent of those trips instead being made on UHSGT. By shifting trips off major highways, the UHSGT will help manage projected population growth in the megaregion.

Conservatively, an estimated 1.7 and 3.1 million riders annually would ride on the system when it opens and annual revenue in the initial years is estimated at between \$160 and \$250 million – making it potentially one of the highest grossing passenger train services in the United States. Moreover, the system has the future potential to cover its annual operating costs by taking

advantage of opportunities to increase ridership and revenue beyond the conservative estimates used in the study.

By connecting to other transportation modes such as transit, trains, planes, bike paths, and rideshare options, the UHSGT would create a new transportation spine connecting cities and towns throughout the megaregion.

Projected market share by mode



Ultra-High-Speed Ground Transportation

2019 BUSINESS CASE ANALYSIS

WSDOT is studying how ultra-high-speed ground transportation (UHSGT) might serve as a catalyst to transform the Pacific Northwest. A stronger, better connected economic megaregion – stretching from Vancouver, British Columbia to Seattle, Washington to Portland, Oregon – has the potential to thrive in the global marketplace. A key component of that vision is a fast, frequent, reliable, and environmentally responsible transportation system that unites this Cascadia megaregion, and positions it for global competitiveness and future prosperity.

Regional business and government leaders believe enhanced interconnectivity would allow the Pacific Northwest to better manage the megaregion's population, economic growth potential and maximize public transportation and investment benefits. Such a system is envisioned to be about much more than transportation. It also could result in better access to jobs, affordable housing, shared resources, enhanced productivity, increased tourism and economic prosperity.

An UHSGT system could make it possible to travel each segment between Seattle, Portland, and Vancouver, BC in less than an hour. Trains might leave every half hour and travel at speeds up to 220 mph (354 kph), with some stops at intermediate stations along the way and all connecting to existing transit systems. The 2019 Business Case Analysis examines how this innovative transportation system might be achieved.



Seattle to Vancouver, BC or Portland in under an hour could transform regional travel

MORE INFORMATION

The entire 2019 UHSGT Business Case analysis can be found online at: <https://www.wsdot.wa.gov/planning/studies/ultra-high-speed-travel/ground-transportation-study>

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Title VI Notice to Public: It is the Washington State Department of Transportation's (WSDOT) policy to assure that no person shall, on the grounds of race, color, national origin or sex, as provided by Title VI of the Civil Rights Act of 1964, be excluded from participation in, be denied the benefits of, or be otherwise discriminated against under any of its federally funded programs and activities. Any person who believes his/her Title VI protection has been violated, may file a complaint with WSDOT's Office of Equal Opportunity (OEO). For additional information regarding Title VI complaint procedures and/or information regarding our non-discrimination obligations, please contact OEO's Title VI Coordinator at (360) 705-7090.

Background

The 2019 Business Case Analysis builds on previous UHSGT studies conducted by WSDOT. It provides a more comprehensive and detailed picture of the wide range of benefits that would flow into the region due to UHSGT. Details on the strategic, economic, environmental, and financial case for UHSGT in the Cascadia megaregion are included. The data generated by the analyses provides better understanding of the unique characteristics and travel demands of the megaregion, outlines steps to secure funding and financing, and provides a governance framework.

The 2019 study was funded by the states of Washington and Oregon, the province of British Columbia, and Microsoft Corp. An Advisory Group provided input on the study from a variety of

perspectives. The group included representatives from the public, private and nonprofit sectors in Washington, Oregon and British Columbia.

The vision of an UHSGT system linking the entire megaregion offers a potential alternative investment option for both public and private sectors. The mobility of residents, business travelers and tourists is currently constrained by crowded roads, congested airports and limited intercity rail service. Vancouver, Seattle, and Portland have the fourth, sixth, and tenth-most congested roads in North America, respectively. WSDOT estimates that adding a lane in each direction of Interstate 5 from the Canadian border to the Oregon border could cost \$108 billion. UHSGT has the potential to ultimately carry 32,000 people an hour, shifting traffic off highways and better managing expected population growth.

Goals and objectives



Stimulate economic growth and innovation

- Support the growth of existing and future employers by expanding the effective labor market in a meaningful way
- Allow the region to compete for larger companies
- Spur investment throughout the region, with emphasis on building the innovation economy
- Consider and target potential areas for new growth



Provide efficient and sustainable mobility

- Create a viable mode choice for intercity travel
- Deliver optimal value for investment
- Promote sustainable and environmentally responsible mobility



Promote regional integration

- Improve transportation connectivity among population, employment, technology, cultural, and knowledge centers
- Enhance existing and future residents' access to equitable interregional transit
- Integrate UHSGT with existing and future intermodal systems to form a comprehensive regional transportation network



Cleaner environment

Over the first 40 years of operations, UHSGT would avoid release of an estimated 6 million metric tons (tonnes) of CO₂, due to 27 million avoided flight miles and 6.1 billion avoided vehicle miles in the Cascadia region. In addition, every year on average more than 960 metric tons of harmful non-CO₂ pollutants, such as particulate matter, carbon monoxide, and nitrogen oxide, would be kept out of the ecosystem.

UHSGT also could lead to a transformation of the environmental footprint for the megaregion. Better local connections to UHSGT stations could lead to increased density in areas with good transit, cycle, and walking facilities. Moreover, there is a potential to achieve zero emission levels should the all-electric system rely solely on clean power sources, such as hydro, wind and solar energy.

Key findings

Station stop scenarios

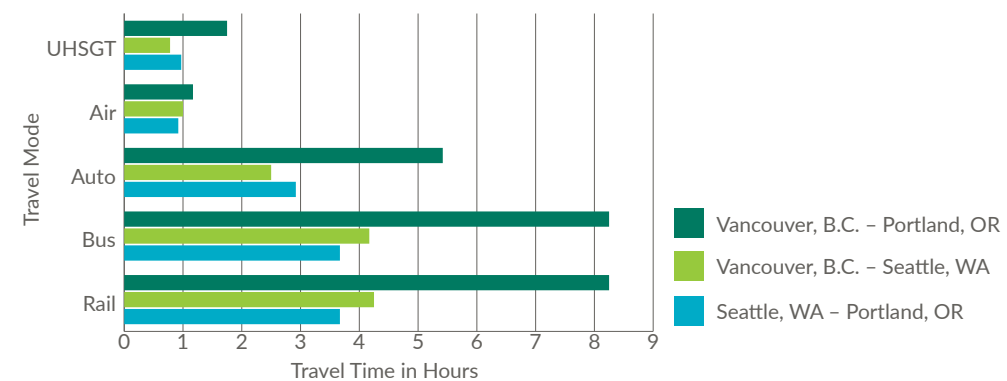
The 2019 Business Case Analysis looks at various scenarios with 21 to 30 daily round trips – some express trips stopping at a only a few locations, interspersed with others that stop at more locations. All trains would stop in the key metropolitan areas of Portland; Seattle/Bellevue/Tukwila; and Vancouver/Surrey. Potential scenarios also looked at possible intermediary stops in other cities, including Bellingham, Everett, Tacoma, Olympia, and Kelso/Longview. Each of the potential station areas were evaluated for connections to transit, trains, planes, bike paths and rideshare options to create an interconnected network.

Travel times

UHSGT would offer significant travel-time savings compared to existing modes of travel, particularly auto, bus and intercity rail. UHSGT travel times using express service between Seattle and Vancouver, BC are estimated at 47 minutes while trips between and Seattle and Portland are estimated at 58 minutes.

Comparisons of travel times between UHSGT and airline travel do not include the time to travel to the airport and complete the check-in, security checks, and customs processing at the airport, which can vary from 30 minutes to over 3 hours. By comparison, the proposed UHSGT system is not expected to be significantly affected by congestion, excess stops, and lengthy processing times for security and customs.

Travel Times by Mode (hours)



Economic growth

UHSGT would provide the region with better connections and faster travel times between city pairs, which would increase economic activity. The high-speed link would support the growth of existing and future employers by significantly expanding the effective labor market. By providing more people/areas with access to fast, reliable transportation, UHSGT would make the region more attractive to large companies.

The construction of UHSGT is estimated to produce 38,000 construction jobs and 3,000 operating jobs and unlock between 116,000 and 160,000 additional jobs annually. The total economic growth potential is estimated to be in excess of \$355 billion.

Key takeaways

- Positions the Cascadia megaregion for global competitiveness and future prosperity
- Economic growth potential in excess of \$355 billion, with 200,000 new jobs related to construction and ongoing operation of the service
- Conservatively estimated 1.7 and 3.1 million riders annually
- Estimate between \$160 and \$250 million in ticket revenue
- Future potential to cover all annual operating costs
- Evaluates 21 to 30 daily round trips traveling at speeds up to 220 mph
- Travel between Seattle and Vancouver, BC in 47 minutes and between Seattle and Portland in 58 minutes
- Between 12 and 20 percent of current intercity trips projected to shift to UHSGT, mostly from those driving private vehicles
- Potential to ultimately carry 32,000 people an hour
- Connections to transit, trains, planes, bike paths and rideshare
- Avoid release of estimated 6 million metric tons (tonnes) of CO₂
- All-electric system has the potential for zero emissions by using clean energy sources (hydro, wind, solar)