Exhibit No._____ (FP-1T)
Docket: TR-140382 and TR-140383
Witness: Foster Peterson

BEFORE THE WASHINGTON STATE

UTILITIES AND TRANSPORTATION COMMISSION

BNSF RAILWAY COMPANY, Petitioner vs. YAKIMA COUNTY, Respondents, YAKAMA NATION, Intervenors.	DOCKET NO: TR-140382 DOCKET NO: TR-140383 PREFILED TESTIMONY OF FOSTER PETERSON ON BEHALF OF PETITIONER BNSF RAILWAY COMPANY

INTRODUCTION

Q: **Please state your full name and job title.**

A: My name is Foster Peterson, and I am a partner and railroad consultant at Full Service Railroad Consulting, Inc., in Marietta, Georgia.

Q: **Please describe your background and qualifications.**

A: I am currently an owner and partner in the railroad consulting practice of Full Service Railroad Consulting, Inc. and an operating officer for two sets of shortline railroads. I have a Bachelor's degree in mechanical engineering from the Georgia Institute of Technology. I have

more than 20 years of experience in the railroad industry and have worked as a railroad consultant for 19 years. I have held a variety of positions including certified locomotive engineer, Designated Supervisor of Locomotive Engineers, Director, Safety & Operating Practices, Manager Training, Rules & Safety, Manager of Operating Practices, Chief Operating Officer, machinist/mechanic, Engineer, Director Testing and Engineering Applications and Senior Director Testing and Engineering Applications.

During my career I have operated numerous passenger and freight trains. As a railroad official I have trained and supervised train and engine service personnel. I have inspected numerous locomotives, freight cars and passenger cars as both a mechanical and operating employee. I have investigated and analyzed hundreds of railroad accidents and incidents. I have extensive experience in both train and vehicle dynamics simulation using models such as Transportation Technology Center Inc.'s TOES™ and NUCARS™. I also have extensive experience in field testing of train operations, including on-board and wayside testing.

I am a member of several professional organizations including the Air Brake Association, The International Association of Railway Operating Officers, the American Association of Railroad Superintendents, the American Railway Engineering and Maintenance of Way Association and the American Society of Mechanical Engineers.

Q: **What does your job as a railroad consultant entail?**

A: I provide clients with analysis of railroad operational issues, and training in railroad safety, rules, and operating practices. I conduct operational and safety audits, and provide services as a consulting and/or testifying expert in railroad mechanical, operating, and engineering disciplines. I provide railroad technical and engineering consulting support from accident/incident response through case analysis and report preparation including consulting and/or testifying expert witness services if requested. I utilize vehicle and train dynamics simulation models in derailments and accident investigation and analysis, as well as design and perform field testing of rail vehicles.

Q: **Generally speaking, when is it appropriate or necessary to close a grade crossing, and what criteria are applicable?**

A: The Federal Railroad Administration (FRA) and Federal Highway Administration (FHWA) offer advice on the Identification of Alternatives for Grade Crossings. Elimination should be the first alternative considered. This may be accomplished by grade separating the crossing, closing the crossing to highway traffic, or closing the crossing to railroad traffic through the abandonment or relocation of the rail line.

Q: **Are grade crossing closures a common practice nationwide? Please explain.**

A: The Identification of Alternatives for grade crossings is promoted by the FRA and FHWA. BNSF has an internal Grade Crossing Closure program that since 2000 has closed over 5,600 crossings and is recognized as an industry leader in this area.

Q: **How does the factor of alternative crossings enter into your recommendation that the crossings be closed?**

A: There are alternative crossings located nearby and three of the four of them have active warning devices. Given that Stevens Road and Barnhart Road crossings do not have active warning devices and the close proximity of crossings that do, rerouting the traffic is the safer option.

Q: **If farm and other heavy machinery regularly use the Stevens Road and Barnhart Road crossings, is there any increased risk for BNSF and the public because of that traffic?** A: Farm or heavy equipment usage at grade crossings increases the probability of a derailment if there is a collision at the crossing. This brings increased risk for damage to the farm and railroad equipment and increased risk of injury for the vehicle operators, train crews, and the public.

As compared to smaller and lighter motor vehicles, farm and heavy equipment affect possible derailment risk in two ways. First, most farm and heavy equipment vehicles are larger

and heavier than average motor vehicles. The collision between a train and one of these vehicles can in and of itself cause the train to derail. I have worked on many crossing collisions in my career where the lead locomotive came off the rails by riding up and over the large vehicle or debris from the vehicle due to the collision. I have also seen the train being displaced from the "straight" path it was traveling by the vehicle, which is generally moving from the train's side rather than in the same direction along the tracks as the train.

Secondly, once a train crew (most often the locomotive engineer) determines in their judgment that a collision is imminent at a grade crossing due to the motor vehicle operator's failure to yield to the audible and visual warnings of the train, they apply the train brakes, generally with an emergency brake application. An emergency brake application is the highest level of braking the train crew can apply to attempt to physically change the outcome of the collision. An emergency brake application has the potential to cause large in-train drawbar forces when the "slack" between cars in the train adjusts rapidly due to the emergency application. These in-train forces can by themselves cause a derailment. Placing the train brakes in emergency is an act that is taken seriously but not lightly due to the potential for drawbar-force-related derailment.

Finally, farm and heavy equipment often have less visibility for the driver/operator of the vehicle as compared to passenger vehicles. This requires the operator to be cautious when crossing at a grade crossing. I have experienced in a number of collisions around the country where the operator fails to do so, thus contributing to a collision.

DECLARATION

I, Foster Peterson, declare under penalty of perjury under the laws of the State of Washington that the foregoing PREFILED TESTIMONY OF FOSTER PETERSON ON BEHALF OF PETITIONER BNSF RAILWAY COMPANY is true and correct to the best of my knowledge and belief.

DATED this 19th day of December 2014 at Marietta, Georgia.

FOSTER PETERSON

DATED this 24th day of December 2014.

Montgomery Scarp, PLLC

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CERTIFICATE OF SERVICE

I am over the age of 18; and not a party to this action. I am the assistant to an attorney with Montgomery Scarp, PLLC, whose address is 1218 Third Avenue, Suite 2500, Seattle, Washington, 98101.

I hereby certify that the original and 12 copies of PREFILED TESTIMONY OF FOSTER PETERSON has been sent by FedEx to Steven King at WUTC and a PDF version filed electronically. I also certify that true and complete copies have been sent via electronic mail to the following interested parties:

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I declare under penalty under the laws of the State of Washington that the foregoing information is true and correct.

DATED this 31st day of December 2014, at Seattle, Washington.

Lisa Miller, Paralegal