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|  <p>RESEARCH</p> <p>Oregon Department of Transportation</p> | <h2>Stage 1 Research Problem Statement</h2> | <p>ODOT Research Section 555 13th Street NE Salem OR 97301-5192</p> <p>Phone (503) 986-2700</p> |
| <p>Number: (Staff Use Only)</p> | <p>Title: (Staff Use Only)</p> | |
| <p>Use this form to propose new ODOT research. Research projects start with the identification of a specific problem affecting Oregon’s transportation system. This form should be limited to two pages. At this stage, we are looking to identify the topic and do not need a detailed project proposal. Please visit the Research Program website for additional guidance.</p> | | |

PLEASE READ THE [RESEARCH PROBLEM STATEMENT GUIDANCE](#) DOCUMENT ONLINE BEFORE STARTING THIS FORM.

1. Concisely describe the **transportation issue (including problems, improvements, or untested solutions) that Oregon needs research to investigate.**

The issue to be investigated is whether an open intermodal operation could alleviate truck congestion in key Oregon highway corridors. This concept involves entire trucks driving on and off trains and being ferried between terminals by rail. Although common in Europe, where it is known as "rolling highway," this truck ferry open intermodal type operation has never been tried in North America. Operational, financial, environmental, and technical issues all need to be examined to determine whether the concept would be a good fit for Oregon. The proposed study would make these evaluations.

2. Illustrate how this **transportation issue is important to Oregon and ODOT’s [mission](#).**

Key parts of the ODOT mission statement pertain to safety, reliability, and innovation. Open intermodal transportation of trucks can enhance health and safety by getting through trucks off congested highways, especially in and around urban areas, reducing crashes and diesel emissions. Delays to motorists and damage to pavement and bridges can also be reduced, improving highway reliability without new highway investment. Certainly exploring the feasibility of this new approach to dealing with dense highway truck volume meets ODOT's quest for innovation, facilitating the consideration of a new freight concept.

3. What **final product or information needs to be produced to enable this research to be implemented?**

The final study work product will be an assessment of the financial, environmental, operational, and engineering feasibility of deploying the open intermodal rail concept in various Pacific Northwest highway corridors important to Oregon where truck density is a problem today. Such study results could then inform transportation policy-makers' decisions on whether a prototype open intermodal demonstration would make sense before they commit funding for it.

4. (Optional) If able, list the proposed scope of work tasks for this research project. This can include potential research, development, or technical transfer activity(ies) that may develop better understanding of the **transportation issue** and lead to an improvement in the Oregon’s transportation infrastructure or services.

A detailed scope of work would be determined in consultation with ODOT and exceeds space available on this form. In summary, we could expect financial tasks to examine the costs of the proposed operation in select corridors and whether it is reasonable to expect revenues from truckers to cover the costs of operation. Operationally we propose to evaluate different candidate corridors to determine where a commercial prototype demonstration would most likely succeed. Environmental considerations include quantifying fuel and pollution reduction, urban health impacts, and reduced need for new highway capacity. Technical questions involve a need to define the equipment to be used and the design of terminals. The above are examples and not a comprehensive task list.

5. (Optional) Are there any individuals in Oregon who will be instrumental to the success of implementing any solution that is identified by this research? If so, please list them below.

ODOT Research is looking for individuals that have expert knowledge of the problem, key approval authority, will otherwise help oversee the study, or will implement the results of this work.

| Name | Title | Email | Phone |
|-----------------|---|--|----------------|
| Thomas White | Consultant, VTD Rail Consulting; during 1992 - 2017, Senior Operations Specialist, BNSF Railroad, Transit Safety Management, WSDOT, and ODOT on the Amtrak Cascades Corridor, TriMet WES service, and Portland-Vancouver I-5 Transportation and Trade Partnership | taw@vtd.net | (425) 345-6337 |
| Robinson Foster | Western Affairs, Steel Interstate Coalition | fosterr@comcast.net | (503) 781-9339 |

6. Other comments:

Open intermodal train service, while popular in Europe, has had no prototype test in North America. The concept offers compelling benefits to truckers in productivity, because the vehicle continues to move during time of driver rest. The driving public benefits from reduced highway congestion crashes, and fatalities. Railroads gain a new source of revenue from hauling trucks they do not and cannot haul today. And, in these times of intense focus on decarbonization of transportation, reduced fuel consumption and lower pollution have a beneficial impact on greenhouse gas formation and climate change.

7. Corresponding Submitter’s Contact Information:

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PLEASE SUBMIT THE COMPLETED FORM BY EMAIL TO: odotnewresearch@odot.state.or.us

This form is not a grant application or contract document. Please do not include proprietary information on this form. Once this form is received ODOT may revise and publish the problem statement. If selected, ODOT will assign investigator(s) of the department’s choosing to conduct research.