

Study for Infrastructure Laboratory Expansion (\$15,000)

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Infrastructure research within the Hinsdale Wave Research Laboratory building has grown significantly over the past six years. Current funding for research on behavior and performance of bridge girders, columns, and bent caps is approximately \$1 million per year. Research is focused on laboratory testing of full-size bridge superstructure elements under realistic support and loading conditions and has produced significant impact in terms of technical contributions and direct economic benefits. As an example, results from research conducted in the laboratory have enabled the Oregon Department of Transportation to rescope a huge highway reconstruction package thereby saving the taxpayers of Oregon \$500 million dollars of additional expense (Statesman Journal, April, 3, 2006). This impact comes from the concurrent projects that have made full utilization of the existing research capacity in the laboratory. Due to setup, construction, and testing space limitations inherent in the size and scope of the projects undertaken, the ability to perform additional research is now restricted and expansion of the existing structural laboratory facilities is critical for continued growth. To address this key need, the Kiewit Center is funding an engineering and architectural study for expansion of the infrastructure testing capability at Oregon State University. This limited expansion addresses the most immediate need for additional work space and lays the groundwork for future development of a new state-of-the-art infrastructure laboratory at the site adjacent to the Hinsdale Wave Research Laboratory. The site review and design study is estimated at approximately \$15,000. Construction costs to alleviate the most pressing space needs are estimated to be approximately \$200,000.