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Study shows how to improve bicycle commuter safety; SF Bay Area, Portland OR are case studies

Mineta Transportation Institute's free report evaluates risks, safety, planning, enforcement and more.

San Jose, Calif., February 22, 2012 – The [Mineta Transportation Institute](http://transweb.sjsu.edu) (transweb.sjsu.edu) has published a report that leverages literature review and case studies in the San Francisco Bay area and Portland OR to recommend ways to improve safety for bicycle commuters. [*Promoting Bicycle Commuter Safety*](#) includes chapters on risks, application of social psychology to bike safety, dimensions of effective practices, and more. The report also includes illustrative tables and photos. Principal investigator was Asbjorn Osland, PhD, with several chapter contributors. The 157-page report is available for free PDF download from transweb.sjsu.edu/project/2927.html

“A basic premise in this report is that cycling should be encouraged because as the number of cyclists increases, the attention of motorists and safety improve,” said Dr. Osland. “However, an important caveat is that the number of cyclists must be commensurate with the infrastructure built for cycling to enhance their safety. This report discusses and evaluates various bicycle commuter settings against a framework of what are called the 5 Es – engineering, education, enforcement, encouragement, and evaluation.”

Dr. Osland noted that, of those five categories, engineering is essential because the infrastructure is vital to protecting cyclists. Education is emphasized because safety is the central focus of the report. A number of case studies was included, and the Bicycle Transportation Alliance in the Portland OR area was prominently featured as an effective example of the “education” and “encouragement” dimensions of the 5 Es. The report concludes with a discussion, and it notes the need for continued research or evaluation, with particular reference to using the social psychological model.

As part of the literature review, researchers found a large amount of crucial data, including:

- In 2008 males accounted for 87 percent of bicycling fatalities in the US. More cyclists are male, but females may follow the rules more.
- Bicycle accidents that involved a motor vehicle were a very small percentage of all bicycle accidents; however, the vast majority of *fatal* bicycle accidents involved a vehicle. This is why engineers suggest keeping cyclists separate from vehicles.
- Too many cyclists violate the rules of the road, yet enforcement is often lacking.
- Driver aggression, drivers “squeezing past” bicycles when there isn’t enough room for them to safely pass, and cyclists riding poorly were mentioned as problems in the Berkeley surveys.
- A lack of empirical data on outcomes makes it difficult to identify true best practices regarding safety education programs. However, wearing helmets, maximizing conspicuity, and maintaining one’s bicycle in good working condition while following the rules of the road seem logical.

Tables in the report include those detailing bicycle rider injuries and fatalities; risks associated with riding against traffic, with traffic, and on sidewalks; bicycle stress level values and components; comparison of several bicycle trip factors in the US and Northern Europe; and more.

Illustrations include before-and-after photos of street redesign; examples of safety posters; a children's bike rodeo; an example of a "bike garden" in Switzerland, where cyclists can practice safety skills; bike safety web pages; street markings and signs; and more. Of special note are the maps detailing the city of Berkeley, Calif. bicycle boulevard network, built on existing and newly-created calmed streets.

The complete 157-page report, including an application of models to the 5 Es, is available for free PDF download at transweb.sjsu.edu/project/1003.html

ABOUT THE PRINCIPAL INVESTIGATOR

Asbjorn Osland, PhD, is professor of management at San José State University. He received his doctorate and MBA from Case Western Reserve University. He also holds a Master of Social Work and a post-baccalaureate in accounting. He has taught full time since 1993. Before that he worked in Latin America and West Africa for 13 years for Chiquita Brands, for ten years in several countries for Plan International, and for the Peace Corps in Colombia. His research interests include case writing, business and society, and international HRM, with over 60 published articles, cases and chapters, and a comparable number of conference presentations..

ABOUT THE MINETA TRANSPORTATION INSTITUTE

The Mineta Transportation Institute (MTI) conducts research, education, and information and technology transfer, focusing on multimodal surface transportation policy and management issues, especially as they relate to transit. MTI was established by Congress in 1991 as part of the Intermodal Surface Transportation Efficiency Act (ISTEA) and was reauthorized under TEA-21 and again under SAFETEA-LU. The Institute has been funded by Congress through the US Department of Transportation's (DOT) Research and Innovative Technology Administration, by the California Legislature through the Department of Transportation (Caltrans), and by other public and private grants and donations, including grants from the US Department of Homeland Security. DOT selected MTI as a National Center of Excellence following competitions in 2002 and 2006. The internationally respected members of the MTI Board of Trustees represent all major surface transportation modes. MTI's focus on policy and management resulted from the Board's assessment of the transportation industry's unmet needs. That led directly to choosing the San José State University College of Business as the Institute's home. Visit transweb.sjsu.edu

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