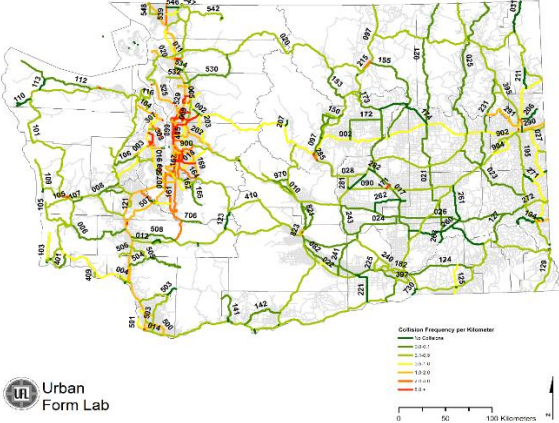| UTC Project Information	
Project Title	Safe Main Street Highways (SMSH)
University	University of Washington
Principal Investigator	Anne Vernez Moudon
PI Contact Information	moudon@uw.edu
Funding Source(s) and Amounts Provided (by each agency or organization)	University of Washington PacTrans $31,302 Washington State Department of Transportation $31,302
Total Project Cost	$62,604
Agency ID or Contract Number	DTRT13-G-UTC40
Start and End Dates	January 15, 2015– September 16, 2016
Brief Description of Research Project	Increases in non-motorized travel raise important safety issues, as pedestrians and bicyclists constitute the most vulnerable road users. Therefore, tools to identify locations with a high risk of collisions between motor-vehicles and pedestrians or bicyclists are essential to insure that gains in mobility, air quality, and health are not accompanied by higher rates of injuries and fatalities in vulnerable road users. The overall goal of this project is to assist in complying with Washington State Strategic Highway Safety Plan of zero fatality and serious injury by 2030, and in reducing the number of pedestrian and bicyclists involved in motor-vehicle collisions on state highways.
Describe Implementation of Research Outcomes (or why not implemented) Place Any Photos Here	The project contributes to the Washington State Strategic Highway Safety Plan, whose goals are to achieve zero road fatality and serious injury by 2030. Part I of the study inventoried collision data in Washington State from 2001 to 2012. More than 90 percent of the collisions had been geocoded for 2010, 2011, and 2012, but only pedestrian and bicyclist collisions had been geocoded for the years between 2001 and 2009. Part II of the study focused on "Main Street Highways" (MSHs), which are stretches of State Routes that also act as main streets for the local populations. Hotspots of pedestrian and bicyclist collisions were identified, and models were developed for estimating socio-economic

	and environmental predictors of collision locations. Collision hotspots were derived from Planar and novel Network Kernel Density Estimation (KDE) methods. Case-control and negative binomial models showed that high risk pedestrian and bicyclist collision locations were significantly associated with collisions occurring (1) at street and road intersections (versus mid-blocks); (2) on wider roads; (3) on roads with bicycle lanes; (4) in low income and non-white neighborhoods.
Pedestrian and Bicyclist Collision Frequency per Kilometer per State Route in Washington State	
Impacts/Benefits of Implementation (actual, or anticipated)	The results of the study can be used to guide and improve pedestrian and bicyclist safety measures. The hotspots detected in MSH zones will help transportation agencies prioritize the locations of future interventions to reduce the risk of collision.

Web Links
   • Reports
   • Project Website
	https://www.wsdot.wa.gov/research/reports/fullreports/862.1.pdf
	https://www.wsdot.wa.gov/research/reports/fullreports/862.2.pdf