UTC Project Information – CAMMSE @ UNC Charlotte	
Project Title	Estimation of Pedestrian Volume Using Geospatial and Traffic Conflict Data
University	The University of Connecticut
Principal Investigator	John N. Ivan and Amy Burnicki
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Funding Sources and Amount Provided (by each agency or organization)	The University of North Carolina at Charlotte: $60,000 The University of Connecticut: $30,007
Total Project Cost	$90,007
Agency ID or Contract Number	
Start and End Dates	10/01/2019 – 09/30/2021
Brief Description of Research Project	Increasing the share of walking as a travel mode is a goal for many urban areas. However, if residents do not feel safe walking they are less likely to use walking for travel. The objective of this project is to estimate models to predict pedestrian volumes at a variety of road crossing locations as a function of observed vehicle-pedestrian traffic conflicts while also considering geospatial and road design factors. Specifically, we will seek to associate observed pedestrian crossing counts with census-reported population data, data describing the nearby land development pattern and data describing crosswalk site and roadway characteristics, along with

	observations of pedestrian and vehicle conflicts. Pedestrian and AADT counts, along with the conflict observations, will be gathered from the archives of recent projects conducted by the lead PI in which pedestrian and vehicle interactions were observed at a total of 206 intersections or midblock crossings. Parcel-level land use data will be acquired for each town where a pedestrian crossing was observed. Population data will be acquired at the census block level from the 2010 decennial Census. Crosswalk site characteristics, including type of traffic control design and crossing distance, were observed at each crossing and are available in the project archives. Network topologies available from State agencies and the Census Bureau will be used to describe the connectedness of the street network surrounding each pedestrian crossing location. The result will be information about how pedestrian volumes relate to the degree of conflicts between pedestrians and vehicles over a range of land development, demographic, crosswalk and roadway conditions. These models will support the CAMMSE theme areas of "generate innovations in multi-modal planning and modeling for high-growth regions" and "Develop data modeling and analytical tools to optimize passenger and freight movements".
Describe Implementation of Research Outcomes (or why not implemented)	

Place Any Photos Here	
Impacts/Benefits of Implementation (actual, not anticipated)	
Web Links • *Reports* • *Project website*	https://cammse.uncc.edu/sites/cammse.uncc.edu/files/media/CAMMSE-UNCC-2020-UTC-Project-Information-12-Ivan-Burnicki.pdf https://cammse.uncc.edu/sites/cammse.uncc.edu/files/media/CAMMSE-UNCC-2020-UTC-Project-Report-12-Ivan-Burnicki-Final.pdf