

Project Title: Evaluating the effectiveness of urban speed cameras on traffic safety in a period of dramatic change

Recipient/Grant (Contract) Number: Carnegie Mellon University, Grant #: 69A3552344811

Center Name: Safety21 National University Transportation Center for Promoting Safety

Research Priority: Promoting Safety

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Project Partners:

- City of Philadelphia
- PA Safe Roads PAC

Research Project Funding: \$82,328.63

Project Start and End Date: 07-01-2023 to 06-30-2024

Project Description:

Speed cameras were installed along segments of Roosevelt Boulevard in June 2020. Two years earlier, the Pennsylvania legislature had approved the camera installation in light of high fatality rates and requests from City officials. In the previous 5 years, the Boulevard had accounted for 14% of the City of Philadelphia's total traffic fatalities. The twelve-lane at grade highway frequently makes lists of the most dangerous intersections and roadways in the country, a particularly egregious statistics since Philadelphia has only about half the national traffic fatality rate. Just three months earlier, Covid-19-related shutdowns dramatically influenced the geography of travel and traffic safety. Collision rates and traffic fatalities skyrocketed throughout the city, likely a result of a combination of decreased congestion, increased drunk driving, and decreased traffic enforcement in the wake of protests against the murder of George Floyd and for police reform. This project examines the effectiveness of the Roosevelt Boulevard using a differences-in-differences approach with a Bayesian Poisson and Negative Binomial models. Selection of control segments will be of utmost importance given the dramatic changes in crashes and fatalities over the period of study. Findings will help inform whether to continue the Boulevard speed camera program, increase the use of speed cameras throughout the state, and potentially liberalize state laws that prevent municipalities from deploying automated speed enforcement without state legislation. Partners include the City of Philadelphia, the Philadelphia Parking Authority, and PennDOT.

Outputs:

This project will result in a peer-reviewed publication and several conference presentations. If legislation is continued and allows continued or additional automated speed enforcement, we will also continue to study the safety effects and provide analysis to the City of Philadelphia as part of its Vision Zero reporting efforts.

Outcomes/Impacts:

The initial analysis has already contributed to an extension of the automated enforcement pilot project. Continued study will support efforts to expand automated enforcement to other corridors in Philadelphia and other parts of Pennsylvania.