Design to Decline: Reducing Traffic Speeds Through Neighborhood Design

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Motor vehicle speeds were measured on five residential streets in different neighborhoods of Bartlesville, Oklahoma, to evaluate whether certain street and neighborhood characteristics may reduce speeding. In this study, speeds of one hundred motor vehicles were collected for each street (having the same speed limit). Speeds were collected during the same daylight hours and dry weather conditions. Correlation analysis and generalized linear regression results show that narrower street width, a higher number of driveways and intersections, and overhanging trees, may contribute to lower motor vehicle speeds and reduce neighborhood speeding. Dewey Ave had significantly lower motor vehicle speeds than the other four streets. Dewey Ave has a traditional grid pattern neighborhood design while the other streets with high motor vehicle speeds have a loop, lollipops (cul-de-sacs), and/or branching tree-like neighborhood design. These results suggest that grid pattern neighborhood design may help control speeding compared to modern loop, lollipops (cul-de-sacs), and branch neighborhood design.

Awards Won: