

# **Analysis of Factors Affecting the Rate of Compliance with the Temporary Stop Regulation at Non-Signalized Intersections Focusing on Geometric Structures**

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Of all traffic fatalities in urban areas in Japan in 2022, 56.7% occurred at and near intersections. 58.6% of traffic fatalities at intersections occurred at non-signalized intersections, a high percentage for non-signalized intersections where automobiles are traveling at relatively low speeds. Therefore, there is an urgent need to study countermeasures against traffic accidents at non-signalized intersections on residential roads. Against this background, in order to prevent traffic accidents at non-signalized intersections, it is important for drivers to check their safety there, i.e., to comply with the rules of temporary stopping. Hence, this study first examined automobile stop rates at several unsignalized intersections. Next, the results of multiple regression and discriminant analysis using the geometric structure of non-signalized intersections as explanatory variables were used to determine the factors influencing the rate of automobile stops. The results showed that the installation of single-light traffic signals and wide sidewalks on the own vehicle side road were factors that increased the automobile stop rate, while zone 30 road markings and choker of the own vehicle side road were factors that decreased the pause rate.