

ABSTRACT

The Palimanan Toll Road is one of the toll roads used by transport vehicles with loads exceeding the permissible limit. These overloaded vehicles cause a decrease in pavement conditions due to damage to the pavement on the Palimanan Toll Road. In Indonesia, the percentage of overloaded trucks can reach more than 60% of the total number of trucks and can be a substantial factor that reduces road pavements' service life. In this effort, many innovations have been made to deal with the damage, which continues to increase yearly, from routine repairs to major repairs. The Palimanan Toll Road, which PT Lintas Marga Sedaya manages, has procured a Weight In Motion device, a technology for weighing vehicles and measuring the dimensions of these vehicles. This final project presents the results of weighing survey data analysis in the Palimanan Toll Road Section and the impact of overloaded trucks on the road pavement. This research aims to examine the damage factor of vehicles caused by overload and the effect of overload on the design life of road pavements. This research was conducted using a Weight in Motion survey. An analysis of the effects caused by the existence of Weight In Motion technology after conducting literature studies, field surveys, and recapitulation of the damage that has been done and the impact of the procurement of this WIM technology, including reducing the number of road damages reviewed from may As of august 2022, it was recorded that the amount of damage was 7.09%. This percentage proves that the WIM technology does not only function to weigh vehicles but can also reduce the amount of damage on the Palimanan Toll Road. Previously in 2021, road damage was recorded at 9,54% from may to august. From the observations that have been made, there has been a decrease in the number of damage to the Palimanan Toll Road and savings in road maintenance costs in 2022 for the may to august period due to the installation of the Weight In Motion device at the Palimanan Toll Gate.

Keyword: Palimanan Toll, Weight In Motion, Over load, Over Dimension.