BEST: International Journal of Management Information Technology and Engineering (BEST: IJMITE)
ISSN (P): 2348–0513, ISSN (E): 2454–471X
Vol. 7, Issue 11, Nov 2019, 7–18

VISSIM MODELING AT BITUNG TOLL GATE TANGERANG INDONESIA FOR IMPROVING TRAFFIC PERFORMANCE

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ABSTRACT

The objective of this research is to know the traffic performance before the existing additional toll booths and whether the number of toll booths at Bitung Toll Gate 1 needs to be increased. This research uses quantitative method with VISSIM model. Previously at Bitung Toll Gate 1, there were five Automatic Toll Booths with the number of cars reaching 1,522 in rush hours from 7 am to 8 am. Thus, PT Jasa Marga (Persero) Tbk as the administrator added two GTOs. From the result of GEH Test calibration and model validation using statistical test of Chi Square which compares the traffic volume using VISSIM model with the data taken from field survey, it is known that the value of GEH Test calibration taken from the highest average value before the GTO addition per hour is 3.352 whereas after the GTO addition the highest average value per hour is 1.902 and this result is below the standard value of <5, thus it is acceptable. Now, the traffic condition at the toll gate after the addition of two new booths shows significant changes from the previous condition.

KEYWORDS: Calibration Parameter, Traffic Performance, Toll Booth, Toll Gate & Traffic Performance