ABSTRAK

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Program Studi : Teknik Sipil

Judul : Kajian Kebutuhan Perlintasan Tidak Sebidang Pada Perlintasan Kereta Api Di Jalan Gatot Subroto, Cimahi

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Perlintasan sebidang rel kereta api di Jalan Gatot Subroto, Cimahi menyebabkan kemacetan saat pintu perlintasan kereta api ditutup, sehingga untuk membuktikan bahwa kemacetan yang terjadi diakibatkan oleh pintu perlintasan ditutup maka perlu dilakukan kajian tingkat kinerja ruas jalan saat pintu perlintasan dibuka. Kajian tingkat kinerja ruas jalan menggunakan metode Pedoman Kapasitas Jalan Indonesia Tahun 2014, dari hasil analisis nilai derajat kejenuhan (D_J) untuk tipe jalan 2/1 saat pagi 0,31 dan sore 0,28, dan tipe jalan 3/1 saat pagi 0,23 dan sore 0,21. Kecepatan tempuh dari hasil survei saat pagi diperoleh 35,43 km/jam, dan sore 36,51 km/jam, sedangkan dari hasil analisis untuk tipe jalan 2/1 saat pagi diperoleh 52,63 km/jam, dan sore 53,63 km/jam, sedangkan untuk tipe jalan 3/1 saat pagi diperoleh 52,06 km/jam, dan sore 52,55 km/jam. Frekuensi penutupan pintu perlintasan kereta api rata-rata 3 kali selama 1 jam. Durasi penutupan 120-210 detik, dan rata-rata lama durasi 159 detik. Tundaan akibat penutupan rata-rata 184,16 detik, tundaan terbesar 294,67 detik, dan terkecil 71,28 detik. Nilai D_J, dan kecepatan tempuh pada saat tidak ada penutupan pintu perlintasan menunjukan tingkat kinerja jalan baik, sehingga ruas Jalan Gatot Subroto dan perlintasan kereta api harus dipisah dengan dibuat menjadi perlintasan tidak sebidang (*fly over*).

Kata kunci : D_J, penutupan perlintasan kereta api, tundaan

ABSTRACT

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Title : *Study of Flyover Needed at Railway Crossing on* Gatot Subroto *Road,* Cimahi

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The level crossing of the railroad tracks on Gatot Subroto road, Cimahi caused traffic jams when the railroad crossing gate was closed, to prove that the congestion caused by the crossing gate is closed, it is necessary to study the level of performance of the road section when the crossing gate is opened. Study of road level performance level using parameters degree of saturation, and speed by using the 2014 Indonesian Road Capacity Guideline method. Obtained degree of saturation (D_J) values for the type of road 2/1 in morning 0.31 and evening 0.28, and for the type of road 3/1 in morning 0.23 and afternoon 0.21. The speed of the results of the survey in the morning obtained 35.43 km/hour, and evening 36.51 km/hour. The speed of the results of the analysis for the type of road 2/1 in the morning obtained 52.63 km/hour, and evening 53.63 km/hour, while for the type of road 3/1 in the morning obtained 52.06 km/hour, and evening 52.55 km/hour. The average frequency of closing railroad crossing is 3 times for one hour. The closing duration is 120-210 seconds, and the average is 159 seconds. The average delay due to the closing of the railroad crossing was 184.16 seconds. The biggest delay is 249.67 seconds, and the smallest is 71.28 seconds. The value of D_J and travel speed when there is no closing of the crossing gate show that the level of road performance is good, so that the Gatot Subroto road and railroad crossings must be separated by being made into a non-level crossing (flyover).

Key word : D_J, the closing of the railway crossing , delay