ABSTRAK

ANALISIS TUNDAAN DAN PANJANG ANTREAN AKIBAT PENUTUPAN PALANG PINTU KERETA API "JALAN PERINTIS KEMERDEKAAN"

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Jalan Perintis Kemerdekaan merupakan persimpangan sebidang tak bersinyal yang sering mengalami kepadatan arus lalu lintas karena adanya perlintasan yang terbentuk dari pertemuan antara dua jenis prasarana transportasi yaitu jalan raya dengan jalan rel. Sehingga aktivitas perjalanan terganggu akibat lintasan kereta api dan banyaknya aktivitas disepanjang jalan menyebabkan antrean kendaraan yang panjang dikarenakan peningkatan volume lalu lintas dan besarnya tundaan yang terjadi. Tujuan penelitian ini menganalisis tundaan dan panjang antrean akibat pertemuan jalan raya dan jalan rel.

Pengambilan data dilakukan melalui survei 1 hari kerja. Data yang dianalisis adalah volume, durasi penutupan palang pintu kereta api, tundaan, waktu *gap* dan panjang antrean kendaraan. Penentuan waktu *gap* kritis menggunakan metode *Gap Acceptance*. Hasil analisis yang di dapatkan yaitu : tundaan yang terjadi menjelang penutupan palang pintu perlintasan pada pagi hari sebesar 433,84 detik dan 388,55 detik.serta pada sore hari sebesar 372,53 detik dan 382,37 detik. dan panjang antrean mencapai 50-68 meter di arah Jalan Perintis Kemerdekaan – Jalan Gatot Subroto.

Kata Kunci : volume; *gap acceptance*; tundaan; panjang antrean

ABSTRCT

DELAY AND QUEUE LENGTH ANALYSIS DUE TO THE CLOSURE OF RAIL WAY "PERINTIS KEMERDEKAAN"

By

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Perintis Kemerdekaan Street is an intersection of unsignalized plots that often experiences traffic congestion due to crossings formed from the meeting of two types of transportation infrastructure, namely highways and rail roads. So that travel activities are disrupted due to the railroad track and the number of activities along the road causes long queues of vehicles due to the increase in traffic volume and the amount of delay that occurs. The purpose of this study is to analyze delays and queue lengths due to the intersection of highways and rail roads.

Data collection was carried out through a 1 working day survey. The data analyzed were volume, duration of closing the rail gates, delays, gap times and vehicle queue lengths. Determining the critical gap time using the Gap Acceptance method. The results of the analysis obtained are: the average closing of the crossing gates is 285.29 seconds in the morning and 165.45 seconds in the afternoon, the average delay is 411.19 seconds in the morning and 377.45 seconds in the afternoon. days, and the queue length reaches 50 meters in the direction of Perintis Kemerdekaan Street-Gatot Subroto Street.

Keywords: gap acceptance, unsignalized intersection, delay, volume