ABSTRAK

Judul: Analisis Kinerja Simpang Tak Bersinyal dan Ruas Jalan pada Jalan Jambore - Jalan Taruna Jaya, Jakarta Timur, Nama: Muhammad Rifqi Zuhair, NIM: 41120110134, Dosen Pembimbing: Amar Mufhidin, S.T.,M.T., Tahun 2022.

Pada tahun 2020 data kendaraan bermotor berdasarkan BPS Statistik DKI Jakarta mencapai 25.452.483 kendaraan yang mengalami peningkatan 11,4% dapat mengakibatkan titik konflik pada persimpangan dan ruas jalan sehingga terjadinya kemacetan, kecelakaan, dan konflik lainnya. Tujuan Penelitian untuk mengetahui volume kendaraan, kinerja, alternatif solusi pada simpang dan ruas jalan. Metode penelitian menggunakan pedoman MKJI 1997 dan PTV Vissim. Analisis kinerja simpang diperoleh volume kendaraan = 4186 smp/jam, kapasitas (C) = 2601 smp/jam, derajat kejenuhan (DS) = 1,609 dengan LOS F dimana kondisi arus tertahan. Analisis kinerja ruas jalan diperoleh volume kendaraan = 2007 smp/jam, (C) = 2590 smp/jam, (DS) = 0,78 dengan LOS C dimana kondisi arus stabil. Hasil vissim diperoleh LOS E dimana kondisi arus tidak stabil. Alternatif solusi pada simpang dilakukan pelarangan belok kanan dari jalan minor dan jalan mayor lengan B diperoleh (DS) = 1,151 dengan LOS F dimana kondisi arus tertahan. Alternatif solusi pada ruas jalan dilakukan pelebaran jalan menjadi 8 meter dan mengubah kelas hambatan samping diperoleh (DS) = 0,67 dengan LOS B dimana kondisi arus stabil.

Kata Kunci: *MKJI 1997, PTV Vissim, Kinerja Simpang dan Ruas Jalan, Tingkat Pelayanan.*

ABSTRACT

Title: Performance Analysis of Unsignalized Intersections and Road section on the road Jambore - road Taruna Jaya, East Jakarta, Name: Muhammad Rifqi Zuhair, NIM: 41120110134, Advisory Lecturer: Amar Mufhidin, S.T.,M.T., in 2022.

In 2020, motorized vehicle data based on BPS Statistics DKI Jakarta reached 25,452,483 vehicles, an increase of 11.4% could result in conflict points at intersections and road sections resulting in congestion, accidents, and other conflicts. The purpose of the study was to determine the volume of vehicles, performance, alternative solutions at intersections and roads. The research method used the 1997 MKJI and PTV Vissim. Analysis of intersection performance obtained vehicle volume = 4186 pcu/hour, capacity (C) = 2601 pcu/hour, degree of saturation (DS) = 1,609 % with LOS F where current conditions restrained. Analysis of road section performance obtained by vehicle volume = 2007 pcu/hour, (C) = 2590 pcu/hour, (DS) = 0.78 with LOS C where the current condition is stable. Vissim results obtained LOS E where the current condition is unstable. The alternative solution at the intersection is to prohibit right turns from the minor road and the major road arm B is obtained (DS) = 1.151 with LOS F where the current condition is restrained. The alternative solution on the road is widening the road to 8 meters and changing the side resistance class obtained (DS) = 0.67 with LOS B where the current condition is stable.

Keywords: *MKJI 1997, PTV Vissim, Intersection and Road Section Performance, Level of Service.*