

The objective of this thesis is to focus on field practice in collecting traffic data which include vehicular volume, travel time and delay, pedestrian volume, public transport volume and parking around Ramkhamhaeng and vicinity area. This particular area is bounded by Latphrao Road, Srinakarintara Road, Phattanakan Road, New Phetchaburi Road and Ratchadaphisek Road respectively. The collected data was synthesized and used in the process of forecasting future traffic volume on the road network in this area for B.E. 2536 and B.E. 2544, estimation of trips to a new Chaloemphrakiat Central Stadium, to obtain suitable factor to expand short count into 24 hour count and analysis in economical justification for construction of pedestrian flyover over Ramkhamhaeng Road.

The results revealed that, during morning peak period, a section of Ramkhamhaeng Road between Soi Ramkhamhaeng 21 (Nawasi) and Soi Ramkhamhaeng 24 (Mu Ban Seri) will carry highest two-way traffic volume about 8,490 pcu/hr in B.E. 2536 and 9,370 pcu/hr in B.E. 2544 respectively.

Secondly, if the central stadium is filled to its capacity of 600,000 seats during a sport tournament, there will be about 4,117 vehicles, excluding public transport more on Ramkhamhaeng Road travelling from Khlongtan Intersection and 1,195 vehicles more from Bangkapi Intersection. These vehicles, on an average, will start the trips 90 minutes before the starting time of the tournament.

Third, traffic volume data collected from 7:00 to 19:00 hrs. time period gives the most suitable expansion factor than other periods, the value being 1.511.

Lastly, the most suitable site for pedestrian flyover over Ramkhamhaeng Road is in front of Welco Department Store, Ramkhamhaeng Branch. At such location, it will give net present value (NPV) of 2,965,628 bahts internal rate of return (IRR) of 34.6 % and benefit cost ratio (B/C) of 2.7 when 15 years economic life and 12% annual interest rate were used in the calculation.

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