

TRANSPORT AND SAFETY – INFLUX OF ROAD VEHICLES

By: R.G. Candiah

Following a forecast by the Road Transport Department (JPJ), Malaysians can expect more congested roads and more accidents. This is based on an estimate given that some 75,000 new vehicles are registered at the department each month.

According to JPJ Director-general Datuk Emran Kadir, 860,000 new vehicles were registered last year, 40% of which were motorcycles. In the first four months of this year, some 293,000 units were registered.

With the addition of one million vehicles, there would be 14.3 million in total, of which 11 million are considered "active".

According to Dato' Ir. George George, Director General of the Malaysian Highway Authority (MHA), the increase in road vehicles is because of the improved economy and increase in people's affluence. He said, as such, there was a need for traffic management as there was a limit to the number of roads that could be constructed.

"The construction of roads are linked to cost and one does not want the whole country to be plastered with roads," he said adding that in developed countries, ideally there would be 600 vehicles per 1000 population.

"As it stands, we have around 200 to 300 vehicles per 1000 population and this will increase as the country develops but it would not increase indefinitely as it will come to a stage where people with vehicles will resort to public transport," he said.

He said Malaysia was improving its public transport system to alleviate

traffic on the roads. "There must be reasonable distance to modes of transport," he said adding that "Dial-a-ride" busses would proliferate in the future to pick up and drop passengers in public transport terminals, thus alleviating the difficulty passengers currently face of walking long distances to use public transport.

"People will eventually develop such a service but not at the moment as the volume is still low and the given company providing such a service will not survive," he said adding that Malaysia was targeting to set up public transport services similar to the ones found in Europe.

George said that as part of the Intelligent Transport Information System (ITIS) being actively implemented at this current moment, Malaysia would benefit from bus-stops having live messages. These live messages consist of transponders on

roads that would pick up the signals and locations of public transport vehicles and clearly give an indication to potential passengers the arrival time of the public transport vehicle.

This will also provide information for cars. Gantries will be set up which will give congestion information and the estimated duration to go from one place to another place via Variable Message Signs (VMS).

He said Malaysian cars will eventually adopt satellite navigation devices in their respective cars which will identify and calculate the optimum route and estimated duration for a particular journey, thus avoiding being held up in traffic jams.

"Car parks will also have electronic displays displaying the number of available bays and the location of these bays, thus the driver of a vehicle does not have to go in search of a parking space," he said.

George added that City Hall was planning to integrate all transport systems enabling a centralised ticketing system in order to facilitate one ticket being used for all modes of public transport.

George said that where toll highways were concerned, MHA has about 15 concessionaires and is planning to set up a real time centralised control centre to monitor



how the highways are being used, to alleviate undue congestions and to monitor accidents.

"By having real-time information, we can overcome bottlenecks and divert traffic," he added. On another note, with the increase in traffic, it can be construed that the number of accidents will also rise.

In the year 2000, the total number of accidents was 250,429, an increase of 12.22% compared to the previous year. In the year 2001, the total number of accidents was 261,175, an increase of 5.89% compared to the year 2000 and in the year 2002, the total number of accidents was 279,237, an increase of 5.30% compared to the year 2001.

The total number of deaths due to road accidents for the year 2000, 2001 and 2002 are 6035, 5849 and 5887 deaths, respectively. Although there is a slight increase in the total number of deaths in 2002, the fatality rate (total number of deaths per 10,000 vehicles) decreased from 5.69 in the year 2000 to 5.17 in the year 2001, and decreased further to 4.89 in the year 2002. It is still high compared to that of developed countries where the fatality rate is in the range of 1.5 to 2.5 deaths per 10,000 vehicles.

The Public Works Department, through the implementation of various safety programs, hopes to reduce the number of deaths in road accidents to 3 deaths per 10,000 vehicles by the year 2010 in line with the Government's policy of reducing the accident fatality rate.

According to Dato' Ir. Mohamad Razali bin Othman, Director of Road Section, Public Works Department (JKR), JKR is the custodian for more than 75% (Federal and State roads) of the total road network in the country. Thus, the department continues in its effort to increase the level of road safety through various road safety programs.

He said JKR is incorporating Road Safety Auditing (RSA) for all new road projects during the planning, design, construction and operation stages of project implementation. RSA is the



formal examination of the planning, design and construction of a road project, and of the characteristics and operation of an existing road.

The Road Safety Audit is also carried out on existing roads to audit on the operation stage. The RSA is carried out in 5 stages:

- 1) Planning and Feasibility Stage
- 2) Preliminary Design Stage
- 3) Detailed Design
- 4) During Construction and Pre-Opening
- 5) Audit of Existing Roads.

He said the RSA is one of the proactive measures to prevent accidents from happening for new road projects and also for existing roads. RSA for new road projects will identify safety hazards during planning, designing and construction of a road project so that they can be eliminated or treated to mitigate their adverse effects at minimum costs.

Razali added that RSA ensures that safety requirements are considered in the planning, design, construction and operation of road projects. He said up to Nov 2003, more than 140 road projects for both new and existing roads have undergone the whole or part of the RSA process.

The Highway Planning Unit of the Ministry of Works has identified a number of accident-prone areas (Blackspot areas) along major and minor Federal roads. Analysing

records obtained from the Malaysian Royal Police using Microcomputer Accident Analysis Package (MAAP) identify these Blackspot areas.

Accidents at a particular location can be diagnosed through police accident records, which then allows the formulation of a collision diagram. This would give the safety engineer some insight as well as the particular trend of accidents that have happened.

About RM60 million has been allocated for this blackspot treatment program. Currently, there are 230 locations that have met the criteria as accident blackspots.

Razali said that under the Eighth Malaysian Plan, the Malaysian government has allocated RM109 million for road safety improvement schemes in addition to the blackspot treatments.

THE SAFETY IMPROVEMENT SCHEMES INCLUDE: -

- 1) Paving of Shoulder - Continuous paving of shoulders for Federal roads in various states are currently being carried out in stages. This program provides travel comfort and increases safety for motorcyclists. With the provision of the paved shoulders, the effect of rear-end collision between motorcycles in mixed

traffic is minimised.

- 2) Improvement of Dangerous Curves – Improvements are made to curved sections of roads where frequent accidents occur and where vehicles are found to skid off-course. The improvement programs usually entail provisions of low-cost measures only and involve placement of additional signboards such as advisory safe speeds and the installation of road furnitures such as guardrails, chevron delineators and road studs.
- 3) Provision of Pedestrian Crossing facilities – Overhead pedestrian bridges and signalised at-grade crossings are constructed to provide safe crossing facilities to pedestrians. The focus is given to pedestrian crossings in town areas and in places where there are

clusters of schools.

- 4) Provision of Overtaking Lanes – Some of the existing inter-urban two-lane two way roads are sometimes limited by constraints, which among other things are due to undulations and abrupt changes in the road gradient. As a result, overtaking of vehicles is occasionally restricted due to limited sight distance. 1km-overtaking lanes are constructed on both sides of carriageway lanes, where possible, at every 5-km interval, usually over a 30 – 40 km stretch of road.
- 5) Installation of Street Lighting – Under this program, streetlights are installed at locations that have a high risk of nighttime accidents especially at areas where there are lots of pedestrian activity at night.

Razali said that in 2001, road accident statistics have shown that accidents involving motorcycles make up approximately 45% of the total accidents that occur throughout the country and 58.3% of the fatal accidents involved motorcyclists and pillion riders.

He added that under the Eighth Malaysian Plan, the government has allocated about RM100 million for the construction of motorcycle lanes. Exclusive motorcycle lanes are built to segregate motorcycles from the mixed traffic lanes.

The selection criteria to build motorcycle lanes are based on the amount of traffic, percentage composition of motorcycles and the annual number of accidents, which involve motorcycles for every kilometer section of the road. ■