

Fixing Dhaka



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RECENT articles and editorials lament Dhaka's transportation woes. The major roads often stand still for minutes on end with no relief in sight. Frustrations boil over. Ordinary people, as well as experts, opine on how to solve the traffic problem in Dhaka. The government has also recently been announcing various measures, including staggering the school, office and business hours to stretch the rush hour traffic to reduce congestions.

Further, the prime minister has also announced a number of projects and initiatives in the parliament and in the cabinet meetings. Some of these are mega projects, such as the elevated expressway over the Airport Road and a new metro rail system for Dhaka. As a member of the Advisory Committee (AC) on the recently adopted Strategic Transport Plan (STP) 2004-

2024 for two years between 2004 and 2006, I had the privilege to look at the problems and issues of Dhaka's transportation in depth.

As an adjunct to the main STP report, the Advisory Committee made a full set of recommendations, which in my understanding became a part of the total STP report. I understand that the current Awami League government is strongly in favour of STP and

has started its implementation plan.

In this article I outline parts of the plan that I think deserve higher priorities than others in order to achieve maximum benefits in the shortest period of time and value for the money. I hasten to say here that opinions in this article are entirely my own and do not necessarily represent that of the Advisory Committee or any of the consultants or

authorities involved in the study.

Because of space constraints, I shall deal with subject matters that I deem to be of immediate importance for improvement of transportation in Dhaka only. I will not discuss the matters relating to (life cycle) costs, institutional structures needed or modes of implementation, as that would by itself require another article.

Short Term

IMMEDIATE action in the transportation sector is to remove as many surface vehicles from the roads and streets as possible and employ a massive overhaul of the surface mass transport system. Immediate actions should include:

Major roads program

Of the ten connectivity roads (see Fig 2) to the Eastern By-Pass (under construction), implement at least five strategically located roads from Bishwa Road to the Eastern By-Pass by 2013. It will increase north-south mobility, by-passing the five inner-city north-south roads, and reduce pressures on Airport Road. It will also make the development of the proposed elevated expressway over Airport Road more feasible. This program deserves the highest priority.

Buses and trucks

- Introduce larger and double-decker buses on all major city roads and streets.
- Rationalise and harmonise the existing private sector buses into a number of limited companies and allocate major routes to one of these different companies. Each route will be served by only one company under a strictly set of rules and regulations. These would include number and types of buses to be used on each routes, frequencies of operation, fares to be charged, etc. No other buses or other companies will be allowed to ply on the designated routes.
- Bus stands to be located at designated points only on the major roads, with unloading or loading of vehicles not allowed at any other location.

Pedestrians

- Clear all major footpaths of illegal occupants and structures, so that pedestrians can use the footpaths and more paved surface is available to all modes of vehicles.
- Provide for designated pedestrian crossings at all traffic intersections. Restrict pedestrian crossings at all other points.

Parking

- Provide and build as many parking-only structures (not mixed with other commercial uses) as possible on all major arterial roads of the city.
- Parking on major arterial roads to be completely prohibited during morning rush hours (6 am to 10 am) and afternoon rush hours (3 pm to 6:30 pm).
- Parking at other hours on major roads to be by metered parking only with heavy financial fines and demerit points for defaulters.
- Parking for vehicles at the rate of 1 vehicle for 2,000 sq. ft. built space to be mandatory for all commercial constructions.
- Hospitals and schools must provide parking on site. No new plans for schools and hospitals should be approved without a parking space for every 1,000 sq. ft. built space.

Drivers and license control

- Computerise the parking violation records of drivers and cars and introduce demerit penalty point system both for car and drivers. Crossing a specific number of penalty points would impound a car and suspend the driver's license.
- Digitise and computerise the licensing system, capable of recording all demerit points and accidental records of the drivers. This will bring discipline in to driving and parking on the city roads.

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Medium to Long Term

IN the medium term (5-8 years), Dhaka needs to develop a three-line metro rail network by 2021: Start immediate planning, organisational, and institutional work to develop a metro network as per STP. Create Mass Rapid Transit Authority with an Advisory Committee to implement the program with highest priority.

Proposal of STP is to plan, design and build at least two Metro lines during this period (5 to 8 years)

Line 1: From Tongi to Saidabad via Uttara, Airport, Kamal Ataturk Ave, Mohakhali, Sonargaon Hotel and Kamapur (should be completed by 2015). This line should be developed in close collaboration with Bangladesh Railways, using mostly the existing rail corridor.

Line 2: From Mirpur (Pallabi) to Bijoy Sarani via Rokeya Sarani to Sonargaon to Bangla Motors, Dhaka University, Azimpur, and Sadarghat to Saidabad (should be completed by 2018).

Both these lines could be a combination of underground and above-ground system (something like the Delhi Metro System). The

underground system could be used in places like the Motijheel/Kamlapur Area. In other areas it should be at least 15 feet above street level. The cost of an above-ground system about half as much as the underground line. Therefore it would be prudent to keep proposed metro lines as much as possible in an overhead system.

Metro line benefits

- A metro line can carry up to 60,000 persons in each direction per hour in a grade separated (above-ground on platform or underground) system in a very rapid and efficient way. No other mode of urban transportation system is capable of this (including BRT or other modes of public transport).
- A metro system removes a very large bulk of urban commuters from the surface transports, thereby also improving the surface traffic navigability and speed.
- Metro is environment friendly and does not pollute the environment, as do many surface transports such as cars, trucks and buses.
- When the three metro lines are built, it will be

capable of moving in excess of 3 million commuters rapidly daily in Dhaka. This will be almost 40 per cent of the total volume of expected 8 million commuters daily in Dhaka with a population of 25 million inhabitants by 2024. No other mode of urban transportation has the capacity to move such a volume of commuters so rapidly.

In the long term (10-12 years), Dhaka needs to introduce a third MRT (metro) line in a circular form that connects the two lines (1 and 2) in an east-west direction.

The metro system, when built, will be capable of moving in excess of 3 million commuters a day. It will therefore be able to move 35 to 40 per cent of the current and future surface traffic quickly and efficiently. This will free up the surface roads of massive volumes of present and future traffic and combined with more arterial roads be an effective tool for urban transportation management in Dhaka's future.

Dhaka has no future without an extensive and efficient metro system.



Fig 1: Proposed Metro and BRT Route Map.

Elevated Expressway vs. Arterial and Connector Roads



Fig 2: Proposed Elevated Highways.



Fig 3: Proposed New Arterial and Major Roads.

REFER to some figures shown in the STP report (Fig 2 and Fig 3) shown below.

These include options and proposals for the development of transport plan for Dhaka by the year 2024.

A major effort in the study has been to enlarge the existing road network by building new arterial and connector roads in Dhaka and the surrounding and to increase the connectivity and accessibility and volume carrying capacity of the city roads (which is currently minimal), diversify and ease the burden of traffic on the Airport Road spine by developing other major alternate new roads and connections. This option has already been provided in the STP document.

STP Dhaka, (2004-2024) Roads ++(+) Proposal The government has currently announced plans and opted to develop the centre spine of the elevated expressway (Fig 1) proposal from Jatrabari to Tongi in phase 1.

Nothing so far has been said about building the major arterial and connector roads. In my opinion, the development of major arterial roads (Fig 2), particularly the two major north-south arterial roads on the eastern and the ten east-west connector roads will be a more effective solution to the city's immediate transport problem and deserve a higher priority.

Benefits of new arterial roads

- It will reduce the traffic pressures on the main centre spine (i.e. the Airport Road).
- It will provide alternate access for the traffic entering from the north-south end of Dhaka. This will not happen with the development of the elevated highway over the Airport Road. (In fact, the development of the elevated highway will further intensify the traffic congestions at the northern and southern entries of the expressway).
- It will open up the eastern fringe of Dhaka for

proper planning and development of additional housing and other facilities.

- It will help mitigate the rising densities in central Dhaka.

Problems associated with elevated highway

- Being a toll highway, it will have limited use potential for general public usage.
- The points of entry and exits from the elevated highway will have severe traffic congestion, as traffic will slow down for toll collections.
- The dislocation of traffic on the centre spine during the periods of construction (for a minimum of five years) will have a devastating effect on the existing traffic and cause severe logistical problems, utility line relocations (electricity lines, water and sewerage lines, cable lines) will be insurmountable.
- The access to and operation of commercial and other buildings on this route (Airport Road) will be almost impossible during the construction period of the elevated highway.
- After construction, the underside of the elevated highway will be reduced to only two lanes, as the structure above will occupy much of the centre of the existing road.
- This lower deck will be dark and crime-infested, causing severe law and order problems.
- It will perpetuate and magnify the existing densities on this route and provide no alternate access to Dhaka from the north and south.
- The cost of this project will deter or slow down other worthwhile and needed STP projects in the city.

It is thus clear that the option of developing alternate arterial and connector roads (Fig 2) is a much superior option than that of developing a cumbersome and expensive elevated highway over the Airport Road (Fig 1).

Recommendations

- Implement the proposals of short-term actions immediately for immediate relief.
- Implement the construction of less costly and more effective major and arterial roads proposed in the STP.
- Plan design and implement at least two metro rail lines within the next 8 years.
- Appoint a Mass Rapid Transit Authority and an expert Advisory Committee to oversee and advise the government on implementation of the projects and the programs.
- Evaluate the progress of the programs and the STP plan every five years.



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