Effect of pedestrian bridges on air pollution

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Abstract — detailed analysis of accidents largely depends on the knowledge of drivers, vehicles, routes and links between them are. In this paper we evaluate the safety of roads in urban and non-urban areas in the next section briefly discusses strategies to suit the possibilities and capabilities of the experts of law in Iran ‘s legislators and the Discussion evaluates based appropriate extent of damage can be caused by low levels of road safety can be prevented.

Keywords — Bridges, pedestrian, air pollution effects

I. INTRODUCTION

Rapid urbanization led to significant changes in the way land is used and the result of the complex interaction between behavioral and structural factors (1). Due to population growth and the subsequent increase in travel demand as well as increased vehicle production and entry, especially in big cities) to the saturation limit (and the Urban longitudinal and latitudinal limits the increase, it increase the traffic of cars, Increased air pollution, visual and auditory cues, increasing costs of fuel, time, people, street maintenance, traffic accidents and accident insurance and vehicle depreciation costs of medical treatment and thus reduce the average speed of movement of vehicles in the city is. The urban transport system more efficiency and effectiveness in public transport should be selected with consideration of the following factors: safety, comfort, speed and passenger handling capacity, accurate scheduling, dispatching kinds of urban transportation, economic evaluation of the construction, maintenance and operation of the system, passenger satisfaction and appeasing them, avoid duplication and exploiting the parallel systems with each other in the passenger transportation. The main factor in urban life and the continuation of the activities of all economic, social, cultural, class cities. Also, transportation and infrastructure related to both direct and mediated influence on the physical development of cities are. Transportation is indeed a fragile area (2). As cities expand the process of cross-over network and transportation system impacts. The rate and extent of transportation in cities emerged which in turn changes the structure and concentration of population in cities they played a significant role (3).

Air pollution as a national problem that the environment is a serious threat to the health of citizens Millions affected by factors such as excessive emission vehicles, No serious device related implementation duties, Distribution of urban management and traffic problems, Lack of appropriate administrative structures to monitor and control the growing phenomenon of venture, has caused Tehran in row one of the most polluted cities in the world to be (4).

Diagnosis and management of air pollution control, air pollution is the most important subset of holistic management. Air pollution control is essential in the diagnosis and management of air pollution sources contribute to air pollution is known to be any changes to the sources, the predictable effects of air pollution in the diagnosis and care to leave (5). Management is not prospective reduce air pollution management. Why, despite all the measures taken and the results of the comprehensive plan to reduce air pollution in Tehran significantly improve or reduce air pollution is not visible.

Other recommended strategies to accelerate the goals of the comprehensive plan include the following topics:

• Approval, expediting and supervising the implementation of comprehensive strategies to reduce air pollution remains
• Coordination between all sections of and adherence to the program adopted comprehensive plan
• Subsidies in order to detect changes in vehicle design and manufacturing technology to reduce emissions
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• Faster and more organized handling of passengers by public transport fleet

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• Implementation plan to improve the quality of liquid fuels in terms of environmental pollution, especially in the mobile and stationary combustion sources
• Necessary incentives to encourage people to make hybrid cars
• Development of postal and electronic communications services, telecommunications and banking to avoid unnecessary traffic Citizens
• Monitoring of stationary sources with self-monitoring plans and taking the necessary incentives for production to reduce pollution
• Development of information technology and environmental education and promotion of a culture of environmental citizens tackle air pollution

Measures taken to minimize fuel consumption and the number of consecutive stops moving and braking vehicles Which leads to the production of air pollutants and noise pollution is generated can be expressed as follows:

1- Improvement of the geometric design with arches: Correction of geometric designs in horizontal arc shown their impact on traffic So that it can be applied to mental background created by the rapid movement of the driver And the average speed of vehicles provided. This action by widening arc across the way to build confidence, move with appropriate speed in real driving routes of interest are. Institute presented the American public with the formula within the proposed amendment and correction B.C.F.E.O.M within the arc with a radius of less than 250 meters is equal to \( s = \frac{50}{R} \) is expressed (6).

2- Traffic control devices: Includes all fixtures and equipment are used correctly and in a timely and appropriate to the amount and location of installation Can reduce travel time and traffic volume and fuel reduction may be effective, including:

2-1- Regulatory instruments: Makes users aware of the legal and regulatory matters of judgment and knowledge of the location or path are assumed improves.
2-2- Warning devices: Attracted drivers installed along or near the route.
2-3- Manual tools Manufacturer: To provide guidance and necessary information to users and users of the properties of geometric designs, Geographical and cultural centers, and other information used to route, With these equipments through conveying concepts and attract attention and respect, and provide the time needed to respond Reaction time can be achieved using the necessary(7).

Increase network capacity so long as a strategy for reducing traffic congestion and its complications was proposed. On the other hand, the threshold of the third millennium and with the advancement of technology is accelerating and expanding the range of types of communication facilities in the city has increased public demand for mobility. In many countries, the extent of travel patterns to the "car" is based. This has led to the growing number of vehicles, private car travel patterns based on the fundamental constraints to achieving sustainable urban development should be considered. Accidents leading to injury, death, disability and pain, loss of productivity, grief, social problems - mental as well as widespread destruction of property insurance are. However, proper planning can increase transport safety and reduce the direct effect of the above share. Safety crises, deaths, damages and costs resulting from road traffic accidents is one of the important challenges of health, public health and developing countries. And those people who are often the main victims aged 15 to 44 years, and especially young people. Traffic accidents were the second leading cause of death after cardiovascular disease into account e most common presenting to emergency departments and operating rooms, road traffic accidents are caused by immune deficiency. Detailed analysis of accidents largely depends on the knowledge of drivers, vehicles, routes and links between them are in this paper the first part of the evaluation of road safety, urban and Iran briefly discussed and In the next section tailored solutions capabilities and abilities of professionals, legislators and enforcement of those laws is discussed and evaluated Given that it may be appropriate extent of damage caused by low levels of road safety can be prevented. Revealed that the pedestrian bridge Reduces fuel consumption by 87, 348 liters per year and reduce pollutants Such as NOX, HC and CO, respectively, 232 and 278 and 6310 kg each year.

Urban Smart Growth strategy to reduce air pollution in metropolises:
A growth plan that uses social factors, economic and environmental development in arid areas and equipped with the necessary infrastructure to conduct.

What Astral?
Horizontal expansion of the city, in the mid-twentieth century due to indiscriminate use of private cars and the development of highway systems, expansion of urban spaces in America flourished.

The advent of smart growth policies Urban Smart Growth policy response to the many problems of horizontal expansion. Smart growth in favor of slow growth, not any growth. This concept implies that growth is inevitable, but planners are able to reduce the adverse effects of excessive horizontal dispersion.

The idea of the history of rural - urban: A British architect to develop ideas for improving the design of code changed a paid theme of social consciousness and the desire to eliminate traffic and traffic with private cars.

Two moves that have a large impact on the broader adoption of smart growth:
1. Message of smart growth and national security laws in
Maryland
2. Publish Legal Handbook smart growth (by APA)
Multiple principles of smart growth:
Principle I : Combining User
principle II: use of compact building design
principle III: the creation of a diverse range of housing options and practices
principle IV: the creation of pedestrian
Principle V: Characteristics of cultured, attractive communities with a strong sense of place
Article VI: preserving open space, farmland, natural beauty and critical environmental areas
Article VII: Strengthening and directing development toward existing communities
Article VIII: creating a set of transportation options
Article IX: development decisions predictable, fair and cost effective
Tenth Principle: Encourage strong community partnerships

Smart Growth objectives:
1- Creating livable communities: communities of human beings and not The cars are driven, neighborhood-scale Livable communities, with shops, restaurants and Agencies that have a little distance from residential areas And on foot or by bicycle, for the most part still are available.

2- Closeness to nature and sustainable protection of valuable land: oneness to nature and sustainable protection of valuable land. An issue which is not inconsistent with dense development. Green corridors along streams, these sites provide access to a resident, while productive agricultural areas, open spaces and wildlife conservation are consistently effective and valuable.

3- Public Bus: Public buses in the city to support the development of dense forms are necessary.

4- Revitalization of the suburbs, city centers and commercial areas of Old

5- Urban growth boundaries: urban growth boundaries, lines around the city makes clear that next year is set to grow 30-20

6- Having long-term prospects for communities

With some strategic planning:
Establishment of common schools and businesses in residential neighborhoods.
Provide sidewalks Welfare (Chair, Canopy, and Light). Cut back cache to minimize the size of the building and the street.
Encourage water conservation and wastewater systems.

II. CONCLUSIONS
Structure and urban form is important in reducing air pollution. Since smart growth, urban land increased access, reduced travel, social and environmental quality through design principles and vision to improve the can contribute significantly to reduced air pollution problem.

Due to the growth of five percent of the population in large cities, Carry about 1/6 day trip by any person, Growing production of private cars entering the streets of major cities, Medium deceleration movement of vehicles on the roads, Increased levels of air pollution, visual and auditory, and effective utilization of high capacity public transport systems, Optimal use of upper and lower surfaces of the streets by urban rail transit systems is inevitable. Transport systems play an important role in protecting the environment, urban life and the lives of everyday citizen's play and if we neglect the implementation and application of the principles of urbanism and little traffic Current status and future generations will inevitably encounter many risks build. Therefore, the use of sustainable transport systems as a critical factor in maintaining healthy urban countries is inevitable to reduce some of these problems. It seems that in our country due to the limited development of technologies related to green transportation technologies, the cost and, Transfer option and are partly to avoid administrative priority, Therefore, policies that focus on improving the implementation of transportation demand management, development and provision of high quality public transport, cycling and walking infrastructure should be concentrated.

Below are some general guidelines for achieving sustainable urban development in cities is mentioned:
- Complete program of investment in public transport and create or improve conditions for walking or cycling....
- Traffic management, including the consideration of priority for public transport in high-density areas where infection is the critical level.
- Allocation policy priority to methods that produce less pollution
- Policies to reduce pollution through the implementation of pollution control methods) traffic management (application of chemical converters
- Policies to reduce pollution by using methods of controlling volume vehicles
Enforce environmental standards and setting the rules for inspection and technical examination of vehicles

Decide on the optimal amount of pollution reduction catalysts should reduce the time during which to exercise

Formulation and implementation of integrated urban transport planning standards based on land.

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REFERENCES

[1] American Conference of Governmental Industrial Hygienists. 2007 TLVs® and BEIs®: threshold limit values for chemical substances and physical agents and biological exposure indices. Cincinnati: ACGIH.


[6] H, Behbahani. Geometric designs to print, I'm the center of academic publishing, 1378.