

Study on Traffic Organization During Construction of Urban Road

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Abstract: The road construction will have a greater negative impact on the surrounding area of the current situation. During the course of road construction, it is very important to carry out scientific traffic organization plan for the important goal of safety and smoothness. In this paper according to the road traffic organization in the period of construction launched a detailed research, the purposes, principles, strategies and measures analysis system are discussed during the construction of traffic organization planning and design; combined with the traffic organization design of Chongqing City Huatang Road Interchange Project during construction, deepening theoretical research to practice.

Keywords: Road construction; Traffic organization; Traffic flow; Traffic control

1. Introduction

In order to meet the needs of rapid economic development, city in all kinds of municipal construction, traffic infrastructure construction are to promote a full range of, however, a lot of construction not only on the environment pollution caused by more due to road construction, the construction area of even greater range of road traffic generated enormous pressure, may cause road congestion, travel delays, coupled with the bus lines may be diverted or adjust the site, to the surrounding of the relevant units and the mass travel, life caused great inconvenience, a serious impact on the surrounding people's travel and life. The purpose of this study is to ensure the construction project of the construction project by means of traffic organization planning and design, which can handle the contradiction between construction and traffic. Smoothly, while the impact of the construction of urban traffic to the lowest level.

2. Objectives and Principles of Traffic Organization During Construction Period

2.1. Planning and design objectives

Due to the impact of construction, current situation of road traffic balance is broken, traffic organization is through the re allocation of road space resources, the vehicle in the entire study area road network and orderly operation, so as to maximize the use of road resources, enables the vehicle to bypass the shortest time; at the same time, to the greatest extent decrease caused by the construction of social, economic and environmental impact. Therefore, the study of traffic organization plan must be from the road network, combined with the temporary road traffic control measures and emergency traf-

fic organization plan, fully coordinate the relationship between traffic and construction.

2.2. Principles of planning and design

Traffic planning group fabric design is using the basic theory and principle of traffic engineering, to traffic safety, unobstructed, efficient, convenient and and environmental harmony for the purpose, to transportation system of "resources" as the constraint condition, for existing and future construction of transportation system and facilities to be optimal design, seeking the optimal scheme for improving the traffic and road traffic engineering construction organization design should follow the following principles:

Direct occupation of road space resources, reduce the traffic capacity of the road construction project of the road will be. Therefore, in the construction process, in the range allowed by the road red line, try to open up temporary traffic sidewalk, as far as possible to ensure that "accounted for a further one, reduction of capacity. To ensure that pedestrians, non motor vehicles and public transport priority is the important embodiment of the concept of "people-oriented" and "bus priority". Bus principle, try not to diversion, to facilitate the travel of the broad masses of the people. At the same time, to ensure the stability of the scope of public transport services; such as to be diverted, the original site to provide guidance of traffic language or directly to the promotion of the passengers.

Traffic as a system, not only in the single point of access to the benefits of security, but should consider the overall effectiveness of the system. Traffic improvement measures to the overall system efficiency as the goal, not the whole network traffic efficiency in exchange for a single point of efficiency. The integrated use of traffic conflict

technique, traffic impact analysis, traffic assignment, management and control, and other related theories, and strive to scientific traffic organization in the period of construction scheme; at the same time, during the construction of the implementation of traffic organization requirements relevant departments to coordinate with each other, the requirements of the research results should be quickly reflected in the reality, and produce a good operating results.

3. Traffic Organization Planning and Design During Construction

3.1. Traffic analysis

Traffic analysis during construction is helpful to the development of regional traffic organization scheme, and the corresponding traffic organization measures can be taken according to different traffic conditions. During the construction of the road, the analysis of the regional traffic mainly has the following three aspects:

Road reconstruction pass ability changes directly affect the traffic in the surrounding area of and master road originally traffic flow magnitude, along the traffic situation, intersection types and service level, combined with the changes of the service level of the road after construction, analysis the construction section of the traffic carrying capacity.

Bus as an important tool for residents to travel, the construction period of the bus line maintenance and ensure that the "people-oriented" is an important aspect of. Even due to the construction project, the bus lines are affected, can not be normal service status living area. Therefore, it is necessary to analyze the public transport environment, to sort out the impact of the bus lines and passenger service points, to provide the basis for the follow-up bus line adjustment and organization.

The nature of the regional road network and traffic flow is analyzed, and the traffic flow is divided into the space and time flow. The road network can be used as the basis of traffic flow and the road network is based on the surrounding area.

3.2. Traffic organization strategy research

The first category is in the area of transportation; the second kind is the trans regional transportation; the third kind is the septal area traffic. The three types of traffic flow in the OD point is in the impact of the region, as long as the trip will bring pressure to the regional network. But these three types of traffic flow will generally bring economic contribution to the area, so the regional internal traffic organization, in addition to trucks, agricultural vehicles, less on the three kinds of traffic flow to take measures to limit. The fourth kind is adjacent area traffic; the fifth kind is the adjacent area trans regional transportation; the sixth kind is separated by the area

traffic; the seventh kind is through the adjacent area traffic. In general, the regional traffic organization, these are the reference factors, to see if the adjustment of the regional traffic organization led to the adjacent, separated by the regional traffic conditions. When necessary, it is necessary to adjust the traffic organization in the adjacent area.

The eighth kind of traffic is to wear area traffic, this kind of traffic flow is very little to bring economic contribution inside the area, and more is to bring traffic pressure to the area. Therefore, the construction of the impact of the regional transport organization, mainly for such traffic within the region and the regional diversion of the ban, reduce the traffic pressure on the region caused by such traffic.

Shunt network is to reduce the construction and traffic interference, to ensure construction safety and traffic safety, the entire road network as an organic whole, regional network from the triage of ideas of construction period guarantee road network service level is not greatly reduced, so that the transit of vehicles in advance to the traffic volume on the other road.

Traffic detour diversion can also be called parallel diversion Road, should be understood as a particular case of network streaming, is also the construction road vehicles transferred to the parallel to the road. Parallel roads should be carried out in advance to improve the implementation of the road traffic capacity, increase security measures, parallel to the road can also be a new road. The way is not easy to cause traffic error detour distance is short, less impact on travel, most cases need to enforce. Under the impact of the construction of the construction of a temporary detour to achieve "accounted for a" and "compensation" to occupy the construction of roads, to reduce the mutual impact of between different types of traffic within the construction area also has a positive role.

According to the impact of the current situation of the construction period of public transport, from the perspective of the public to travel from the point of view, the construction period of the bus lines to adjust the organization mainly in the following aspects:

For taking part of the construction of the road, from the point of reducing the road traffic pressure, the peak period of the peak hours of traffic saturation is too large and bus lines on the road to the bus line. For the construction of a fully enclosed Road, the bus routes need to be diverted. Project construction site occupied bus stop or affect the bus stop and stop, the bus stop needs to migrate or cancel. Impact on the area of the bus station to try to organize the idea of the organization of the public transport to achieve up and down passengers, reduce the impact. Other if there are rail transport site, need to consider its convergence with the conventional bus.

During the construction of the road, access to the construction area of the walking group is unified, in order to pass the construction area, relatively strong overall characteristics of pedestrian flow. Therefore, pedestrian traffic organization mainly reflected in to ensure the safety of pedestrians, guide the pedestrian evacuation. Set up temporary signs in front of the construction area, to guide pedestrians to changing the normal crossing route, even bypass. In the construction area of the active safety measures for pedestrians, the first rule is to make pedestrians to avoid the construction area".

In the case can not be avoided, should establish a pedestrian organization signage, message boards, warning signs, markings, deployed to complete information provide safety guidelines for pedestrians. At the same time, the construction personnel to provide traffic advisory for pedestrians, and persuade their unsafe behavior obligations. Try to keep the pedestrian path unobstructed and good isolation. If you need to block the human TRAIL must be set in advance the eye-catching warning signs, and provide information to bypass, or to build three-dimensional through facilities. When necessary to draw line, to guide pedestrian contour.

3.3. Emergency traffic measures

Road construction period may be faced with unforeseen emergencies, such as traffic accidents, therefore, should made an emergency traffic emergency measures to ensure that in case of emergency personnel safety and traffic order.

Establishment of information monitoring center, using a variety of ways to the audience, publicity and stands ready to provide traffic information service; of roads and intersections, traffic monitoring, can be real-time monitoring of inside and outside the stadium area traffic conditions, once the event of an emergency can dispatch of emergency rescue and rescue vehicles: such as tow trucks, trailers and other. Set up a temporary emergency response organizations, to prepare trained emergency personnel, the establishment of the necessary rescue vehicles and evacuation of dedicated channels and lines, all emergency rescue vehicles are in under the command of the

traffic control center to ensure safe and smooth mass rescue and evacuation to safety.

Management services for the provision of parking and temporary parking for the evacuation of vehicles. Strengthen to the scene of the emergency command and closed roads around the site, the implementation of regional traffic control and traffic bypass and other pre disposal measures. Direct influence area, the mass flow of traffic organization and management: to ride the evacuation of the masses of the vehicle arrival or leave the evacuation vehicles docked points to effectively organize; to walk or self driving evacuees to effectively organize.

4. Conclusions

City road construction investment, long construction period, the construction of a wide range of traffic impact on the city is very large. Therefore, before construction should be done during the construction period of traffic organization plan research work. The purpose of this study is to pass after overall consideration during the construction of the traffic flow and the current situation of traffic flow and Research on the reasonable organization schemes, as far as possible reduce the disturbance of construction of regional traffic, reduce to residents living along the line, the adverse effects of social operation, the practice of road traffic organization in the period of construction provide guidance.

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