



GOVERNMENT OF PAKISTAN
MINISTRY OF COMMUNICATION
NATIONAL TRANSPORT RESEARCH CENTRE

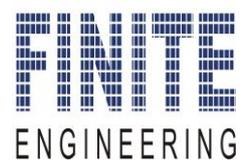


NTRC PERMANENT TRAFFIC COUNT PROGRAM PHASE-I



MONTHLY PROGRESS REPORT April, 2020

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1 INTRODUCTION

1.1 Background

Infrastructure is both a cause and a consequence of economic growth. The role of infrastructure in integrating countries into the global economy by providing transport services is well known. Infrastructure can also raise the quality of human capital, which is a key factor in achieving high and sustainable levels of growth. Improvements in the quality and quantity of infrastructure have a disproportionately positive impact on the poor, and thus play a vital role in reducing income inequality.

A well performing Transport structure is vital for a country's development. Investment in a country's infrastructure directly affects economic growth as producers find the best markets for their goods, reducing transportation time and cost, and generating employment opportunities.

Pakistan is gifted with a naturally geo-strategic location. It is at the periphery of South Asia on one side, and Central Asia on the other side. In the south, the Arabian Sea forms a gateway to the vast Eurasian hinterland. It is here that cultures of Central, West and South Asia crisscross. This ideal location makes Pakistan one of the most attractive and shortest routes for transit to the Central Asian Republics (CARs) as well as China. Indian trade to that region, in an economical / convenient manner, is also dependent on the availability of passage through Pakistan.

Pakistan's location provides economic advantage for freight transportation from the Indian Ocean to Afghanistan, China, and the Central Asian States.

Pakistan, with more than 200 million people, has a reasonably developed transport infrastructure. Road transport is the backbone of Pakistan's transport system. The 12,131 km long National Highways and 4,266 km long Motorway network (Figure 1-1) carries 80 to 90 percent of Pakistan's total traffic. Further development of the road network is expected to continue under the CPEC projects.



Figure 1-1: National Highway & Motorway Network in Pakistan

The precise and consistent traffic volume study is the basic pre-requisite for planning in the transport sector. The result of the study is used to assess the existing, predict the upcoming traffic demand and evaluate maintenance requirements of the highway and motorway network.

In order to update the data base of the current traffic conditions, National Transport & Research Centre (NTRC) is conducting a Permanent Traffic Count Program (Phase – 1) using automated devices for a period of 365 days at following sections of National Highways and Motorways:

- Motorway, M-1, Islamabad – Peshawar
- National Highway, N-5, Torkham – Kamra
- National Highway, N-35, Hassanabdal – Khunjerab
- National Highway, N-45, Nowshera – Chitral

M/s Finite Engineering et al. have been assigned the task to conduct classified and directional traffic count on the selected sections of highways / motorways.

1.2 Need Assessment

During the past few years, the traffic volume on the highway network has increased tremendously. The up gradation in the widening of highway is largely dependent upon the on-going traffic volume on that road. Thus, there is a need to obtain the latest classified traffic volume data on national highways and motorways. This will not only help in assessing the existing traffic pattern on road network but also support in obtaining actual vehicle classification data. The study will also help to identify critical flow time periods, determine the influence of large vehicles on vehicular traffic flow or document traffic volume trends.

1.3 Objectives

The main objective of this project is to get classified traffic counts which will be useful for:

- Planning and prioritization of highways;
- Design of highway projects;
- Planning of road maintenance;
- National transport statistics;
- Road safety measures; and,
- Traffic control

The traffic count information is useful for many other purposes such as for calculating road user costs, road classification, environmental appraisal, and cost-benefit analysis.

1.4 Survey Location

The traffic survey is conducted on North Bound (NB) and South Bound (SB) at following particular locations (Figure 1-2) on each highways / motorway section as discussed in 1.1.

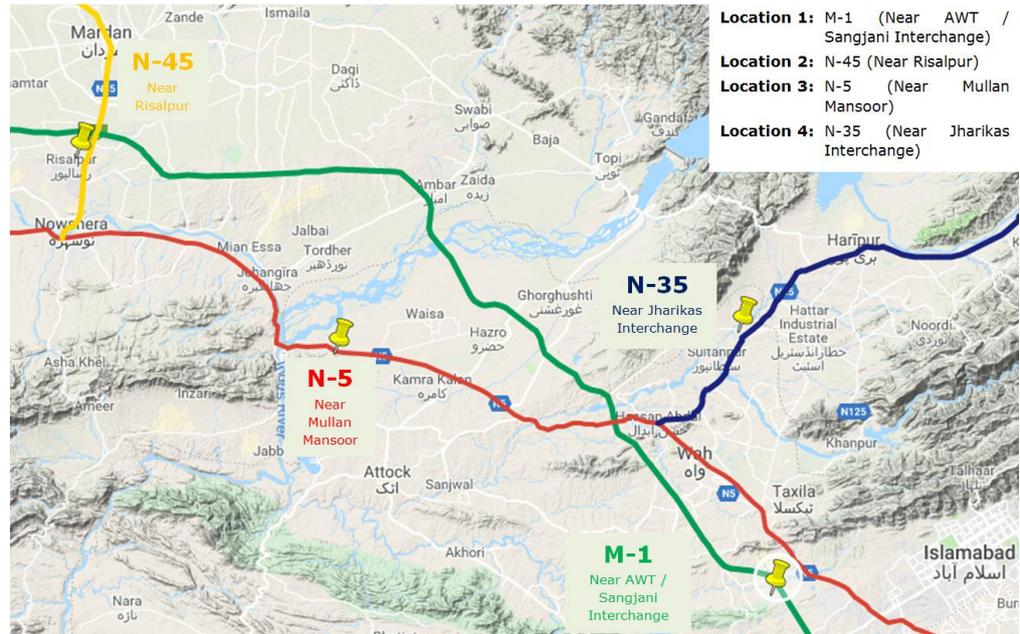


Figure 1-2: Traffic Survey Locations

The coordinates of survey points are mentioned in Table 1-1.

Table 1-1: Traffic Count Location Coordinates

Sr. No.	Highway / Motorway	Location	Coordinates
1	M-1	Near AWT / Sangjani Interchange	33°39'1.59"N 72°49'42.36"E
2	N-5	Near Mullan Mansoor	33°53'26.73"N 72°18'45.61"E
3	N-35	Near Jharikas Interchange	33°54'37.18"N 72°47'6.49"E
4	N-45	Near Risalpur	34° 5'4.02"N 72° 0'25.68"E

1.5 Vehicle Classification

The traffic volume plying on road network is composed of various vehicle types. The different vehicle categories classified during traffic survey is mentioned in Table 1-2.

Table 1-2: Vehicle Classification

Sr. No.	Vehicle Categories	
1.	Motorcycle	
2.	Motor Rickshaw	
3.	Car / Jeep / Pajero / Taxi	
4.	Hiace / Minibus	

Sr. No.	Vehicle Categories	
5.	Large Buses	
6.	Light Truck	
7.	2 Axle Truck	
8.	3 Axle Truck	
9.	4 Axle Truck	
10.	5 Axle Truck	
11.	6 Axle Truck	
12.	Others	

1.6 Equipment Used

The Consultants have used Pneumatic Tubes for conducting classified traffic count survey. Pneumatic road tube sensors send a burst of air pressure along a rubber tube when a vehicle's tires pass over the tube. The pressure pulse closes an air switch, producing an electrical signal that is transmitted to a counter or analysis software. The pneumatic road tube sensor is portable, using lead-acid, gel, or other rechargeable batteries as a power source. The road tube is installed perpendicular to the traffic flow direction.

The Consultants will also verify and ensure quality of data obtained from Pneumatic Tubes, by means of video recordings at each survey location before submission to the client.

1.7 The Report

This report deals with traffic count survey and analysis for the month of April, 2020. The results of traffic count survey executed on national highways and motorways are presented in succeeding sections.

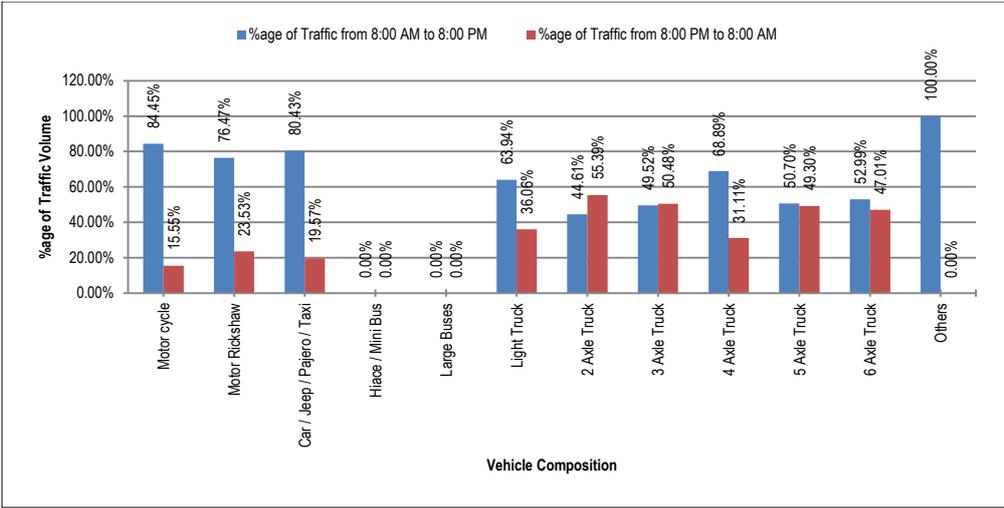


Figure 3-9: Percentage of Traffic Composition in Day and Night Time on N-5

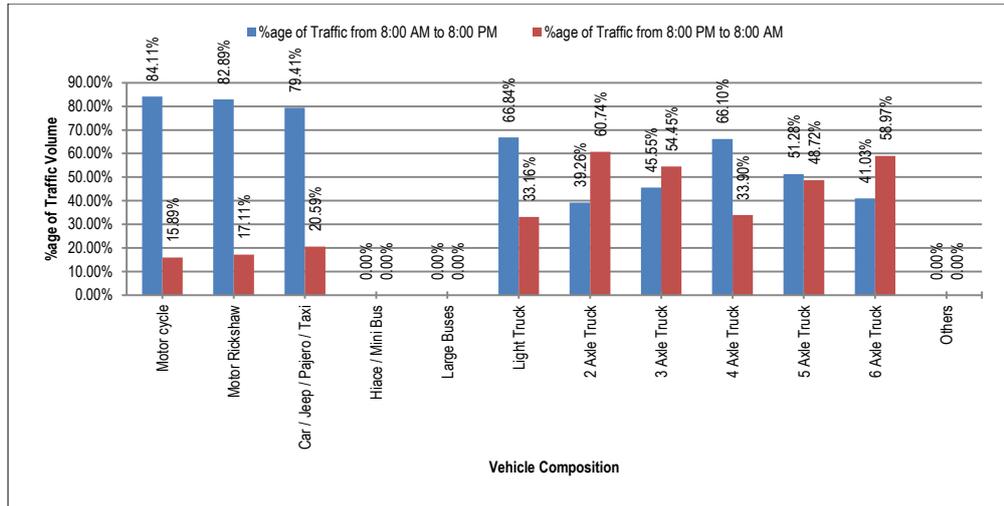


Figure 4-9: Percentage of Traffic Composition in Day and Night Time on N-35

Annexures

Annex-1: Motorway M-1

Annex-2: National Highway N-5

Annex-3: National Highway N-35

Annex-4: National Highway N-45

