Traffic volume study and Travel time survey In Pune city

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Abstract-*Traffic engineering uses architectural methods and techniques to achieve the safe and time efficient movement of individuals and goods on roadways. The safe and time efficient movement of the people and goods is dependent on Traffic flow|, which is directly linked to the traffic characteristics. The three main parameters of a traffic the flow of visitors are quantity, speed and density In this work emphasis was given on traffic volume and the analysis was carried out through primary traffic flow surveys at Municipal Corparation to Warje Malwadi & Juna Bazar Junction in Pune City. The flow of visitors is studied by manual methods. With the help of the data collection, an attempt had been made to understand the traffic designs during different periods.*

Keywords-Traffic volume survey, Travel time survey, Manual counting method, Location- Khumbharwada chowk, Kasba peth, Pune.

I. INTRODUCTION

This quotation describes almost everything about the value of transportation. Travel is carrying civilization to a brighter future. Right now a day's transportation is one of the most burning issues in each and in every single place of the world. Every single country is approaching in a different way according to their needs and solving their transportations problems inside their capabilities. In designing buildings we need to determine loads approaching to the structure to calculate reinforcement to be provided for safe working of the structure. Right here in transportation volume acts the same purpose. To get planning, designing and procedure of transportation system the first and foremost necessity is volume. Volume is actually the number of vehicles passing an area of a roadway. Expressing traffic volume level as number of vehicles passing a given section of road or traffic lane per unit time will be inappropriate when several types of vehicles with widely varying fixed and dynamic characteristics are comprised in the traffic. The problem of computing amount of such heterogeneous traffic has been resolved by converting the several types of vehicles into comparative passenger cars and conveying the volume in conditions of Passenger Car Device (PCU) per hour. The interaction between moving vehicles under such heterogeneous traffic condition is highly complicated. Again volume is not constant. It increases with time. So a constant method of calculating quantity is a matter of great importance for soft functioning of transportation system. If volume data is not found on a consistent basis then the transportation system may are unsuccessful and our economy of the country may face a great difficulty.

II. VARIOUS METHOD OF TRAFFIC VOLUME SURVEY

{Presently there are now there Generally there are} two major methods of counting vehicle for volume survey. They are-

1. Manual Counting
2. Automatic counting method.

1.Manual method

In this method, vehicles are counted personally. There are two methods of manual counting one particular.

1.Direct Approach
2.Indirect Method.

1. Direct Method:

Data is counted by using hands tally and manual counters/enumerators.

Advantages: At this time method traffic volume as well as vehicle classification and turning proportions can be attained. Data can be used soon after collection.

Disadvantages: This kind of method is not Franco for long duration count number and when flow is high. Error frequently occurs specially when volume is high. Count number cannot be cross checked out. Count cannot be done in undersirable climate.

2 Indirect method :

In this method, data is collected using online video camera. Video is captured for long time and data is collected later by rewinding Advantages: Besides traffic volume, several traffic parameters can be obtained from recorded film. Info can be cross checked out and quality can be ensured. This method applies when volume is high. It is suited to non-lane based traffic operation.

III. TRAFFIC VOLUME SURVEY MORNING TIME – 9.30 A.M. & 10.30 A.M.

TWO-WHEELER

Left side	Straight side	Right side
44	1540	40

Table no 1

THREE -WHEELER

Left side	Straight side	Right side
5	148	4

Table no 2

FOUR-WHEELER

Left side	Straight side	Right side
8	146	3

Table no 3

HEAVY VEHICLES

Left side	Straight side	Right side
2	8	3

Table no 4

AFTERNOON TIME – 1.30 p.m.TO 2.30 p.m.

TWO-WHEELER

Left side	Straight side	Right side
20	322	18

Table no 5

THREE-WHEELER

Left side	Straight side	Right side
3	120	5

Table no 6

FOUR- WHEELER

Left side	Straight side	Right side
6	138	7

Table no 7

HEAVY VEHICLES

Left side	Straight side	Right side
1	10	2

Table no 8

IV. COMPARISON FOR VOLUME OF VEHICLES BETWEENPEAK HOUR AND NON-PEAK HOUR

Sr no.	Vehicle	Peak	Hour		Non	Peak	Hour
		Left	Straight	Right	Left	Straight	Right
1.	Two wheeler	44	1540	40	20	322	18
2.	Three wheeler	05	148	04	03	120	05
3.	Four wheeler	08	146	03	06	138	07
4.	Heavy vehicle	02	08	02	01	10	02
		Total -	1950		Total -	652	

Table no 9

V. COMPARISON OF TRAFFIC TRAVEL TIME SURVEYBETWEEN PEAK HOUR & NON-PEAK HOUR

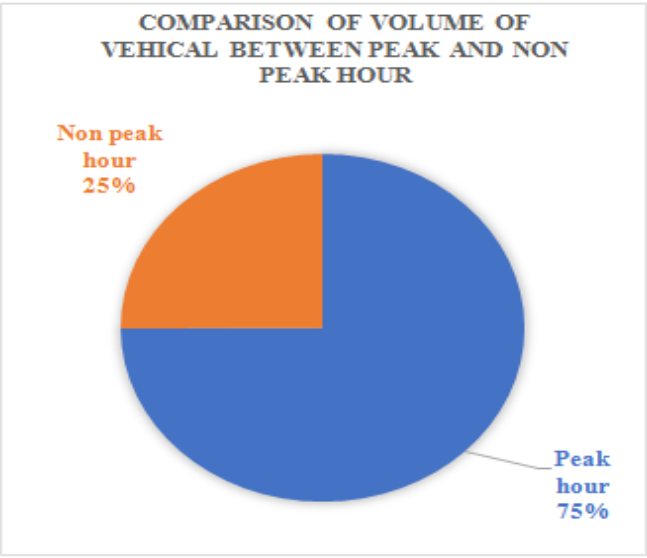

Figure no 1

IV. COMPARISON OF TRAFFIC TRAVEL TIME SURVEY BETWEEN PEAK HOUR &NON-PEAK HOUR

Survey	Peak hour	Non peak hour
Time (sec)	3224	1509

Table no 10

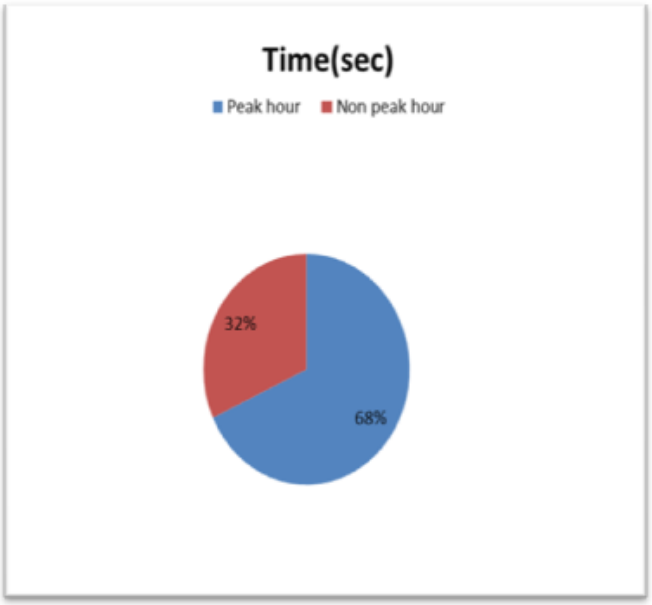

Figure no 2

V. CONCLUSION

- Study of traffic volume survey shows that only 25% of vehicle are used during non peak hour where as 75% vehicles are in peak hour.
- Composition of vehicle shows that most of the vehicle in traffic stream where light weight vehicle (two wheeler)& only few percent is convered by heavy vehicle the reason for such high proportion of light weight vehicle is the location & economic class of people.
- Traffic travel time survey shows that 68% of actual time is required during peak hour. During non-peak hour 32% of time.

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