

Evaluation of Traffic Problems at Reliance Square (Kudasan, Gandhinagar)

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Abstract— The quick urbanization has resulted in enhanced travel demands and thereby an increase in urban transport problems. The urban traffic problems are attested with traffic congestions, accidents, unauthorized parking, poor land use, inadequate transport planning as well as poorly maintained road networks. This study mainly focus on evaluation of traffic problems occurred at Reliance Square (kudasan), this study area is located near Gandhinagar city and having some serious traffic issues.

Key words: Evaluation of Traffic Problems

I. INTRODUCTION

The traffic of an urban area increases rapidly due to the growth in population and vehicle ownership. With the advancement in transportation and urbanisation, traffic congestion has become the main socio-economic problem in urban as well as rural areas in developing countries. Careful and balanced management is required for this increased traffic problems. The urban road of India generally carries the heterogeneous traffic which is the combination of various types of vehicles like cars, buses, motor cycles, trucks, auto rickshaws, carts, etc. These all vehicles have different size, speed, load carrying capacities or passenger capacities, etc. which affect the traffic flow.

The purpose of this paper is to identify all the traffic problems due to which study area is suffering from a high traffic congestion .the problems would be identify by several surveys conduct in study area and all the data would be analysed. Surveys conduct are:

- 1) Traffic volume count survey
- 2) Accidental data collection
- 3) Roadside interview
- 4) Road characteristics data
- 5) Vehicular characteristics



Fig. 1: traffic at study area

A. Need of study:

- 1) It's been very needy to give a proper traffic solution for this particular urban road where traffic is very high and congested so
- 2) Traffic problems have to find firstly.
- 3) Due to this so many people suffers from additional time consumption and waste of time.
- 4) So many accidents take place at this roads or intersection nearer.
- 5) It's important to improve road carrying capacity of this urban roads to convey higher amount of vehicles so problems have to find out properly.

B. Objective:

The only objective of this study is to find actual and all problems due to which area is suffering from traffic.

C. Scope of Study:

- 1) The study area is suffering from heavy traffic congestion at different time of day period.
- 2) Then various effective phenomenon for occurrence of that problem was investigated.
- 3) Data Collection of the existing facility.
- 4) Study would be based on: 1) Traffic volume count, done at 5min ,15 min and hourly base pattern 2) Road characteristics data
- 5) analysis of Collected data would be done
- 6) And problems will be defined with all data required

II. SURVEY DATA RESULT AND ANALYSIS

III. ROAD SIDE INTERVIEW SURVEY

Manual roadside interview was conducted on study area and consumers of particular road were asked to fill up the form which cosives their review on traffic problems and its causes as per their personal views on study area , and result is 96% people is suggesting improvement of traffic conditions at study area and accepting there is traffic congestion.

A. Road Characteristics:

The road characteristics survey conceives data about roads type, length, width, headway, and data about rotary near to the study area.

This road is collector road which collects traffic from kudasan area to nh8 ,its length is 10km where its connects village roads to nh8.its width is 7m each lane in 3.5m wide .there is clear head way of that nothing will come of a traffic to 12m of height.

B. Coordinates of study area:

Latitude: 23.1676708

Longitude: 72.6365852

The width of each lane is 3.50 m.

C. *Rotary data:*

Here is all dimensions and measurements of rotary is surveyed and as mentioned below:

- Weaving length : 17.0m
- Weaving width : 4.7 m
- Entry width :12.01 m
- Exit width : 12.01 m
- Circulation width :5.82 m

D. *Traffic volume count:*

Traffic volume count data for 7 days was conducted at the study area and it has averagely PCU of 21343 Per day which is very high.

SURVEY DAY	PCU
Day 1	20335
Day 2	21986
Day 3	21250
Day 4	20547
Day 5	21232
Day 6	20120
Day 7	19465
TOTAL 7 DAYS AVERAGE	20705

Thus its volume capacity ratio is also >1 , that indicates traffic congestion is high at area.

IV. CONCLUSION

As per data collection and result from surveys, it's clear that area is suffering from heavy traffic and its problems are evaluated manually by observing study area and by opinions of people using road and suffering from traffic over the area. This area is suffering from several problems by which traffic congestion is high, and safety is concern and they are as follows:

- Not proper designed rotary
- Uneducated parking on road
- Proper signal design required

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