

SPOT SPEED STUDY AT A.V. ROAD

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ABSTRACT

Road traffic congestion is a recurring problem worldwide. In India, a fast growing economy, the problem is acutely felt in almost all major cities. This is primarily because infrastructure growth is slow compared to growth in number of vehicles, due to space and cost constraints. Secondly, Indian traffic being non-lane based and chaotic is largely different from the western traffic. The difference can be understood fully only through experience. Thus, Advance Transport Systems (ATS), used for efficient traffic management in developed countries, cannot be used as it is in India. ATS techniques have to undergo adaptation and innovation to suit the contrasting traffic characteristics of Indian roads.

In this position study, we present a comprehensive study of all available ATS systems, including both research proto-types and deployed systems. We next pose a set of interesting open research problems in the context of Indian ATS. Finally, we list a set of public and private organizations, that play a role in Indian traffic management and research, as meaningful collaboration between field practitioners and e-searchers is needed for efficient transfer of relevant technology. Though our study focuses on the Indian traffic scenario. Many of the problems and solutions outlined in this study are relevant for other developing countries as well.

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KEYWORD: Road safety, travel time, transportation system, mobility

1. INTRODUCTION

Road Safety is an essential component of transportation engineering. The safety of Road transportation involves many factors including driver skills, roadway characteristics, vehicle conditions, and weather.

In addition to crash causation, the identification of hazards that may increase severity in the event of a crash is important. Among all contributing elements, speed is considered to be one of the most critical. Statistics show that speed is a factor in one-third of all motor vehicle fatalities.

One mechanism of addressing roadway safety is the implementation of road safety. This review presents the road safety concept, its origin, and expansion. This section provides the background information regarding this concept and strategies used or implementation for an existing roadway focusing on speed issues. Perhaps the most common attempt to control driving speed is imposing speed limits. In the second part of this chapter, the speed topic is reviewed.

1.1 AIMS&OBJECTIVES

- Check Road safety of Anand-Vidhyanagar Road.
- Check Accident analysis of Anand-Vidhyanagar Road.
- To study Checklist Survey on Anand-vidhyanagar Road
- To study spot speed on selected place of Anand-vidhyanagar Road.
- To study safety factor on Anand-vidhyanagar Road.
- Check risk and severity of road accidents.

1.2 STUDYAREAJUSTIFICATION

- Our study area is pramukhswami circle is located on Anand-Vidhyanagar road.
- It is very congested area.
- The vehicles are parked haphazardly on roadsides.
- Because of haphazard parking on road sides the sufficient area is not obtain for traffic movement.

2. SPOTSPEED

Speed is an important transportation consideration because it relates to safety, time, comfort, convenience, and economics. Spot speed studies are used to determine the speed distribution of a traffic stream at a specific location. The data gathered in spot speed studies are used to determine vehicle speed percentiles, which are useful in making many speed-related decisions.

2.1 METHODOFSPOTSPEED

- Stop watch method
- Radar meter method
- Pneumatic road tube method

3. DATA COLLECTION & ANALYSIS

- We collect Different type of vehicles like Two wheeler , Three wheeler, Four wheeler, Heavy vehicles , LMV, NMV Spot speed data at peak hour on 15 February 2018 at Opp. Big Bazar Mall &Pramukhswami circle.
- The data gathered in spot speed studies are used to determine vehicle speed percentiles, which are useful in making many speed-related decisions.

4-WHEELERS							
Ob. No	Time(s)	Distance m	Speed m/s	Speed(X) Kmph	Mean	X-Mean	(X-Mean) ²
1	2.66	30	11.278	40.602	28.724	11.878	141.083
2	3.13	30	9.585	34.505	28.724	5.781	33.418
3	3.1	30	9.677	34.839	28.724	6.115	37.390
4	3.09	30	9.709	34.951	28.724	6.227	38.781
5	3.15	30	9.524	34.286	28.724	5.562	30.933
6	3.27	30	9.174	33.028	28.724	4.304	18.520
7	3.22	30	9.317	33.540	28.724	4.816	23.197
8	3.98	30	7.538	27.136	28.724	-1.588	2.523
9	3.23	30	9.288	33.437	28.724	4.713	22.208
10	3.98	30	7.538	27.136	28.724	-1.588	2.523
11	3.79	30	7.916	28.496	28.724	-0.228	0.052
12	3.5	30	8.571	30.857	28.724	2.133	4.550
13	3.6	30	8.333	30.000	28.724	1.276	1.628
14	4.1	30	7.317	26.341	28.724	-2.383	5.676
15	2.98	30	10.067	36.242	28.724	7.518	56.514
16	3.1	30	9.677	34.839	28.724	6.115	37.390
17	3.89	30	7.712	27.763	28.724	-0.961	0.923
18	3.98	30	7.538	27.136	28.724	-1.588	2.523
19	3.53	30	8.499	30.595	28.724	1.871	3.500
20	3.85	30	7.792	28.052	28.724	-0.672	0.452
21	4.56	30	6.579	23.684	28.724	-5.040	25.399
22	5.1	30	5.882	21.176	28.724	-7.548	56.965
23	4.9	30	6.122	22.041	28.724	-6.683	44.665
24	4.34	30	6.912	24.885	28.724	-3.839	14.740
25	5.06	30	5.929	21.344	28.724	-7.380	54.466
26	3.67	30	8.174	29.428	28.724	0.704	0.495
27	3.94	30	7.614	27.411	28.724	-1.313	1.724
28	5.25	30	5.714	20.571	28.724	-8.153	66.464
29	4.12	30	7.282	26.214	28.724	-2.510	6.302
30	4.26	30	7.042	25.352	28.724	-3.372	11.370

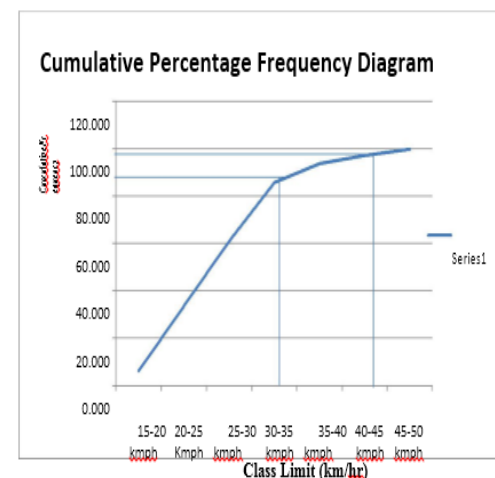
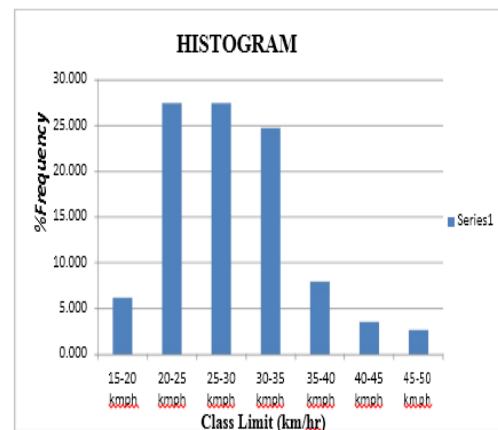


Fig -1: DATA COLLECTION OF 4-WHEELER

85th percentile = 32.5 Kmph

98th percentile = 37.5 Kmph

4. CONCLUSION

Traffic congestion is an important problem in Indian cities. The characteristics of Indian roads and traffic make the problem interesting to solve. There is scope for evaluating existing ideas in different and challenging traffic scenarios, innovate new solutions and empirically evaluate ideas in collaboration with public and private sectors. In this paper, we make a small effort to put together the different ideas and people relevant in Indian ATS, so that it gives an overview of the problem and the available solutions and outlines a set of open questions to answer.

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