# A Study On Black Spot Analysis In Chennai

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Abstract- The rapid and extensive increase in the number of motor vehicles since the 1950's caused certain negative results world-wide. One major problem is traffic accidents. It is possible to categorize the factors that cause traffic accidents as related to humans, road and vehicles. It seems that the human factor, comprising driver, pedestrian and passenger, is more dominant than road or vehicle factors in the happening of accidents. However, the control of the road factor is much easier than the human factor. This paper presents the results of the study on Identification and Analysis of Black Spots at Chennai city. Studies were carried out in the selected stretch of 100 feet road from (koyambedu to Guindy) were identified. The identified black spots are analyzed for the causes of accidents in the study area and were compared with IRC specifications. We suggest some Of the Remedial measures to reduce the accidents .The before and after studies were done. Which shows the reduction in number of collision points after studies?

## I. INTRODUCTION

During this century, the number of motorized vehicle has been increasing continuously. The spectacular increase in number of motor vehicles on the road has not kept pace with corresponding increase in total length of road network or vehicles on the road has not kept pace with corresponding increase in total length of road network. Further the mixed traffic situation prevailing on our road network has further aggravated the traffic situation. Thus the vehicles population increases year by year. Coupled with mixed traffic Situation has created a major social problem- loss of lives through road accident. Increase in traffic brings out extremely severe problem of road accident. The impact of road traffic accident in term of injuries, impairments and fatalities are global, social and public health problems. It is now well established that many Developing countries face a serious problem of road accidents. Accident fatalities rate in the developing countries like India is high comparison to with of the developed countries. The population of India has doubled during the last 30 years while vehicle population has doubled in the last 5 years. Traffic accidents in deaths constitute 40% of the total accident deaths in India

#### **II. OBJECTIVE**

- 1. To study the literature related to accident studies.
- 2. To collect the various data supporting the present local area scenario.
- 3. To identify the black spots and study the nature and causes of accidents in the selected stretch of road.
- 4. To carry out the inventory of the existing system.
- 5. To propose corrective measures and provide justification to improve the present condition.
- 6. To carry out accident analysis before studies.
- 7. To carry out accident analysis after study

### **III. SITE SELECTION**

It has Nearly 25 Major interjection and 75 minor interjections. Some of the popular 100 feet Black spots are given as Follows.

The Black spot of 100 feet road have been listed as follows

- Koyambedu Bridge
- Koyambedu around about
- CMBT Bus Stand
- SAF Games Village
- Vadapalani Bridge Down
- SIMS Hospital Near
- LakshamanShruthi Signal
- Ashok Pillar Junction
- Kasi Theatre Bridge
- Kalaimagal Bus stop
- Ekkattuthangal jun
- Ambal Nagar



Fig; 100 Feet Road Stretch

Based on the Collision Diagram We have Spotted the Black spot in the 100 feet road .

# **IV. PROBLEMS ON 100 FEET ROAD**

Accidents are caused mainly by increase in the number of two wheelers. These types of Accidents are taken place in the interjections due to lack of signals and proper response for the signals. Road conditions and road user plays a vital role in the accident cases.



Fig: Ashok Pillar signal

In most of the two wheelers, there is no Side Mirrors. While Overtaking these side mirrors have been used. During the junction, the signals should be provided. At that time, sudden stoppage of vehicles, the upcoming vehicle crashes each other, due to lack of control. These leads to severe injuries sometimes it leads to fatal. In some of the places, the Vehicles are parked at roads; these may cause problems for the road users.

DIP IN DEATHS IN <mark>Delhi in 2016</mark> 🛛 👬 👬						
City	Accidents		Death		Severity	
	2016	2015	2016	2015	2016	2015
Delhi	₹ 7,375	8,085	♦ 1,591	1,622	🛉 21.6	20.1
Chennai	♦ 7,486	7,328	1,183	886	15.8	12.1
Jaipur	\$ 3,004	1,894	890	476	\$ 29.6	25.1
Bangalore	\$ 5,323	4,834	835	713	15.7	14.7
Kanpur	1,451	1,496	🛉 684	665	<b>4</b> 7.1	44.5
Mumbai	\$ 24,639	23,468	♦ 562	611	♦ 23	2.6
50 million- plus cities	₹ 89,835	1,11,024	<b>♦</b> 17,797	16,513	19.8	14.9

The Above pictures Shows that Delhi and Chennai are most dangerous in road accident. But, Chennai leads the First Position in road accident Death Cases. Mainly these are happened due to motor Vehicles. The below Pictures Which Shows the causes of Accident



This Pictures Shows Most of the road accidents are caused due to the motor vehicles in Chennai city.

# V. REMEDIAL MEASURES

- Avoid Usage of Mobile Phones While Driving
- Wear Helmet While riding a bike.
- Rules should be strictly followed.
- Everyone Should Maintain the Speed limit during the peak hours.
- Traffic Police Should be there at any time at all Junctions.
- Dummy signals should be removed
- These are the common remedial measures to prevent the road accidents

# VI. CONCLUSION

Road Accidents cannot be stopped by taking remedial measures .this should be avoided by taking Engineering Measures like software's installed on cars and speed checking radars should have been done in all districts of TamilNadu.

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Speed Breakers should there at all junctions, if possible Signals should be provided. With these we have done for 100 feet road by making some changes for the welfare of the people by preventing road accidents in Chennai city.

## REFERENCES

- [1] N. V.M, Venkat.L and P.I.Vamsi, "Identification and analysis of black spots on NH-5," vol. 1, no. 3, 2011.
- [2] L. Isen, S. A and S. M.S, "Identification and analysis of accident black spots using geographic information system," vol. 2, no. 1, 2013.
- [3] A.F.Iyinam, S.Iyinam and M.Ergun, "Analysis of relationship between highway safety and road geometric design elements: Turkish case," vol. 34469.
- [4] Mohammed and H. Aswad, "The influence of road geometric design elements on highway safety," vol. 4, no. 4, 2013.
- [5] IRC: 86-1983, "Geometric design standards for urban roads in plains," 1991.
- [6] IRC: 106-1990, "Guidelines for capacity of urban roads in plain areas," 1990.
- [7] IRC: 35-1997, "Code of Practice for Road Markings," 1997.
- [8] IRC-SP-41, Design of at grade intersection, New Delhi: Indian Road Congress, 1994.