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Analysis of Study on Black Spot and it's Identification on Roads

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Abstract

Black spot are the places in an area which faces the maximum number of accidents or the areas which are much prone to accidents. In every district or town there are places where there is signageof black spot which warns the riders to drive slowly near that point .Different steps are included in finding the black spot starting from analyzing the number of accidents taking place to number of faculties happened. All records are kept in police office and city hospital.

Every year ministry of road sanctions cores of rupees for the identification of black spot and reducing the number of these black spot. Not all black spot are dangerous so after finding all theblack spot we need to prioritize them according to some standards mentioned by IRC.Executive Engineer and Junior Engineer of a division are given the in charge for this work. From laying patches to installing signage posts all works are done under the J.E.

Keywords:-Blackspot,Accidentproneregion,Roadsafety,signing,Speedlimit,Improved alignment

I.Introduction

I. Road Safety-An incident that happens unintentionally results in damage or injury is termed as accident. WHO in a survey found that13 people die in the world every hour. More than 80,000 are killed on Indian roads each year and more than1.2 billion is injured. Road accidents are a leading cause of death and injury around the world. These deaths outnumber many other accidents caused by various modes combined, and the cost to society is far greater than the official aid received by developing countries around the world. Sweden has established a 2020 goal of "vision zero." In India, achieving such a goal is extremely tough. We need to undertake a lot more work, especially in India, to eliminate accident-prone regions and to educate the public about road safety.

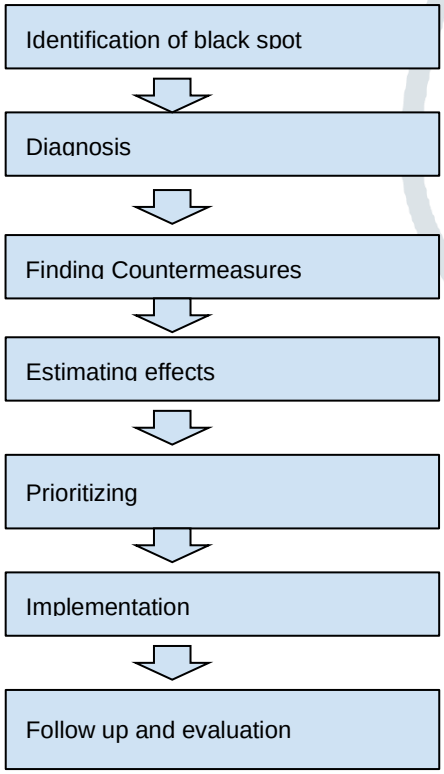
Rain, drunk driving, over speeding, and other factors can all contribute to an accident. Vehicle skidding is one of the most common causes of traffic accidents all around the world. Lack of tire-to-road friction causes skidding, which is one of the leading causes of traffic accidents.

India is one of those countries which have high rate of road accidents and fatalities. National highways and State highways account for huge proportion of these fatalities which result in huge economic loss and also a huge loss to their family so to avoid all these Ministry of Road and Highway development decided to make concerned efforts in improvement of roads and national highways. To perform this objective Accident prone areas known as **Black spots** were to be identified based on the fatality and accident records from police stations and by monitoring the highway traffic and accidents. The black spots have been to be recognized and to be categorized into first priority, second priority and third priority, etc. based on all the recorded data and to be removed.

II. Black Spots-An accidental black spot or black spot is a region where road accidents and fatalities have been concentrated majorly. They are not human made but occur due to various reasons such as sharp turning point at intersection, less value of friction coefficient, hidden junction on a fast road and due to non-availability of sign posts showing speed regulations and information regarding coming traffic. Government each year appoints a committee to check for black spots in each state and work for removing them.

1. Improving the signing , providing speed limit sign boards and warning boards
2. Improving the alignment of the curve by increasing or decreasing the curve radius.
3. Improving the pavement by providing the same level of driving lanes and shoulders.

There are several phases involved in removing or improving accident black spots in a road network:-



The factor responsible for accidental prone area on a road network depends on these:

1. Width of the road
2. Number of the lanes on road

3. Number of vehicles crossing the road in a day
4. Type of the pavement
5. Length of the network before intersection
6. Presence of shoulders, medians.

II.Results

A.Evaluation and follow-up:

It is critical to detect countermeasures. So as to pick up information about what has really occurred. The point is to show if the venture gave great incentive for cash and if the outcomes in wellbeing terms were fortunate or unfortunate.

The motivation behind this part is to show how development and assessment could be completed, to talk about some significant perspectives and to show prospects and impediments in the development and assessment measure.

B. Countermeasures documentation:

In order to potentially catch up, the adopted countermeasures must be archived. The information needed is simple and limited. It is likewise simple to gather. Yet, it must be seen during the usage cycle, on the grounds that later it will be more hard to gather and now and again additionally inconceivable. Before the site was remodeled or new hardware was installed, the paperwork should include information about the roadway and traffic. The dates when the usage began at the site and when it ended should be included in the documentation. This signals the end of the previous era and the beginning of the new one. In most cases, the usage time frame should be excluded from the when time frames.

The utilization time range is a source of excitement because it is typically a confusing moment from a traffic standpoint. There is a threat this confounded circumstance could cause mishaps. It is hence valuable to break down mishaps during this period for various building destinations. The point is to check whether development works are making perils and to read whenever applied techniques for signs or markings are adequate to give the correct data to the street clients. In comparison to the countermeasures, this is an unexpected point. The former will not be explored further in this part because this manual is about the latter. It will be stated which section of the part is being enhanced. From kilometer to meter ...to km ... If the upgrade necessitates changing the length of the street, new separations should be provided as well. The areas decide which sections of the street should be monitored.

C.Migration by accident:

Accident migration refers to the "transfer" of accidents to other locations, usually neighboring portions of road leading to the renovated site. The number of accidents on certain portions could rise, reducing the countermeasure's overall effectiveness. For instance, a straight segment of road is followed by three quite abrupt turns. One of the curves, the first curve for vehicles entering from one direction, has a lot of single crashes. After a long stretch of

straight road, drivers haven't adjusted their speed enough. This curve has improved, while the other two have not. Accidents might then spread to the next curve, which would now be the first sharp curve, and so on. Drivers may adapt to new behaviors at upgraded locations and then continue to do so at older sites, resulting in accident migration. For example, on new road sections, speeds are frequently higher. When moving into old (unimproved) road parts, the cars continue to travel at a high speed, which is higher than before. On the same road, this would result in more accidents. One way for determining whether migratory effects are present is to monitor the accident situation on neighboring sites at the same time as improving locations. The control group will not include adjacent locations because this may result in an exaggeration of the impact.

III.Conclusion

India is one of those countries which have high rate of road accidents and fatalities. National highways and State highways account for huge proportion of these fatalities which result in huge economic loss and also a huge loss to their family so to avoid all these Ministry of Road and Highway development decided to make concerned efforts in improvement of roads and national highways

1. Increase the visibility of the intersection to alert drivers to the possibility that other drivers may do similar actions.
2. Install signage indicating that a junction is approaching.
3. Through the intersection, reduce your speed to 70 km/h or 50 km/h as much as feasible.
4. Give left-turning and potentially right-turning cars their own lanes.

Prioritizing also done and this implies that finding the best plans, best action plans according to some defined criteria

Finally,a site visit is very helpful in diagnosing. The diagnosis may have revealed trends that necessitate a more thorough site assessment.

The expert keeps an eye on the site and the situation with the visitors. It can also be utilized for more specific purposes. And reliable estimates on the ground, such as grating, sight separations, speeds, collisions, vehicle gaps, and the amount of individuals crossing on foot.

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