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Review Paper on RSA: A Descriptive Approach Towards Road Safety of Dhandhuka to Dholera (Sh-20) In Gujrat State

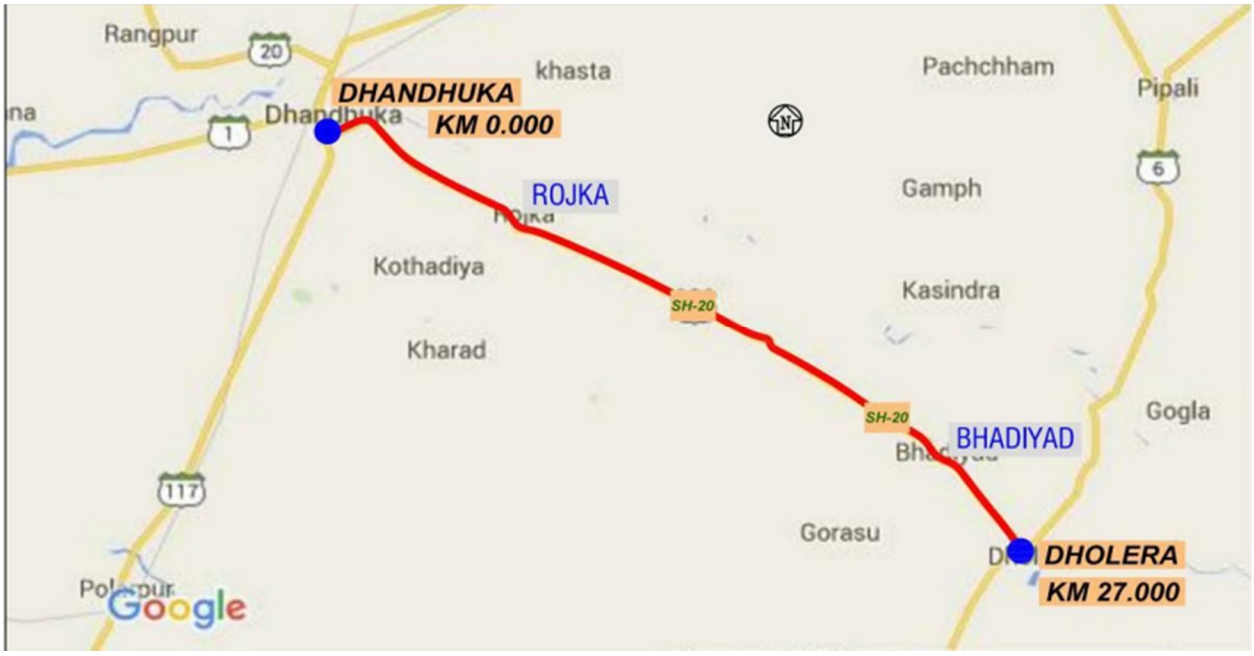
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Abstract: ***Every year road crashes result in loss of lakhs of lives and serious injuries to crores of people. In India itself about eighty thousand people are killed in road crashes every year. The present transport system has minimized the distances but it has on the other hand increased the life risk. In most of the cases crashes occurs either due to carelessness or due to lack of road safety awareness of the road user. Hence, road safety education is as essential as any other basic skills of survival. Our aim is to provide road safety information for road users to encourage safer road user behavior among current and prospective road users and reduce the number of people killed and injured on our roads every year.***
In this study, the section of road from ''(Dhandhuka to Dholera road State highway 20)" near Ahmedabad in the state of Gujrat. Road taken having considerable traffic during day time and some black spots on the road where accidents takes place continuously. A detailed analysis of road is carried out on the basis of data collection like classified traffic volume study, accidental data collection, potholes on road data collection, road safety signs and symbols, crust details of existing road etc.

I. INTRODUCTION

The project road starts from Dhandhuka and ends at Dholera with a total length of 27 km, is proposed for two-lane paved shoulder with 7 m carriage-way width from the existing condition of 5.5 m carriage-way width from km 00+000 to km 27+000. The improvements proposed are within the available RoW of 24 m. Land acquisition is not envisaged, and there are no stretches where widening or geometric improvements.

As the road network, involving Dhandhuka-Dholera road is proposed for development under OPRC, so the project study consisting of preparation of Concept design, and drawings has been prepared for the improvement, rehabilitation, strengthening and widening of the road network.



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Road safety issues reveals high number of accidents along the project corridor due to inadequate width of shoulders, poor sight distance in sharp locations, lack of treatment in junctions, narrow width of cross drainage works and the parapets of the culverts. Safety interventions included in the design with respect to curve locations are warning signs on both sides of curves and restricted speed, design of T-junction with channelization, posting of proper markings and designs, etc. A minimum of 1.5 m shoulder has been provided. Wherever feasible the culverts will be expanded in width to accommodate shoulders/extended carriageway. Delineation of trees with object markers will be done.

II. LITERATURE REVIEW

1) Yuha Huvarinen The article shows that observance of automobile roads design and construction standards does not guarantee safety of traffic. The focus is put on the weakest component of the traffic system – "a person" in the context of growing motorization and psychological stresses and increase of accidents risks. Substantiation is provided for the conclusion about the necessity for using additional tools capable of minimizing accidents risks stipulated by the human factor. The article studies the experience of the leading countries in the field of the traffic safety audit integration into technological processes of roads lifecycle.
2) Sudipa Chatterji A study on the identification of risk factors on such highways is of immense interest in mitigating road accidents. However, The present study aims to identify the critical safety issues observed during RSA on the two major two-lane undivided highways in the state of West Bengal, India. Both the highway carries a considerable amount of traffic and passes through numerous built-up areas, markets and industrial belts. Several risk factors were identified at different hazardous locations along the highway stretches during the RSA. Lack of infrastructure, interaction of vulnerable road users (VRU) with high-speed traffic, and faulty geometric design are some of the most alarming safety deficiencies identified through the audit process. Finally, countermeasures were suggested based on the observations made during the RSA.
3) Dr. S.S. Jain The study aims to evaluate Road Safety Audit of a section of four-lane National Highway (NH)- 58 and will focus on evaluating the benefits of the proposed actions that have emanated from deficiencies identified through the audit process. After conducting RSA, they have found that trucks are parked on highway which reduces the effective width of carriageway and creating traffic hazards to high speed moving traffics. Unauthorized median openings were found which should be immediately closed. Missing road and median markings to be done and speed signs should match with speed. Access and service lanes are also deficient which requires immediate improvement. The most Vulnerable Road User (VRU) i.e. pedestrians and cyclists facilities near habitation are lacking and needs to be facilitated on priority.
4) Mohd. Idrus Bin The main goal of this study was to analyze the audit road infrastructural along F050 route which is from KM 7 to KM 28 based on Road Safety Audit. Several methods were used to obtain data such as observations and research, accident statistics and simple statistics. Through these methods, the data were analyzed by using average index, HIRARC and simple statistics. From the analysis, it was found that the road infrastructure level in the study area was less satisfying. Besides that, research results show that the level of risk due to road infrastructure gradually increases at certain places. Hence, the authority should be play more important roles to conduct maintenance and improvement on road infrastructures that poses high risk of accidents to ensure the safety of road users.
5) Patel Savankumar Road accident generates increases impacts on the economy, general prosperity and welfare of the people. Today, road activity wounds are one of the principle wellsprings of passings, insufficiencies and hospitalizations, with genuine monetary costs. Radhanpur intersection (Mahesana) CH 00.00 km (SH-55) to Chanasma intersection CH 32.80 km (SH-55) saw noteworthy problems of road accidents 534 amid the period 2008-2014 on SH-55. The objective of study is to concentrates on completing road safety audit for evaluating accident potential and wellbeing execution in the change of existing road.

III. OBJECTIVES

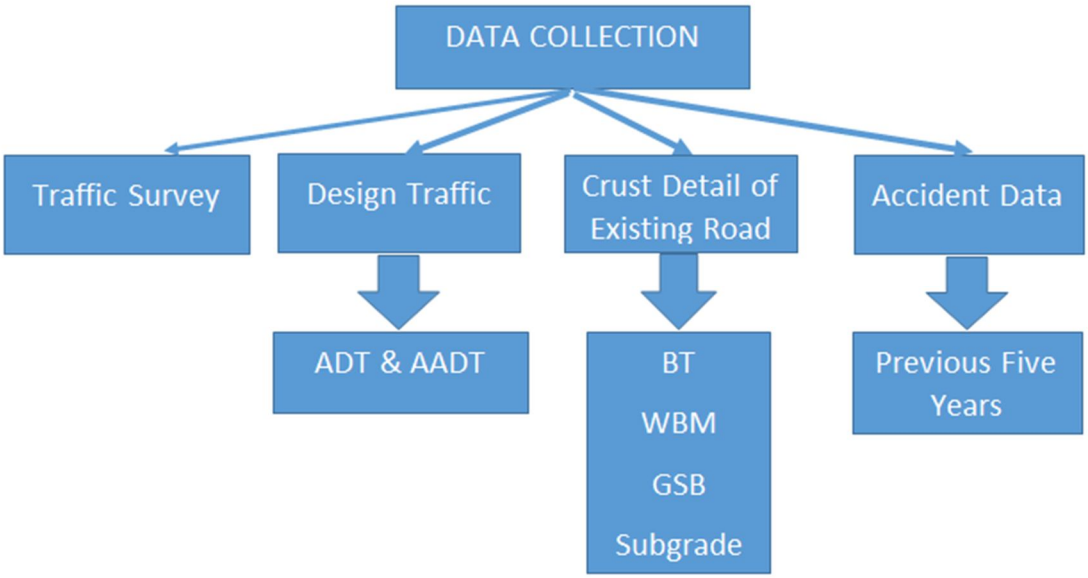
1) To identify adverse impacts and determine remedies measures.
2) Minimize the accident potential on the roadway by auditing the road safety issues.
3) To lay emphasis on design to implementation stage and to spread awareness in road planner, designer and construction stage about the road safety.
4) To understand the importance of every road users and provide the facility to overcome their difficulties.
5) By auditing the road mitigate the life cycle cost of the road projects and to minimize the requirement of further corrections.
6) To advance the awareness of providing safe road schemes for non-motorized as well as motorized road users.
7) Collect information using suitable tools regarding project impacts.

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IV. METHODOLOGY

1) Initially previous studies were conducted to adopt idea about RSA.
2) After that various field data has been collected to achieve above objectives.
3) Traffic survey of the proposed road has been conducted of 7 consecutive days of the week and found out ADT & AADT in terms of PCU.
4) Accident data of previous 5 years has been collected by visiting various police stations comes under the selected section.
5) Black spots were identified by observing locations of accident & their frequency occurred on the selected road section.
6) The entire audit was conducted under the guidance of the learned supervisor using modified checklists. After collecting necessary background information, data was reviewed.
7) Several numbers of site visit and field reviews were carried out. Based on collected data and field observation, analysis was done to organize audit findings.

V. DATA COLLECTION



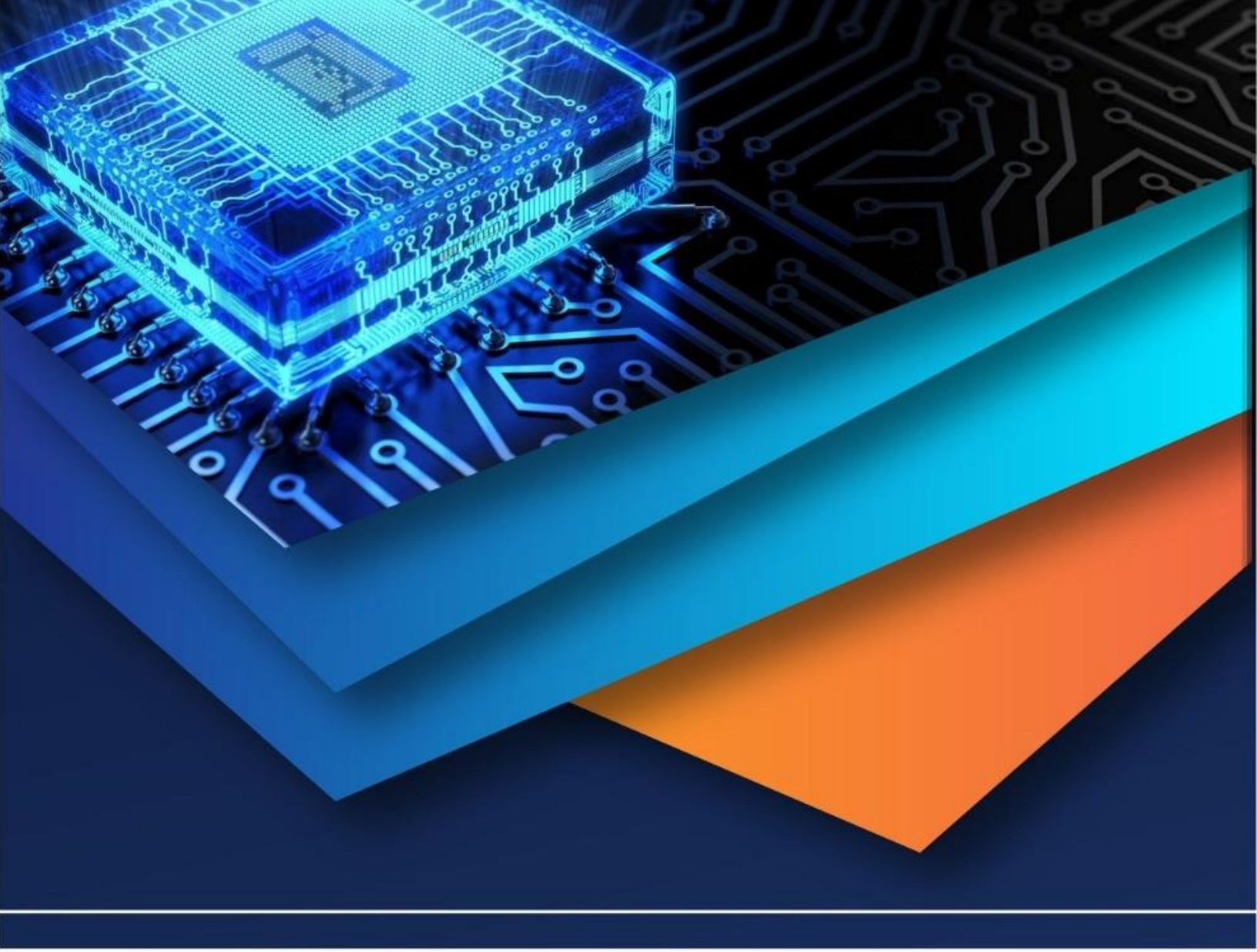
VI. RESULT & CONCLUSION

After reviewing past research study we have conclude that most researchers have shown their interest in conducting Road Safety Audit (RSA). By conducting RSA they indirectly indicate the human factors affecting the safety issues mostly, along with increasing the motorization, lack of safety amenities along the road sides, locations where gap in medians without proper sign boards.

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