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FEASIBILITY OF FOOTOVER BRIDGE AT MANINAGAR RAILWAY STATION, AHMEDABAD, GUJARAT

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Abstract- **Ahmedabad city is the administrative centre of Gujarat, India. Located at latitude 23.0300° North and longitude 72.5800° East, the city is the centre for social, educational, commercial, residential, cultural, political and economic activities of Ahmedabad district. The total population of Ahmedabad is 7,796,000 as per Gujarat census, 2011. Ahmedabad has seen rapid economic growth during last decade. The city is facing problems of traffic, parking, and pedestrian‟ safety on certain stretches of roads in the city. The area to be covered in the study of above transportation problem in Ahmedabad maninagar railway station. Data collected at the maninagar railway station, Ahmedabad to study influencing factor and their effect on pedestrian walking speed. Maninagar railway station routs study for respect to age and gender of pedestrians. Traffic value at maninagar railway station crossing by foot cannot only challing but can be dangerous with this mind, to design and built pedestrian bridge at intersection of maninagar railway station. This wills eliminate traffic congestion and delay at highway as well as eliminate conflicts between pedestrians and motor vehicles.**

Keywords- *Pedestrian Bridge, Foot Over Bridge*

I. INTRODUCTION

In many ways pedestrian flow are similar to those used for vehicular flow because itcan be described in terms of familiar variables such as speed, volume, rate of flow and density. Other measures related specifically to pedestrian flow include the ability to cross a pedestrian traffic stream, to walk in the reverse direction of a major pedestrian flow, to maneuver generally without conflicts and changes in walking speed, and the delay experienced by pedestrians at signalized and unsignalizedintersections. A footbridge also called a pedestrian bridge, pedestrian overpass, or pedestrian overcrossing is a bridge designed for pedestrians and in some cases cyclists, animal traffic, and horse riders, instead of vehicular traffic. A bridge is a structure built to span a gorge, valley, road, railroad track, river, body of water, or any other physical obstacle, for the purpose of providing passage over the obstacle. Designs of bridges will vary depending on the function of the bridge and the nature of the terrain where the bridge is to be constructed.

II. LITERATURE REVIEW

Feasibility Study For Planning a Fly-over Bridge Over Railway Crossing at Vijalpore Road, Navsari

People of Vijalpore village are facing acute traffic problem at railway crossing road in Navsari. The main reason for this problem is passage of more number of trains from here which results in closure of railway gate for longer periods of time. People have to wait for several minutes to pass through this railway crossing. Also, a underpass situated near the railway crossing is very small and water gets accumulated under in rainy season.

Pre-Feasibility Study of Transportation in Infrastructure: A Case Study of Chhapi Railway

In this Paper Study focused on the town where the traffic congestion occurs due to the railway crossing and other alternative to minimised problem. Chhapi is a main town surrounding area so the approach road which connect the SH 41 is only the way where railway crossing is there.so, the many people have problem occur due to crossing likewise traffic congestion, pollution, delay, fuel consumption etc.

III. STUDY AREA

Figure: Study Area

IV. DATA COLLECTION AND ANALYSIS

Serial No.	Class Limit	Mid Point	Frequency	Relative Frequency	Percentage Frequency	Cumulative Frequency
1	15.00 - 19.99	17.495	102	0.680	68.0	68.0
2	20.00 - 24.99	22.495	36	0.240	24.0	92.0
3	25.00 - 29.99	27.495	12	0.080	8.0	100.0
4	30.00 - 34.99	32.495	0	0.000	0.0	100.0
5	35.00 - 39.99	37.495	0	0.000	0.0	100.0
6	40.00 - 44.99	42.495	0	0.000	0.0	100.0
7	45.00 - 49.99	47.495	0	0.000	0.0	100.0
Total			150			

Spot Speed Data Collected

Pedestrian's volume counts:

Pedestrian's volume count is conducted at the main road of the maninagar railway station main road are crossing the roads data is collected. Main road of the maninagar railway station is the main junction point of the other roads. The all roads are meeting at the one point and the data is collected below table.

No.	Time		Maninagar Railway Station Road Pedestrians Volume	
	From	To	A to B	B to A
1.	6:00AM	6:30AM	136	148
2.	6:30	7:00	163	160
3.	7:30	8:00	195	174
4.	8:00	8:30	188	168
5.	8:30	9:00	278	289
6.	9:00	9:30	304	289
7.	9:30	10:00	310	291
8.	10:00	10:30	322	299
9.	10:30	11:00	474	338
10.	11:00	11:30	496	352
11.	11:30	12:00	375	286
12.	12:00PM	12:30PM	280	296
13.	3:00	3:30	373	398
14.	3:30	4:00	436	275
15.	6:00	6:30	662	602
16.	6:30	7:00	678	573
17.	7:00	7:30	589	544
18.	7:30	8:00	608	613

V. CONCLUSION

Followings are the major conclusion of the study

1. Data Collected we can conclude that avg. speed was too low comparing to any other Roads.
2. According to IRC if the Volume of Pedestrian crosses the 1500 per day the best solution is only Foot Over Bridge. Which is Best Fit Solution and Feasible solution at Maninagar Railway Station.

REFERENCES

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