

# Planning of Bridge Over Hiranykesh River

Vaishnav Patil<sup>1</sup>, Satish Redekar<sup>2</sup>, Shivaraj Khapare<sup>3</sup>, Shubham Kumar<sup>4</sup>, S. B. Patil<sup>5</sup>,

Students, Department of Civil Engineering<sup>1,2,3,4</sup>

Lecturer, Department of Civil Engineering<sup>5</sup>

Sant Gajanan Maharaj Rural Polytechnic, Mahagaon, Kolhapur, Maharashtra, India

**Abstract:** *The process of planning is carried out to overcome the problems like flood, traffic congestion and for safe movement of vehicles during flood sections. And also one major thing that the present bridge was constructed in the British era so the life of the come finish. Planning of bridge involves so many things like traffic survey to determine the road width for the present traffic flow, flood survey to determine the height of the bridge and rainfall data to determine the future flood lift.*

**Keywords:** Flood, Hiranykeshi river, Traffic volume study, Bridge

## I. INTRODUCTION

In India most of the bridges which we use were constructed in the British era. Although they are in good condition, but due to modern Civilizations and construction of dam and reservoir near the bridge site location the water level below the bridge has increased above the bridge.

Today India is facing problems of high flood where the roads get water clogged and bridge get submerged. The reason behind this is the bridge which was constructed back in British era, so the height of the bridge is now getting less to that of present conditions.

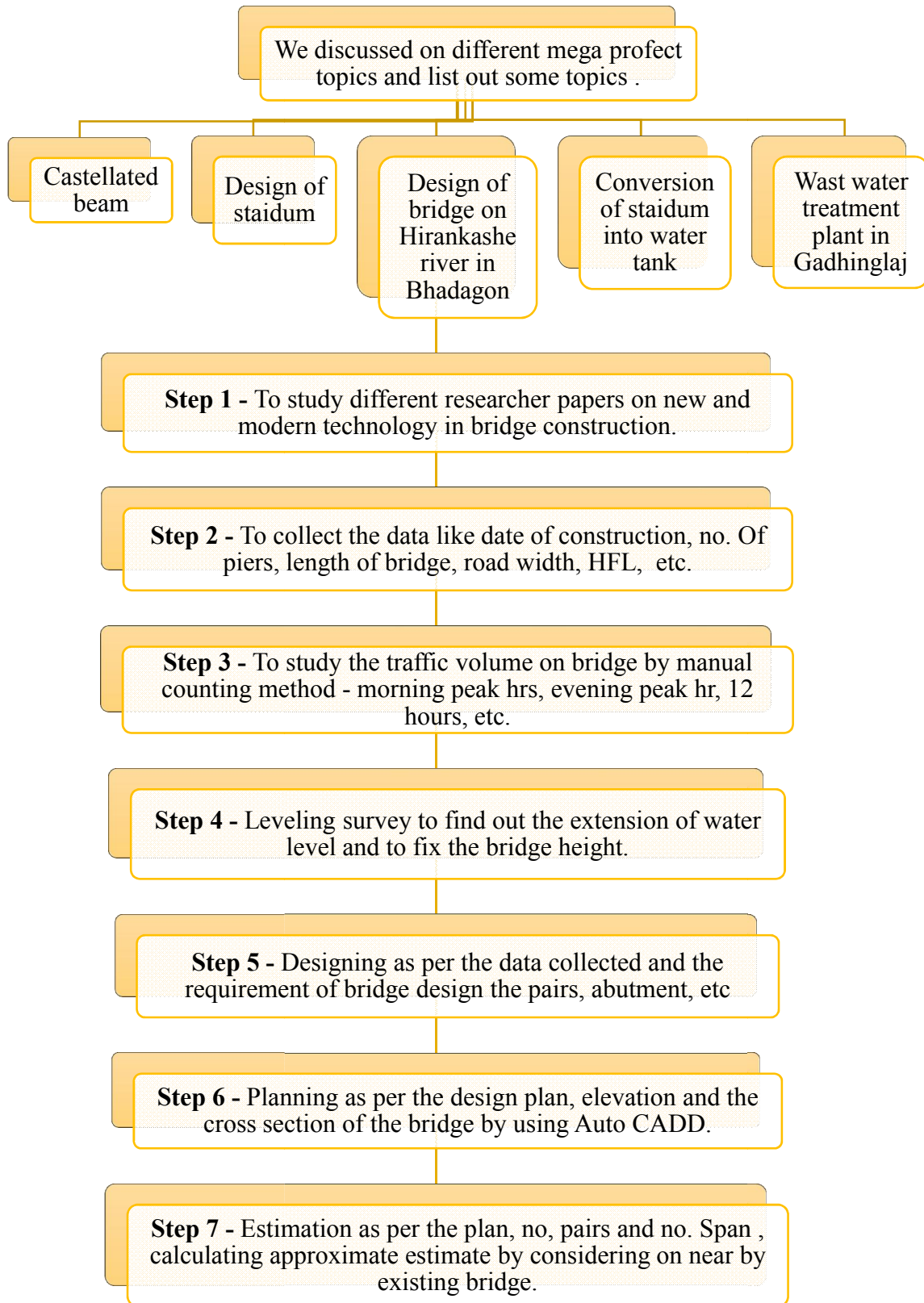
And it is said that, change is inevitable. Therefore there is a need to modify, need to change and renovate and reconstruct the bridge structure as per the structural life. It is said that after 50 years bridge structure should be reconstructed.

So we have chosen the Bridge which is over the Hiranykashi River. In rain season this Bridge gets submerged very quickly and the water level does not decrease for week and people face so many difficulties and problem.

## II. OBJECTIVES

- To study the flood situation and provide a suitable bridge height.
- To increase the road width, to avoid the traffic congestion.
- To increase the life span of bridge.

**III. METHODOLOGY**



**Figure 1:** Methodology of planning of bridge

**IV. PROCESS OF PLANING**

Process of planning of bridge on hiranykesh river.

1. Collected some information from PWD office.
2. Then we did the traffic volume study and determined the road width
3. Auto level survey to determine flood height
4. Collected rainfall data and calculated the future flood arise
5. Determined the flood lift and free board and confirmed height od bridge
6. Calculated no. Of pier
7. Stat the planning of bridge as per the data collected

**V. CONCLUSION**

- A suitable height of bridge, which bridge would not get submerged in flood situation.
- A suitable road width was traffic congestion would happen.

**VI. ACKNOWLEDGEMENT**

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**VII. REFERENCES**

- [1] Standard specification and code practice for road bridge, Published by the Indian Road Congress (IRC – 21-2000).
- [2] Japan international cooperation Agency Grant Aid Management Department, has published Basic design study report on Bridge construction in Jan 2005.
- [3] Design of reinforced concrete bridge , published by university of Toronto steel reinforcement.
- [4] Fisheye Adebwal Oldimieji Master of science thesis Stockholm Sweden, 2012.
- [5] Laurretta luck, debar Jackson, Kim usher published on 15 may 2006.



Fig no. 02 Bhadagaon bridge



Fig no. 03 – Traffic congestion due to flood