

Review on Design / Study of Pedestrian Bridge in Shirdi area

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Abstract – The aim of project is to reduce traffic problems near Sai Mandir Shirdi and give alternate option for people who travel from Sai Mandir to Bhaktniwas, and/or Annachhatra, by walking. Constructing pedestrian bridge from mandir to bhaktniwas. And also design escalator for handicap and old peoples.

Key Words: Traffic Volume, No.of Users, Mechanical Means

1. INTRODUCTION

A footbridge (pedestrian bridge, pedestrian overpass, or pedestrian overcrossing) is a bridge designed for pedestrians. Footbridges complement the land scape and can be used decoratively to visually link two distinct areas or to signal a transaction. In many developed countries footbridges are both functional and can be beautiful works of art and sculpture. For poor rural communities in the developing world, a footbridge may be a community's only access to medical clinics, schools and markets, which would otherwise be unreachable when rivers are too high to cross. Simple suspension bridge designs have been developed to be sustainable and easily constructible in such rural areas using only local materials and labor.

While the primary meaning for a bridge is a structure which links "two points at a height above the ground", a footbridge can also be a lower structure, such as a boardwalk, that enables pedestrians to cross wet, fragile, or marshy land. Bridges range from stepping stones possibly the earliest man-made structure to "bridge" water to elaborate steel structures. Another early bridge would have been simply a fallen tree. In some cases a footbridge can be both functional and a beautiful work of art.

An enclosed footbridge between two buildings is sometimes known as a skyway. Bridges providing for both pedestrians and cyclists are often referred to as green bridges and form an important part of a sustainable transport system.

Footbridges are often situated to allow pedestrians to cross water or railways in areas where there are no nearby roads. They are also located across roads to let pedestrians cross safely without slowing traffic. The latter is a type of pedestrian separation structure, examples of which are particularly found near schools.

2. LITERATURE REVIEW

Hannah Bodendorf He explain that Nowadays urban development tends to high buildings, maximising the utility of limited space. In an effort to maintain comfort plenty of escalators connect levels in buildings. Of course there is much theoretical information about capacity of escalators, but do these model reality well? To figure out whether the assumed capacities specified in guidelines are reachable or not, we investigate the performance of escalators at railway stations and shopping centers in several field studies. The specific angle of slope amounts to 30, the speed to 0.5 m/s. [I]

Man-Chung Tang study about "Forms and Aesthetics of Bridge" & he can found the objective of a bridge design is to produce a safe bridge that is elegant and satisfies all functionality requirements, at a cost that is acceptable to the owner. A successful bridge design must be natural, simple, original, and harmonious with its surroundings. Aesthetics is not an additional consideration in the design of a bridge, but is rather an integral part of bridge design. Both the structural configuration and the aesthetics of a bridge must be considered together during the conceptual design stage. To achieve such a task, the bridge design engineer must have a good understanding of structural theory and bridge aesthetics. [II]

Alberto mariaavossa can study about the "probability distribution of footbridge peak acceleration to single and multiple crossing walkers" & The scenarios of a single and of multiple walkers crossing a footbridge are considered by many Standards and design Guidelines for vibration serviceability assessment. Accordingly, this study analyzes the probability distribution of footbridge peak accelerations induced by these two load cases. In particular, single span footbridges with uniform mass distribution are considered, with different values of span length, natural frequencies, and structural damping. Only lateral vibrations are considered, and the load is modeled as a moving sinusoidal force corresponding to the first harmonic. The randomness of the dynamic characteristics of walkers is modeled using probability distributions taken from the literature; so doing a standard probabilistically-modeled population is defined. The footbridge is analyzed by means of modal analysis, considering only the first mode. In the case of multiple crossing walkers, arrival time is modeled as a Poisson distribution and different number of walkers, therefore different walkers densities, are considered. Numerical analyses of the transient response to the moving harmonic

load were carried out, and the peak acceleration was evaluate [III]

3. CONCLUSIONS

Overview of literature showsthat the project will be Provide easy access to pedestrian from Sai Mandir to Bhaktiniwas or Bus stand or Bhojnanalay.

In this study attempt have been made to reducetraffic problem on Ahmednagar – Manmadhighway.andbridge should be safe and comfortable for pedestrian use.

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