

PLANNING AND DESIGN OF BEACH RESORT

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ABSTRACT

The Scope of the Project is to construct a Beach Resort at Devanampattinam in Cuddalore, which is known as Silver Beach. The area of the project is 960 sq.ft. It is proposed to construct this beach resort for relaxation of the Children and aged persons who are living in the surrounding busy town areas. The proposed resort building will be designed as a framed structure. The resort consists of the Reception hall, Dining hall, Kitchen, Bathrooms, Toilet, Lodging rooms, Storerooms, Massage, Car parking, etc. The building will be planned and designed with reference to National Building Code IS 456 - 2000 and Limit State Method.

KEYWORDS: Coastal tourism, communities, devanampattinam, monolithically, economical.

I.INTRODUCTION

Construction of Beach resort will attract more foreigners to visit the Silver beach. Constructing a beach resort also enhance beauty to the beach. Silver Beach, in Devanampattinam, is situated in the eastern side of Cuddalore and is visited by a number of travelers. The beach provides an opportunity for tourists to indulge in various activities such as horse riding and boating. Moreover, the beach also having a boathouse and a children's play area. It is the Second longest beach on Coromandel coast and is considered to be one of the longest sea beaches in Asia. In recent decades, coastal tourism has grown significantly bringing enormous economic benefits to host communities. Considering this fact we undertaken this project. With respect to resort building, there is a growing tendency for the resort developer to propose the use of local traditional design features as the design theme or concept. This is natural, because of its appeal and attracts the attention of most tourists to the place. Resorts make the environment more beautiful and add amenities to attract customers. Resorts should offer proximity and easy access to significant, natural, scenic, recreational and cultural amenities.

II.LITERATURE REVIEW

Ahmad Sanusi Hassan (2010) This paper discusses resort design with the adoption of vernacular style in Langkawi, Malaysia. Resort refers to a building or a group of buildings designed in a particular setting to cater to both relax and recreational activities. The resort sites may front beaches, lagoons, hill slopes or lakes or provide elevated views with convenient access to the waterfront activities. Vernacular style becomes increasingly popular for the design of resort hotels.

Aymen Mohamed elmagalfta (2006) The research attempts to provide appropriate design guidelines for future resort architecture in Langkawi with respect to traditional form and design. It starts with a literature search on the general resort's planning and design criteria, study on the Malay house's form and design, and the study on Langkawi and some resorts buildings. The field survey method has been chosen by preparing to identify the level of preference and satisfaction from the respondents (tourists) who had stayed at selected resorts in Langkawi.

Smith, R.A.(1992) This research concerns the development of contemporary beach resorts as they evolve from natural beaches to become cities by the sea. Despite many positive aspects to this process, as resorts urbanize, increasing negative effects of development tend to have an impact on the resort quality, with implications for tourists, residents, management, developers, and governments. Pattaya, Thailand, is one beach resort that has experienced many of the problems typical of this form of development. Analysis of this case reveals some of the underlying causes for the failures of beach resort development. A tentative pattern of beach resort evolution is presented.

III.METHODOLOGY

- Planning
- Approval of Drawing
- Structural Design
- Design of Slab
- Design of Beam
- Design of Column
- Design of Footing
- Estimate
- Load Calculation

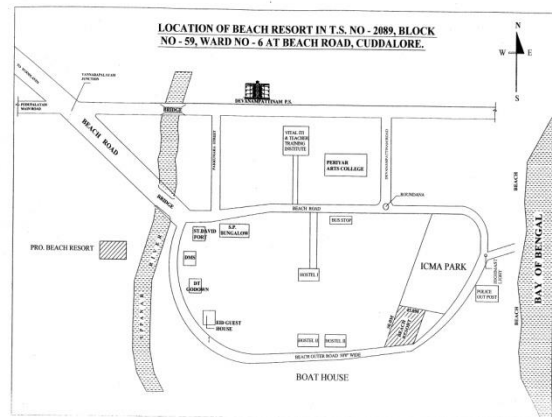
III.SCOPE AND OBJECTIVE

Use of M20 Grade Concrete and Fe 415 Grade Steel for all the RCC Works. Safe bearing capacity of the soil is taken as 200KN/m2. The building designed for Ground floor only. The column Main rod shall be specified as per IS: 456-2000. The development length shall be 50 mm for tension members and for compression members. The top of the grade beam shall be kept at least with the natural ground level.

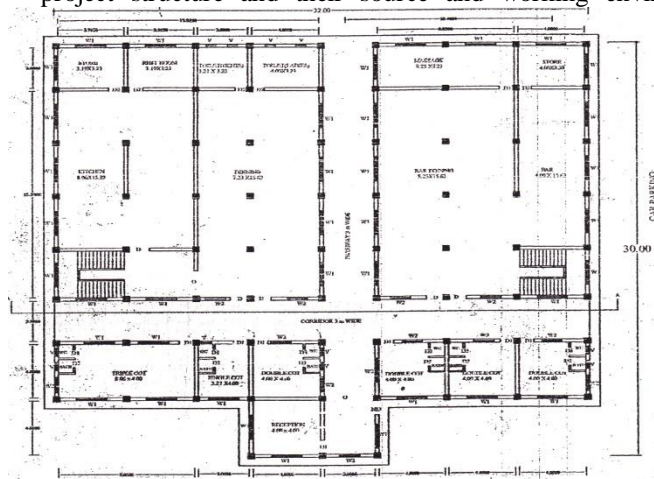
IV.PLANNING AND DESIGNING

i) PLANNING

Project planning involves enabling the project management team to address the important implementation issues including the realigning of project objectives, scope, financial arrangement and implementation schedule gave the overall



project structure and their source and working environment.



ii). DESIGNING

COLUMN

Size of column = 0.40 m x 0.40 m

P_u = 1000 KN

d' = 40 mm

f_{ck} = 20

f_y = 415 N/mm²

Length = 4 m

END CONDITION

Both ends are fixed

$$= 6.5 < 12$$

This is short column.

LONGITUDINAL REINFORCEMENT

$$P_u = 0.4 f_{ck} A_g + (0.67 f_y - 0.46 f_{ck}) A_{sc}$$

$$A_{sc} = 1073.42 \text{ mm}^2$$

Provide 8 nos 16 mm dia bar.

Transverse Reinforcement:

$$1) \% \text{ of dia} = \% \times 16 = 4\text{mm}$$

$$2) 6 \text{ mm}$$

Spacing:

$$1) 300 \text{ mm}$$

$$2) 16 \times \text{dia} = 16 \times 12 = 192 \text{ mm}$$

$$3) \text{Least lateral dimension} = 230 \text{ mm}$$

Provide 6 mm <j> ties @ 300 mm c/c

V.CONSTRUCTION OF BEACH RESORT

ANALYSIS AND DESIGN

The design of all structural members are done by "LIMIT STATE DESIGN" for all structural members as per IS: 456 - 2000.

LOCATION

This project is to construct the Beach Resort near Cuddalore at Devanampattinam Silver beach in the sea shore of Bay of Bengal. The soil samples are collected at different depths and tested in the laboratories to determine the safe bearing capacity of the soil and from the results, we came to know the average safe bearing capacity of soil as 200 KN/m²

MATERIALS USED;

M 20 Concrete and Fe 415 Steel

SLABS:

Slabs are plate elements forming floors and roof of the building and carrying loads primarily by

flexures. A slab is usually supported by beams or by walls and may be used as a flange of T or L beams, the slabs are designed as a one-way slab or two-way continuous slabs.

FRAMES;

Structurally, a building may consist of load-bearing walls and floors. The floor slabs may be supported on beams which in turn may be supported on wall or column. The frame is designed for the entire vertical and horizontal load transmitted to it. A frame consists of columns and beams built monolithically forming a network. This provides rigidity to the connection of members. The loads are evenly distributed to the structure monolithically and thus the structure is not only safer but also economical.

COLUMNS

The column is defined as an element used primarily to support axial compression and with a height of at least three times its least dimension.

FOUNDATION

Foundations are structural elements that transfer loads of the buildings or individual column to the subsoil. The foundations are designed to prevent differential settlement and provide

adequate safety against sliding and overturning.

WATER TANK

A water tank is provided to fulfill the essential needs of the occupants. In this project, two water tanks are placed with 12,000 liters capacity

V. CONCLUSION

The primary objective of the work on design and evaluation of a beach resort is prepared with thorough technical knowledge of Civil Engineering. The structure has been designed by the Limit state method. . The analyze and design of

structural elements in the superstructure were carried by a manual calculating method. During the course of the project, the technical problems were efficiently solved by consulting

with experts. It has helped to design the building with the utmost knowledge with full furnished details.

VI REFERENCE

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