

Planning, Analysis & Design of Convention Centre

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ABSTRACT

The principal intent of the paper is the planning, analysis and design of multi- storeyed buildings. Furthermore, planning and designing will be done so as to cater the proposition of all convention center within a site area of 8.6ha. The site with an average perimeter of 1.19km was selected in prior. The design was embarked on, once the soil investigation report of the purported site had been accumulated. Owing to the complexity of the design and laborious planning it called for the use of a tad more advanced softwares like Revit Architecture and STAA. Pro V8i SS6 in addition to AutoCAD [1], [2].

The designing is carried out in consensus with the requirements as stipulated in the various IS codes and NBC, also conferring to the Limit State method of design. Specifications complying to IS 857, IS 1893-2000, IS 2911, IS 456 etc was used throughout [3].

Keywords: AutoCAD, Revit Architecture, STAA

Introduction

Ever growing as one amongst the most sought-after tourists' spots, Kerala is witnessing a high rise in demand for world class accommodation. Consequentially, the future for the hospitality industry is on the bright side in the state. Cochin, dubbed the commercial and technological center of Kerala is a prime spot to embark on a new venture in the hospitality sector. This paper encompasses the planning, designing and analysis of a convention center. The project aims on incorporating Analysis of Structures and Design of Structures based off the Civil Engineering [4], [5].

The project is done in stages:

1. Architectural Planning and drawing

2. Modelling
3. Structural Analysis
4. Structural Design

Planning and drawing was carried out using the AutoCAD16 version. The drawings was then exported to STAAD supported formats for 3D modeling. The analysis and design was also completed using the STAADPro software. A final architectural modeling is done with the help of Rivet Architecture software as the final stage [6].

Result

1. **Architectural planning:** The primary convention centre has the larger dimension as 77m and the other two dimensions as 45m and 47m respectively. The workable area of the convention centre has the dimensions of 34m * 36m respectively. The stage has dimensions of 36m * 10m respectively. The Grand Convention Centre has a seating capacity of more than 700 bystanders and well equipped with all exclusive luxury facilities.
2. **Design result:**

DESIGN RESULTS			
M40 LENGTH: 3600.0 mm	Fe415 (Main) CROSS SECTION: 400.0 mm X 600.0 mm	Fe415 (Sec.) COVER: 40.0 mm	
MAIN REINFORCEMENT	Provide 8 - 12 dia. (0.38%, 904.78 Sq.mm.) (Equally distributed)		
TIE REINFORCEMENT	Provide 10 mm dia. rectangular ties @ 190 mm c/c		
<u>Puz</u> : 3509.40	<u>Muz</u> : 198.24	<u>Muy</u> : 128.19	IR: 0.21

Conclusion

The planning and designing was done only after thorough research of literatures. This paper has ensured re defining.

References

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