TALL BUILDING CASE BASE

THIS THESIS IS SUBMITTED TO THE DEPARTMENT OF CIVIL ENGINEERING IN PARTIAL FULFILMENT OF THE REQUIRMENT

FOR THE DEGREE OF MASTER OF ENGINEERING IN STRUCTURAL ENGINEERING DESIGN

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DECLARATION

I, T.G.D.T.Dharmawardana, hereby declare that the content of this thesis is the original work carried out for a period of one year by me. Whenever other's work is included in this thesis, it is appropriately acknowledged as a reference.

Abstract

A High Rise Building project is a collective output of a number of professionals, non-professionals, and skilled and non-skilled labour. In this regard the structural engineer has to play a major role. The structural engineer has to look in to all structural aspects such as shear wall layout and area and sizing of structural elements and non-structural aspecst, such as sump capacity, number of elevators, KVA rating, toilet details, etc. at the early stages of the project. Consideration of non-structural aspects may help to select a better structural form and to avoid change of structural systems in latter stages due to sudden addition of toilets, elevators, stairs etc.

Structural Engineering Design is a science. It is also an art, which relies upon past experience and knowledge gained from the study of other projects should help to deal with new projects of a similar or even different nature.

This research involved a literature survey, a survey of tall buildings and an analysis of their features.

In the literature survey, some important case-by-case details were identified, as well as some general guidelines for building planning.

In the tall building survey, an attempt was made to use the experience of construction of high-rise buildings in Sri Lanka for new projects. The study is based on sixteen high-rise buildings in Sri Lanka. The results show that some structural and non-structural guidelines could be adopted for new projects at the initial design stage.

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CONTENTS