



**DEPARTMENT OF BUILDING
UNIVERSITI TEKNOLOGI MARA
(PERAK)**

THE CONSTRUCTION OF SUPERSTRUCTURE

Prepared by:

ALIYAH NATASHA BINTI ABD KADIR

2019247532

ACKNOWLEDGEMENT

Alhamdullillah, praise to Allah, the Most Merciful, the Most Graceful.

My internship at Tekad Nusantara Sdn Bhd was a fantastic opportunity for learning and professional growth. As a result, I feel myself really fortunate to have been given the chance to be a part of it. I am also glad for the opportunity to meet so many amazing individuals and experts that guided me during this internship time. I had wanted to express my deepest thanks to the following great people for their guidance, counsel, and assistance throughout the training time. First and foremost, I would want to express my gratitude Encik Marzuki bin Hj Che Omar for the chance to do my training at his esteemed firm. His fantastic and competent team was really helpful in allowing me to study and improve comprehension, knowledge of the real work environment of the project, as well as theory concerning structures, construction, and civil works. Many thanks to the Masjid Saujana site workers for assisting me in better understanding construction protocols, site safety, and industry best practices. It is a privilege to be able to work and learn alongside such esteemed individuals.

Furthermore, I would want to thank all of the UiTM instructors who have educated me and helped me to become a better student and person. I would also want to express my heartfelt gratitude to the professors who were actively involved in my training. To Cik Nor Azizah Binti Talkis, Supervising Lecturer, En. Ezzat Fahmi Bin Ahmad, Evaluation Lecturer, En. Dr Nor Asma Hafizah Bt. Hadzaman, Practical Training Coordinator and Dr. Dzulkarnaean Bin Ismail, Programme Coordinator, I appreciate the time, effort, and encouragement that they have given to the timely achievement of my training, this report, and the useful information that they generously gave throughout the previous several semesters.

Last but not least, I had wanted to give special thanks to my wonderful parents for their unwavering support throughout the years. I apologize to all those anonymous individuals that assisted me in various ways in order for me to have a decent training experience. Thank you so much.

ABSTRACT

It is indisputable that Malaysia's building industry has grown tremendously in tandem with other developing countries. A superstructure is an important component that must be present while creating a construction or a residence. Without the crucial part, a successful structure will not be built. This report was written for a mosque construction project with a budget of RM10,900,800.00. The objective of this report is to identify the materials used that are necessary in building a structure. The improper material choice can lead to structure failure, which is one of the most undesirable things that might happen to a building. Next, outline the strategy for creating RC concrete columns and slabs, as an appropriate methodology is necessary and important for a building to stand robust and not cause any future inconvenience once completed. When it comes to creating a structure, the necessary technique and materials must also be implemented. Furthermore, as well as any concerns that may develop on the job site during construction because problems are unavoidable and must be handled effectively by the person in charge. Hence, this study will describe how superstructure construction works in practice.

CONTENTS

ACKNOWLEDGEMENT I

ABSTRACT II

CONTENTS III

LIST OF TABLES IV

LIST OF FIGURES V

CHAPTER 1.0 INTRODUCTION 1

 1.1 BACKGROUND OF STUDY 1

 1.2 OBJECTIVES 3

 1.3 SCOPE OF STUDY 4

 1.4 METHODS OF STUDY 5

CHAPTER 2.0 COMPANY BACKGROUND 6

 2.1 INTRODUCTION OF COMPANY 6

 2.2 COMPANY PROFILE..... 8

 2.3 COMPANY ORGANIZATIONAL CHART 9

 2.4 LIST OF PROJECTS..... 11

 2.4.1 Completed Projects..... 11

 2.4.2 Project in Progress 12

CHAPTER 3.0 CASE STUDY 13

 3.1 INTRODUCTION TO CASE STUDY 13

 3.2 TO IDENTIFY THE MATERIALS USED IN CONSTRUCTION OF REINFORCED CONCRETE (RC)
 COLUMN AND REINFORCED CONCRETE (RC) SLAB 16

 3.3 TO EXPLAIN THE CONSTRUCTION METHOD OF REINFORCED CONCRETE (RC) COLUMN AND
 REINFORCED CONCRETE (RC) UPPER SLAB 22

 3.4 TO IDENTIFY PROBLEMS THAT OCCUR DURING THE CONSTRUCTION OF SUPERSTRUCTURE 30

CHAPTER 4.0 CONCLUSION 34

REFERENCES 35

CHAPTER 1.0

INTRODUCTION

1.1 Background of Study

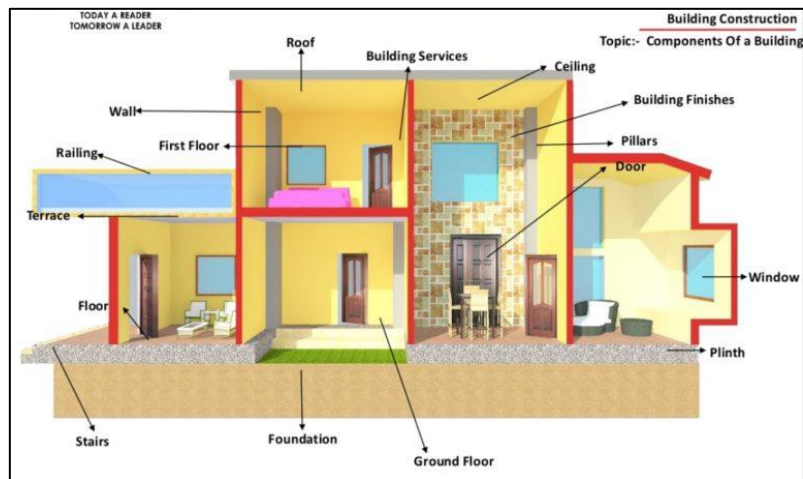


Figure 1: Basic components of building

Source: (Vernon, 2020)

In construction industry, every building will start with the base first before constructing it to become a building. A construction project has two key components: substructure and superstructure. The substructure is the portion of the construction that is erected underneath ground level, whereas the superstructure is the portion of the structure that is developed atop ground level and fulfils the goal of the structure's intended function (The Constructor, 2010). The foundation, floors, walls, beams, columns, roof, stair, and other fundamental components of a structural system are the foundation, floors, walls, beams, columns, roof, stair, and other basic components of a building structure. Each one has features that have a role in terms of sustaining, confining, and safeguarding the building structure (The Constructor, 2019).

Column-Beam-Slab System is employed in current construction in all superstructures using latest tech and building materials. The weight of the slab is often distributed to the columns or walls via the beams, downwards to the foundation, and finally to the underpinning earth beneath (admin, 2015). Beams and columns are two categories of structural components that perform