DEPARTMENT OF BUILDING

UNIVERSITI TEKNOLOGI MARA

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CONSTRUCTION OF TOLL CANOPY ROOF TRUSSES STEEL STRUCTURE

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2017206548

ABSTRACT

This report briefly described and explains about the toll canopy roof trusses steel structure and how to construct it. The government of Malaysia has been spending around RM 5 billion on this SUKE project. The main objective of this highway was to reduce 35% of traffic congestion from MRR2 to Kuala Lumpur. The steel structure has many advantages over the concrete structure and in this project, it can be seen how this steel structure can extend the distance from column to another in a relatively long path which is 74.6m roof structure which cannot be achieved using concrete structures. The objectives of this report are to determine the construction method of toll canopy roof trusses steel structure, to determine the test to be done and the problems that occurred and how to solve it. The methodology for this report was taken based on the observation, document and also the interview about the project with the employees. As a conclusion, all the information of the toll canopy roof trusses steel structure received are collected and gathered to complete this report.

ACKNOWLEDGEMENT

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

I would like to extend my heartfelt gratitude for the guidance, advice, and help rendered throughout the period of training by the following group of amazing individuals. First and foremost, I would like to thank En Hishamuddin Bin Sadi for the opportunity given, to conduct my training in his esteem company. His team of professionals comprising of Mr Ganesh Tachinamutu, En Masrizal Misran, En Mohd Afiq Abdul Aziz, En Farhan Husin, En Raja Faizuddin, En Nur Shafies Mursydie, Pn Nurul Atiqah Nizam, Cik Wan Nur Farhana and En Ashok Sivashanmugam, have enabled me to learn and develop my understanding, knowledge and feel of real-time projects, and the theory involved in analysis of structures, building and civil works. They are also responsible for streamlining and assessing my training. Also to the site personnel in Bukit Teratai, Ampang who has extended their cooperation and help to further enhance my ability in understanding the procedures in construction and site administration, test procedures, site safety and best practices in the industry. It is an honor for me to be given the opportunity to 'work' with all of you.

I would also like to thank ALL the UiTM lecturers that have taught and nurtured me in becoming a better student and person. I would also like to extend my deepest appreciation to the lecturers who are directly involved during my training stint. To En Muhammad Naim Bin Mahyuddin, Supervising Lecture and also the Practical Training Coordinator, Dr Mohd Rofdzi Bin Abdullah, Visiting Lecturer and Dr. Dzulkarnaen Bin Ismail, Programme Coordinator, I value the time, effort, encouragement and ideas that they have contributed towards the successful completion of my training, this report and the valuable knowledge that have been shared over the last few semesters.

Last but not least, my special thanks to my beloved parents for their sacrifices over the years.

Thank you so much.

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INTRODUCTION

1.1 Background and Scope of Study

Steel structure is a metal structure which is made of structural steel components connect with each other to carry loads and provide full rigidity. Because of the high strength grade of steel, this structure is reliable and requires less raw materials than other types of structure like concrete structure and timber structure. (https://atad.vn/steel-structure-introduction/)

The steel structure is the cost leader for most projects in materials and design. It is inexpensive to manufacture and erection requires less maintenance than other traditional building methods. It can withstand extreme forces or harsh weather conditions, such as strong winds, earthquakes, hurricanes, and heavy snow. They are also unreceptive to rust and, unlike wood frames, they are not affected by termites, bugs, mildew, mould, and fungi.

Steel is one of the major construction materials used all over the world. It has many advantages over other competing materials such as high strength to weight ratio, high ductility (hence its suitability for earthquake-resistant structures), and uniformity. It also green material in the sense that it is fully recyclable. (N.SUBRAMANIAM,(2010). Steel Structure Design and Practice, Publishing Oxford University Press, India)