



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

**THE PROCESS OF CONSTRUCTION OF 1 UNIT  
TELECOMMUNICATION TOWER TYPE 3 LEGGED**

**Prepared by:**

**ATHIQAH NURKHALISYAH BINTI AZINUDDIN**

**2019273548**

## **ACKNOWLEDGEMENT**

In the name of Allah, the Most Merciful and the Most Graceful.

I wish to express my sincere gratitude to En Mohd Nor Ariffin Bin Abdul Hamid for providing me an opportunity to do my internship in his project and planning department. His team consist of Puan Siti Aishah Bin Saiful Yazan, En Dzuljalalikram Bin Abdul Halim, En Mohamad Amirul Ashraf Bin Mohd Shukor, En Muhammad Shaffiq Bin Mohammad Zaki, En Yusaini Bin Taslim, En Lukman Bin Hasim, En Muhamad Zahid Bin Zainul Rashid and Nur Diyana Binti Salleh, have guide me to learn and understanding about the real time project. The team is also be responsible to show the project flow from the planning part until the project handover.

I sincere thank to my supervisor, Puan Nor Hidayah Binti Bogiman and En Muhamad Zahid Bin Zainul Rashid for their guidance and encouragement in carrying out this project work. I also wish to express my gratitude to the official and other staff member of D'harmoni Telco Infra Sdn Bhd who rendered their help during the period of my project work.

A special thanks to my beloved family members for all the sacrifices and support throughout this journey.

## **ABSTRACT**

Telecommunication tower is a tower that are be using for placing equipment of the telco. The telecommunication tower that are build can be share by many telco. The quantity of the telco that can be fit in one tower is based on the type of the telecommunication that are build. In this report, It will be explanation about the process from starting search proposed site until the erection of the tower. The process that will be explained is to explain the process of search site for telecommunication tower. Following that, to explain the process of technical site survey for construction of telecommunication tower. Lastly, to explain the process of construction work of tower from foundation to erection tower. Last but not least, this report give a knowledge about process flow to build a telecommunication tower.

<b>CONTENTS</b>	<b>PAGE NO</b>
Acknowledgements	4
Abstract	5
Contents	6
List of Tables	7
List of Figures	8
<b>CHAPTER 1.0 INTRODUCTION</b>	
1.1 Background of Study	10
1.2 Objectives	12
1.3 Scope of Study	12
1.4 Methods of Study	13
<b>CHAPTER 2.0 COMPANY BACKGROUND</b>	
2.1 Introduction of Company	14
2.2 Company Profile	15
2.3 Organization Chart	17
2.4 List of Project	24
2.4.1 Completed Projects	24
<b>CHAPTER 3.0 THE PROCESS OF CONSTRUCTION OF 1 UNIT TELECOMMUNICATION TOWER TYPE 3 LEGGED</b>	
3.1 Introduction to Telecommunication Tower Type 3 Legged	48
3.2 The process of search site for telecommunication tower	48
3.3 The process of technical site survey for construction of telecommunication tower	50
3.4 The process of construction work of tower from foundation to erection tower	50
<b>CHAPTER 4.0 CONCLUSION</b>	
4.1 Conclusion	54
<b>REFERENCES</b>	

## CHAPTER 1.0

### INTRODUCTION

#### 1.1 Background of Study

The telecommunication tower is a type of telecommunication structure made up of steel frames. Telecommunication towers act as a specially built structure to placed telecommunication devices, allowing them to broadcast signals that support the communication systems.

A telecommunication transmitter is a telecommunication device that contains antennas and telecommunication electronic devices used to connect mobile phones to a cellular network using radiation technology. A tall building is installed with a variety of transmitter or receiver antennas. Among the electronic devices available are digital signal processors, electronic control systems and GPS receivers.

Telecommunication transmitters are typically placed at a high elevation to provide adequate coverage. Cellular signal coverage is primarily determined by line of sight. If the telecommunications transmitter is in line of sight, a phone can easily receive coverage. If there are buildings or dense trees in the way of the line of sight, placing the telecommunication transmitter at a high altitude helps in producing good coverage.

As a result, we frequently see telecommunications transmitters installed on towers. The tower is known as a telecommunication transmitter tower or the Base Transceiver Station (BTS) or Cell Tower. Telecommunication transmitters are not only installed on towers, but are also frequently installed on the roofs of tall buildings.

There are a type of telecommunication tower which is tower, lamp pole, monopole, monopole tree and minaret. Firstly, tower. Tower is have 3 legged and 4 legged. The height of the tower that have is 45 meter, 60 meter and 76 meter. The tower is build on the ground (greenfield).

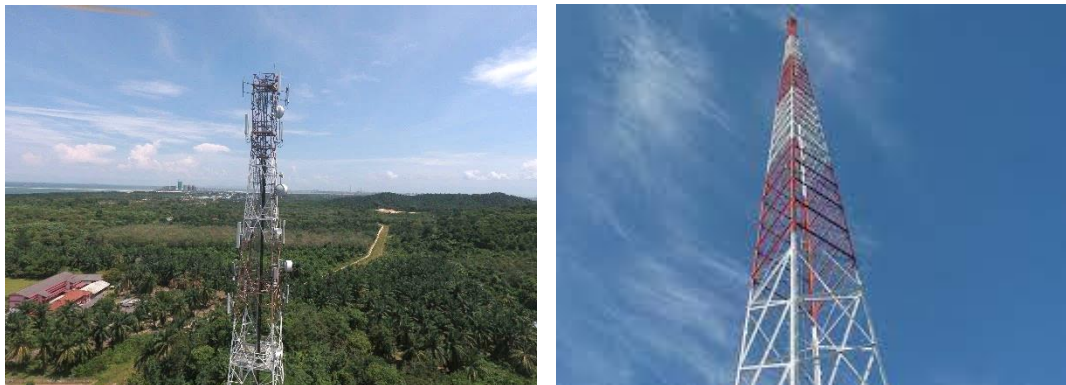


Figure 1.1: 3 Legged and 4-Legged tower