



UNIVERSITI TEKNOLOGI MARA

FACULTY OF CIVIL ENGINEERING

INDUSTRIAL TRAINING REPORT

MUHAMMAD ZAKI IKMAL BIN MOHAMAD SHAHR
(2016616556)

RAF CONSULT SDN BHD,
2E, JALAN PULAI PERDANA 11/1,
TAMAN SRI PULAI PERDANA, JOHOR BAHRU, JOHOR,

JULY 2018

ABSTRACT

Industrial training refers to a program which aims to expose students to real life experience to be a Civil Engineer within a specified timeframe. Industrial training can help students gain a little bit about the activities and tasks that need to be implemented as a Civil Engineer. RAF Consult is chosen because it is a consultant company that offer engineering and consulting services which their scope of works are related with the syllabus of Civil Engineering course.

In a short period of time I have been exposed to consulting works and site surrounding as they offer me to teach me how to design a building using specific software and place me at their site construction for me to experience the life as a site engineer. I also get the opportunity to familiarize the site and learnt how the engineer is responsible to ensure the progression of the project. At the office, I have been taught by Mr. Zaini who is a professional in Building Information Modelling (BIM) on how to design buildings using BIM software such as Autodesk Revit and Autodesk Robot Structural Analysis. At the site, I have been taught by Mr. Taufik who is a Site Engineer from RAF Consult on how to be a Site Engineer and learnt about Pile Driving Analysis Test (PDA Test).

Autodesk Revit is one of Building Information Modelling (BIM) software for Structural Engineer, Designer and Architect. Autodesk Revit is more convenience than Autodesk AutoCAD as AutoCAD is primarily a drafting tool to create basic geometry that represents real life while Revit is used to create geometry that is required with real life information. Revit also supports a modeling workflow, where deliverables such as drawings and schedules come directly from a single, unified model.

The Pile Driving Analyzer (PDA) system is the most widely employed system for Dynamic Load Testing and Pile Driving Monitoring in the world. High Strain Dynamic Load Tests, also called PDA tests, assess the capacity of several piles in a single day. Pile Driving Analyzer systems also evaluate shaft integrity, driving stresses, and hammer energy when monitoring installation.

ACKNOWLEDGEMENT

In the name of Allah, the Most Gracious, the Most Merciful. All the praises and thanks be to Allah towards HIS gifts upon me, divine strength , patience and great determination in completing my task during industrial training.

Full of love and respect, I would like to thank my industrial supervisor, Mr. Mohamad Taufik Bin Bidon and Mr. Mohamad Zaini Bin Misran who always guide and teach me during my eight weeks of industrial training. Their guidance have open my mind about Civil Engineering and thought me well, who is a rookie in this field. I also want to express my appreciation to Ir. Ahmad Fadhil Bin HJ. Udin (The Principal of RAF Consult), Mr. Mahdhir Bin HJ Samian (Project Director), Ir Rusnipa Bin Wahi (Head of Structure Division), and Mdm Mastura Binti Omar (Head of Administration And Finance) as well as all the staff of RAF Consult, on the willingness to accept me to training at the company and provide mentoring and guidance to me and help me solve all the problems faced during my industrial training.

Last but not least, I want to give my deepest gratitude to my beloved parents, Mr. Mohamad Shahir Bin Abdullah and Mrs. Norhazaini Binti Ibrahim for their love, supports and prayers and all their effort to help me in completing my industrial training.

TABLE OF CONTENT

TITLE	PAGE
Abstract	1
Acknowledgement	11
Table Of Content	111-114
List Of Figures	iv-v
CHAPTER 1 : INTRODUCTION	
1.1. Company Background	1
1.2. Nature of Business	1-3
1.3. Organization Charts	4-6
1.4. Certificates and Recognition	7-9
1.5. Current Project	10-16
1.6. Conclusion	17
CHAPTER 2 : WEEKLY SUMMARY	
2.1. Introduction	18
2.2. Weekly Summary	19-21
2.3. Conclusion	22
CHAPTER 3 : TECHNICAL REPORT	
3.1. Introduction	23
3.2. Design and Analysis	24-27
3.3. Retaining Wall	27-28
3.4. Piling Work	29-30
3.5. Concreting Work and Concrete Cube Test	30-31
3.6. Conclusion	32
CHAPTER 4 : CONCLUSION	
4.1. Introduction	33
4.2 Lesson and Knowledge Gained	34
4.3. Suitability of Organization	35
4.4. Limitation and Recommendation	35
REFERENCES	36

LIST OF FIGURE**Title****CHAPTER 1**

Figure 1.1: Consulting

Figure 1.2: Detailing

Figure 1.3: Planning

Figure 1.4: Organization Chart

Figure 1.5: Divisions

Figure 1.6: List of staff

Figure 1.7: APEC Engineer

Figure 1.8: Lembaga Jurutera Malaysia

Figure 1.9: International Professional Engineer

Figure 1.10: Sekolah Kebangsaan Taman Pulai Emas

Figure 1.11: Site Office Organization Chart

Figure 1.12: Retaining wall Process

Figure 1.13: Piling Process

Figure 1.14: Excevation

Figure 1.16: Pad Footing

CHAPTER 3

Figure 3.2.1: Basic Revit

Figure 3.2.2: Basic Revit realistic view

Figure 3.2.3: Pile cap design

Figure 3.2.4: Rebar in beam

Figure 3.2.5: Rebar in column