DEPARTMENT OF BUILDING

UNIVERSITI TEKNOLOGI MARA

(PERAK)

SELECTION OF SUB-CONTRACTOR FOR SPECIALIST WORK

(RC PILES INSTALLATION WORKS)

Prepared by:

MUHAMMAD AMIRUL AIMAN BIN NOR AZAM

2019227846

DEPARTMENT OF BUILDING
FACULTY OF ARCHITECTURE, PLANNING AND SURVEYING
UNIVERSITI TEKNOLOGI MARA
(PERAK)

AUGUST 2021

It is recommended that the report of this practical training provided

By

Muhammad Amirul Aiman Bin Nor Azam
2019227846

entitled

Selection of Sub-Contractor for Specialist Work
(RC Piles Installation Works)

be accepted in partial fulfilment of requirement has for obtaining Diploma in Building.

		_____
Report Superisor	:	Ir Raja Nurulhaiza Binti Raja Nhari
		_____
Practical Training Coordinator	:	Dr Nor Asma Hafizah Binti Hadzaman
		_____
Programme Coordinator	:	Dr. Dzulkarnaen Bin Ismail

DEPARTMENT OF BUILDING
FACULTY OF ARCHITECTURE, PLANNING AND SURVEYING
UNIVERSITI TEKNOLOGI MARA
(PERAK)

AUGUST 2021

STUDENT'S DECLARATION

I hereby declare that this report is my own work, except for extract and summaries for which the original references stated herein, prepared during a practical training session that I underwent at Gabungan Strategik Sdn Bhd for duration of 20 weeks starting from 23rd August 2021 and ended on 7th January 2022. It is submitted as one of the prerequisite requirements of BGN310 and accepted as a partial fulfilment of the requirements for obtaining the Diploma in Building.

…….

Name : Muhammad Amirul Aiman Bin Nor Azam

UiTM ID No : 2019227846

Date : 7/1/2022

ACKNOWLEDGEMENT

First and foremost, thanks to Allah, the God Almighty for his shower of blessings. My highest appreciation and gratitude go to the amazing individuals as well as a group of people that have helped and guided me throughout my practical training period. The first person I would like to express my gratefulness towards is En Mustafa Bin Mohd Said for the given opportunity for me to conduct my practical training at his prestigious company and get a priceless experience to work under his management. He has certainly inspired me to become a good leader like he is in the future. Secondly, I would like to wish my thanks to Pn Hamidah Binti Kasim for monitoring me throughout my practical training, with her guidance and help, I was able to develop and expand my knowledge in doing tasks as a contracts administrator where I get to experience conducting site inspection for defects, award recommendations as well as instilling me with ethics of working in an office. Other fellow officemates which consist of Siti Suhana Binti Abu Bakar, Hazimah Binti Zaini, Alya Ilyani Binti Mohd Shukri, Zol Azmeer Bin Zolkiflee, Muhammad Shukry Bin Jamil and Hasrizal Bin Ramli have also helped me develop my knowledge, experience, and skill of working as a contract's administrator at a construction company. Not to forget my lecturers from UiTM, Ts Dr Asmat Binti Ismail and Ir Raja Nurulhaiza Binti Raja Nhari that have guided me in completing this practical report and fulfilling all the requirements to complete this industrial training for this semester. Cik Norazizah Binti Talkis and Dr Nor Asma Hafizah Binti Hadzaman, the practical training coordinator that has briefed and informed us, the student of diploma in building semester 5 regarding this practical training.

ABSTRACT

Choosing a subcontractor for specialised work on a construction project is a difficult decision for the main contractor to make because it can affect the progression and smoothness of the project's delivery. An improper subcontractor's selection can result in issues such as poor work quality and project's cost and time overrun. Thus, this report aims to study the selection of subcontractors for specialist works specifically for the installation works of reinforced concrete piles at the E'Island Lake Haven Residence project. It comprises four blocks, an 18-storey high rise residential project that is currently under construction in Puchong, Selangor. The three objectives for this report are to investigate the methods of subcontractor selection for specialized construction related works together with its significance, to analyse the criteria for subcontractor selections that make them qualified for the works, and lastly is to determine the problems that could arise during subcontractor selection and the ways to overcome them. This report will mainly focus on the responsibilities of the contracts department of the main contractor and what are their roles in selecting the best subcontractor to put responsible for the mentioned scope of works at a construction site.

CONTENTS **PAGE NO**

LIST OF TABLES

LIST OF FIGURES

CHAPTER 1.0

INTRODUCTION

1.1 Background of Study

Prior to the commencement of a construction project, the selection of a sub-contractor is a process that any main contractor/owner must go through to evaluate the best subcontractors among the applicants to put responsible for a specialist work at a construction site. A proper sub-contractor selection for a specialist work is a crucial yet complicated process that is very influential in the progression and success of a construction project (Alptekin & Alptekin, 2017). Other than ensuring the success of the construction works, this process is also important to avoid selecting the least credible sub-contractor that could cause any issues that may lead to project failure such as delay of works, poor quality standards and over budgeting of a project (Rashid et al, 2018). There are a few methods that are currently being adopted by the industry players.

The most common basis of sub-contractor selection is through bid price on itself as most sub-contractor who offers the lowest tender price is regarded to be the key to being awarded the contract (Alptekin & Alptekin, 2017). However, most experienced construction industry practitioners argued that sub-contractors should be evaluated from a variety of perspectives and not just based on the price that they offer (Rashid et al., 2018). Furthermore, awarding the contract to a sub-contractor that offers the lowest bid price isn't always the most beneficial way of selecting a sub-contractor as it might result in project delivery issues as they may quote a low tender price with a reduced quality of work in the hopes of being paid by making a claim (Alptekin & Alptekin, 2017). These sub-contractors also tend to manipulate the prices that they offered solely to get awarded with the contract (Rashid et al, 2018).

On the contrary, another alternative way of selecting a sub-contractor is by MCDM (Multi-Criteria Decision Making) which is much advantageous than the lowest price criterion as it takes into consideration various factors that could promise the smooth success of a work. This method has the potential to deliver projects within the allocated time frame together with an acceptable quality standard which can cut down unnecessary costs that may result in overfunding of a project (Rashid et al, 2018).

Selecting the best bidder and assessing the applicants is not an easy job as it requires in-depth knowledge and experience to guarantee that the appointed sub-contractor can execute the specialist works satisfactorily to the owner's requirement (Alptekin, 2017). Hence, this report will study the methods and standard operating procedures of sub-contractor selection and the criteria of selecting the most qualified sub-contractor as well as the problems that could occur during the process with the solutions to overcome them.

1.2 Objectives

i. To investigate the sub-contractor selection methods for specialised construction related works.

ii. To analyse the criteria of a sub-contractor that qualifies for specialist work.

iii. To determine the problems & solutions during the selection of sub-contractor.

1.3 Scope of Study

Figure 1.1 E'Island Lake Haven Residence

The scope of this study focuses on the selection of a sub-contractor for specialist work specifically the works related to reinforced concrete piling installation works at the E'Island Lake Haven residential project. The construction site is located at Taman Putra Perdana, 47100 Puchong, Selangor where this study is being carried out. This 18-storey high-rise residential project had commenced in December 2019 and is still currently ongoing. As shown in Figure 1.1, It comprises 4 Blocks which are Block A, B, C and D that is facing an artificial lake. The total cost of this project is Two Hundred and Fifty Million Malaysian Ringgit (RM 250,000,000.00) and it is an in-house project by Gabungan AQRS Berhad. Hence, this study will explain and analyse the processes that are involved in selecting a sub-contractor for the piling installation works for this project. It will include the necessary documents, forms and paper works that are used during the process. Furthermore, it will also break down the several criteria of a sub-contractor that is qualified for the works to ensure the most suitable applicants is appointed. The process of selecting a sub-contractor is not an easy task, with that being said, there may be some problems that may arise during the process. Thus, this study will investigate the problems and issues that may be faced by parties involved during the process of selecting a sub-contractor together with the solutions to overcome them. However, this case study will not focus on the method statement of piling installation on site as it will only investigate the processes that are happening in the background of acquiring the best sub-contractor that will provide piling installation works for this project. Finally, further explanations for the mentioned focus of this study are elaborated as below.

1.4 Methods of Study

1. Observation

Observations were conducted by seeing how the contract administrators at the office do their work on finding sub-contractors and suppliers for various specialised construction related works for a project. Every stage of sub-contractor or supplier selection is scrutinized thoroughly to obtain data by identifying every process that is involved together with its importance in selecting the best sub-contractor.

Other than that, observations on site were also carried out by witnessing certain processes of obtaining the materials such as the deliveries of RC square piles by the suppliers to the construction site. An installation process of the piles using pile driving machinery are also observed at one of the blocks during the occasional visit to the site and the observation is recorded by taking pictures with a smartphone. These observations are carried out throughout the internship period.

2. Interview

Interviews are carried out to collect data by asking questions to respected personnel who are responsible to handle the sub-contractor selection for the specific works at the project. A semi-structured interview is conducted where the questions are prepared beforehand to better emphasize the points for the study. This type of interview is done with the contract administrator at the HQ office in Kota Damansara and it takes about 9 minutes for a single interview session.

Meanwhile, an unstructured interview is also carried out with the site quantity surveyor during a visit to the site. This is a more casual type of interview where the questions are not prepared first but rather just questions regarding the topic that comes to mind. The interviews are recorded with the voice memo application on a smartphone as well as jotting down notes in a notebook.

3. Document Reviews

There are several materials used for the data collection for respective sections of this report. To complete the company background, the company profile is used to obtain the data such as company registrations, company organisation chart and a list of ongoing and completed projects. Meanwhile, the data needed to carry out the study on this topic is acquired from the paperwork and documents that are related to the topic such as the company's standard operating procedures (SOP), quotations from sub-contractor, subcontractor/supplier registration forms, letter of intent, price analysis, approval limit table, pile layout drawings letter of award and few others.

Some of these documents will be included below to show how it projects the data of this study to better understand its significance in the subcontractor selection process. All the stated documents that have been reviewed are placed at the HQ office in Kota Damansara and some of them only exist in softcopy form stored in the server as some of them are private and confidential.

CHAPTER 2.0

COMPANY BACKGROUND

2.1 Introduction of Company

Gabungan Strategik Sdn Bhd (GSSB) which was incorporated on 1st September 1999 is a grade G7 construction company registered under the Malaysian Construction Industry Development Board (CIDB). It is a wholly-owned construction division of Gabungan AQRS Berhad after going through an amalgamation with Motibina Sdn Bhd, Pembinaan Megah Ikhlas and, AQRS The Building Company in the year 2010. Two years later, the company was publicly listed on Bursa Malaysia under the name of Gabungan AQRS Bhd (GBGAQRS). Gabungan AQRS Berhad is planning a significant breakthrough into the construction business as it grapples with globalization and the strong competition of the 21st Century. In response to the government's demand to encourage Strategic Partnership or Smart Partnership, the company's construction division, Gabungan Strategik Sdn Bhd has succeeded in integrating technical expertise and professionalism in holding its equity and management among its 304 highly motivated employees. This is to ensure that its involvement in the construction industry develops personnel with a wide range of experience who serves at their best. Apart from its professional management and technical competence, the organisation has a work culture that prioritises quality in the execution of all government and private projects. With specialization and past experiences in construction of high-rise residential buildings, public schools, rail facilities as well as roadworks, Gabungan Strategik Sdn Bhd has been entrusted with several large-scale projects that could worth up to seven hundred million Malaysian Ringgit. Few of the noticeable projects that the company has been involved in or are currently involved in includes the Klang Valey Mass Rapid Transit (KVMRT), Sungai Besi – Ulu Kelang Elevated Expressway (SUKE), Klang Valley Light Rail Transit (KVLRT-3), and Pusat Pentadbiran Sultan Ahmad Shah (PPSAS).

2.2 Company Profile

Table 2.1 Company Profile and Registrations

Detail	Description
Company Logo	
Name of Company	GABUNGAN STRATEGIK SDN. BHD
Company Registration	492885-H
Type of Company	Private Limited
Contractor Registration	Perakuan Pendaftaran CIDB Malaysia Grade Category Specialization G7 B B01 B02 BO4 B29 G7 CE CE01 CE02 CE03 CE06 CE07 CE10 CE13 CE20 CE21 CE30 CE31 CE3 CE36 G7 ME M01 M15 M16
Registered and Business Address	D-33, Blok D, Jalan Teknologi 3/9, Bistari 'De' Kota, Kota Damansara, PJU 5, 47810 Petaling Jaya, Selangor, Malaysia
Date of Incorporation	1 September 1999
Paid up Capital	RM 10,000,000.00
Board of Directors	Y.M Tunku Alizan Bin Raja Muhammad Alias, Dato' Kamaruddin Bin Md. Ali, Dato' Sri Azizan Bin Jaafar, Dato' Ow Chee Cheoon, Ow Yin Yee, Latifah Binti Abdul Latif, Dato' Kamisah Binti Johan, Muk Sai Tat
Bankers	Affin Bank Berhad, United Overseas Bank (M) Berhad, Maybank Islamic Berhad, AmBank Berhad.
Certifications	ISO 45001:2018, ISO 9001:2015

2.3 Company's Organisation Chart

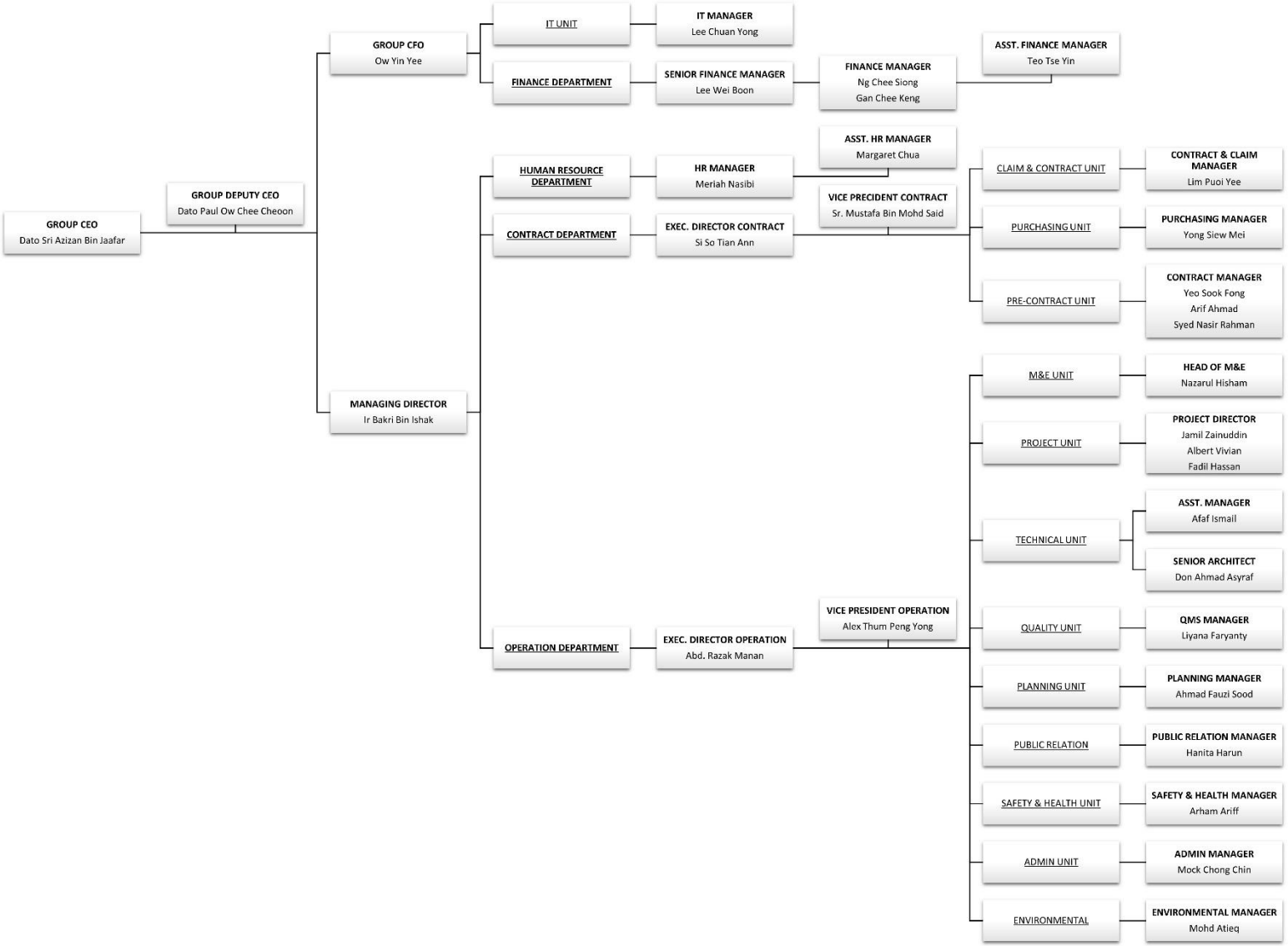

Figure 2.1 Company's Organisation Chart

Description:

Figure 2.1 above shows the Gabungan Strategik Sdn Bhd company's organisation chart that is led by two of the board of directors which are Dato Sri Azizan Bin Jaafar as the Group Chief Executive Officer and Dato Paul Ow Chee Cheeon as his deputy. Under both their supervision, there are two other key persons of the company which are Ow Yin Yee as the Group Chief Financial Officer that oversees managing the I.T unit and finance department and Ir. Bakri Bin Ishak that holds the position as the Managing Director of the construction division. The construction division is divided into three departments which are the human resource, contracts, and operations departments. The human resource department is managed by Meriah Nasibi as the human resource manager and Margaret Chua as her assistant. Meanwhile, the contracts department is under the administration of Si So Tian Ann as the executive director with Sr. Mustafa Bin Mohd Said as his vice president. They are in charge of managing the three (3) sub-department of contracts that comprises of claim & contract unit, purchasing unit and also pre-contract unit. The operations department that is under the management of Abd. Razak Bin Manan and Alex Thum Peng Yong on the other hand is a much bigger department if compared to others as they hold the responsibility to administer nine (9) sub-department namely, the M&E unit, project unit, technical unit, quality unit, planning unit, public relation, safety & health unit, admin unit as well as the environment unit.

2.4 List of Projects

2.4.1 Completed Projects

Table 2.2 List of Completed Projects

1) KLANG VALLEY MASS RAPID TRANSIT (KVMRT) PACKAGE V1

Project Title	Klang Valley Mass Rapid Transit Sungai Buloh – Kajang Line. Package V1: Construction and Completion of Viaduct Guideway and Other Associated Works from Sg. Buloh to Kota Damansara Station.
Project Value	Three Hundred Three Million Four Hundred Thirty-Seven Thousand Two Hundred Seventy-Nine Malaysian Ringgit and Seventeen Cents. (RM 303,437,279.17)
Start Date	19 SEPTEMBER 2012
Completion Date	29 SEPTEMBER 2016
Project Duration	48 Months
Client	MMC Gamuda (KVMRT) PDP Sdn Bhd

2) SPURLINE – VARIATION ORDER OF KVMRT-V101

Project Title	Project Mass Rapid Transit Lembah Kelang Jajaran Sungai Buloh – Kajang – Elevated Package V1 – The Construction and Completion of Viaduct Guideway and Other Associated Works from Sg. Buloh to Kota Damansara Station – Spurline.
Project Value	Thirty-Eight Million Nine Hundred Forty-Three Thousand One Hundred and Five Malaysian Ringgit. (RM 38,943,105.00)
Start Date	3 DECEMBER 2015
Completion Date	31 DECEMBER 2016
Project Duration	13 Months
Client	MMC Gamuda (KVMRT) PDP Sdn Bhd

3) TROPICANA METROPARK PANDORA

Project Title	The Execution, Construction of 1 Commercial Block 'Serviced Apartment' of 28-Storey Apartment (2 Towers) Which Consist of Tower A and Tower B of 24-Storey Each, Multi-Storey Car Park (P1-P5), Multi-Purpose Hall, Gymnasium and Complete with Landscape Works.
Project Value	One Hundred Seventy-Two Million Nine Hundred Ninety Thousand Five Hundred Thirty-Nine Malaysian Ringgit and Thirty-Two Cents. RM 172,990,539.32
Start Date	28 NOVEMBER 2013
Completion Date	30 DECEMBER 2016
Project Duration	36 Months
Client	Tropicana Corporation Berhad

4) PERMAS CENTRO, 3-STOREY SHOP LOTS

Project Title	Proposed Development on PTD 202777 – PTD 202784 (Part of Lot 65352) Mukim Plentong, Daerah Johor Bahru – 99 Units 3 Storey and 4 Storey Shop Office
Project Value	Fifty-One Million Malaysian Ringgit RM 51,000,000.00
Start Date	15 JULY 2013
Completion Date	15 OCTOBER 2014
Project Duration	15 Months
Client	Crystal Aspect Sdn Bhd

5) PETRONAS BASECAMP AT SIPITANG

Project Title	Provision of Accommodation on Base-Camp Concept Complete with Necessary Facilities for Petronas Chemicals Fertiliser Sabah Sdn Bhd (PCFSSB)
Project Value	Fifty-One Million Malaysian Ringgit (RM 51,000,000.00)
Start Date	28 NOVEMBER 2013
Completion Date	30 DECEMBER 2016
Project Duration	37 Months
Client	Petronas Chemicals Fertiliser Sabah Sdn Bhd (PCFSSB)

6) KLANG VALLEY MASS RAPID TRANSIT (KVMRT) CARPARK

Project Title	Klang Valley Mass Rapid Transit – Sungai Buloh – Kajang Line. Package MSPR9: Construction and Completion of Multi-Storey Carpark, External Works and Other Associated Works at Kajang Station.
Project Value	Twenty-One Million Eleven Thousand Two Hundred Sixty-Three Malaysian Ringgit and Sixty-Two Cents. (RM 21,011,263.62)
Start Date	29 JULY 2013
Completion Date	30 NOVEMBER 2015
Project Duration	28 Months
Client	MMC Gamuda (KVMRT) PDP Sdn Bhd.

7) UPGRADING OF JALAN RANTAU – SG. GADUT

Project Title	Design and Build of Upgrading of 5.16 km Jalan Rantau/Sg. Gadut Which Involves Upgrading and realign of existing Federal Route (FR1), trumpet interchange and link road as direct link to connect FR1 and State Road Jalan Rantau, upgrading existing T-Junction of Jalan Rantau to Cross Signalized Junction and all associated works.
Project Value	One Hundred Forty-One Million Malaysian Ringgit (RM 141,000,000.00)
Start Date	30 JULY 2012
Completion Date	29 DECEMBER 2014
Project Duration	29 Months
Client	Jabatan Kerja Raya (JKR)

8) SMK SRI PUNCAK JALIL, SELANGOR

Project Title	The Construction and Completion of SMK Bandar Punck Jalil at Lot PT 55715, Jalan Puncak Jalil 7, District Petaling by Using IBS System.
Project Value	Forty Million Five Hundred Thousand Malaysian Ringgit RM 40,500,00.00
Start Date	13 SEPTEMBER 2011
Completion Date	30 SEPTEMBER 2015
Project Duration	48 Months
Client	Ministry of Education Malaysia

9) BUKIT TENGAH DEPOT FOR PLBKE

Project Title	The Construction and Completion, Testing and Commissioning of Bukit Tengah Depot for Package N5 – Sub-Package116
Project Value	Twenty-Nine Million Two Hundred Thousand Malaysian Ringgit. (RM 29,200,000.00)
Start Date	5 APRIL 2011
Completion Date	28 APRIL 2014
Project Duration	36 Months
Client	MMC-Gamuda JV Sdn Bhd

10) IBS CONSTRUCTION FOR 9 SCHOOLS AT KL, PERAK AND KEDAH

Project Title	Proposed Construction of Additional School Blocks by Using IBS Method for Nine (9) Schools Located in Federal Territory of Kuala Lumpur, Perak and Kedah.
Project Value	Fifty Million Six Hundred Eighty Thousand Four Hundred Fifty-Eight Malaysian Ringgit and Forty-Eight Cents (RM 50,680,458.48)
Start Date	29 APRIL 2011
Completion Date	16 DECEMBER 2014
Project Duration	44 Months
Client	Ministry of Education Malaysia

11) RECONSTRUCTION OF POLICE TRAINING CENTRE (PULAPOL)

Project Title	Cadangan Pembangunan Semula Pusat Latihan Polis (PULAPOL) Ayer Hitam, Polis Diraja Malaysia, Negeri Sembilan.
Project Value	Seventy Million Six Hundred Sixty-Nine Thousand Seven Hundred Fifty-One Malaysian Ringgit and Seven Cents. (RM 70,669,751.07)
Start Date	7 APRIL 2011
Completion Date	31 DEEMBER 2012
Project Duration	20 Months
Client	Pembinaan BLT Sdn Bhd

12) IBS APPROACH FOR 43 SCHOOLS AT KLANG VALLEY

Project Title	Proposed to Design, Build and Prepare Forty-Three (43) Additional Building Blocks in the State of Selangor and the Federal Territory of Kuala Lumpur by Industrial Building System (IBS)
Project Value	One Hundred Fifty Million Malaysian Ringgit. (RM 150,000,000.00)
Start Date	11 OCTOBER 2007
Completion Date	14 MAY 2010
Project Duration	31 Months
Client	Pembinaan BLT Sdn Bhd

13) KEM PASIFIK FOR MILITARY ARMY FORCES

Project Title	Proposed of Military Army Forces and Government Servant at Klang Valley – Tapak Kem Pasifik. Work involves Piling, Building Works and All Associated Infrastructure Works for Building The D/E, Multipurpose Hall and Surau.
Project Value	Thirty-Two Million Nine Hundred Twenty-Five Thousand Four Hundred Eighty-Three Malaysian Ringgit and Sixteen Cents, (RM 32, 925,483.16)
Start Date	20 APRIL 2005
Completion Date	31 DECEMBER 2007
Project Duration	32 Months
Client	Usahasama SPNB-LTAT Sdn Bhd

2.4.2 On-Going Projects

Table 2.3 List of On-Going Projects

1) SUNGAI BESI – ULU KELANG ELEVATED EXPRESSWAY (SUKE)

Project Title	The construction and completion of Elevated Expressway including site clearing and demolition works, utility relocation works, traffic management, bored piling and caisson works, pile caps, piers and elevated portals, launching of precast beams and pavement works for Work Package CA3 from CH. 4200 to CH. 7800
Project Value	Six Hundred Ninety-Two Million Three Hundred Ninety-One Thousand Three Hundred Ninety-Nine Malaysian Ringgit and Eighty-Nine Cents. (RM 692,391,399.89)
Start Date	29 AUGUST 2016
Client	Turnpike Synergy Sdn Bhd

2) KLANG VALLEY LIGHT RAIL TRANSIT (KVLRT-3)

Project Title	The construction and completion of guideway, stations, park and ride, ancillary buildings, and other associated works for Package GS04 of 4.6 km length from Temasya Glenmarie and ends at Shah Alam Stadium. It involves the construction of 3 elevated stations, Project Site Office, Park and Ride facilities, CLQ and relocatable office.
Project Value	Seven Hundred Nine Million and Eight Hundred Thousand Malaysian Ringgit (RM 709,800,000.00)
Start Date	5 OCTOBER 2017
Client	Prasarana Malaysia Berhad

3) PUSAT PENTADBIRAN SULTAN AHMAD SHAH (PPSAS)

Project Title	The construction and completion of 4-Storey Dewan Undangan Negeri, 7-Storey Menteri Besar and State Secretary Office, 7-Storey State Building Offices, 7-Storey Federal Building Offices and related Mechanical and Electrical Services and External Works and Infrastructure Works.
Project Value	Three Hundred Sixty Million Nine Hundred Seventy-Eight Thousand Five Hundred and Forty-Five Malaysian Ringgit (RM 360,978,545.00)
Start Date	27 DECEMBER 2016
Client	Pahang State JKR

4) THE PEAK 41-STOREY APARTMENT

Project Title	The construction and completion of Two (2) Main Blocks (Block A and Block B) of 41-storey service apartment complete its facilities, Mechanical and Electrical Works, Civil works and other works related.
Project Value	Two Hundred Fifty-Seven Million Five Hundred Eighty Thousand Eight Hundred Seventeen Malaysian Ringgit and Eighty Cents. (RM 257,580,817.80)
Start Date	3 SEPTEMBER 2012
Client	Gabungan AQRS Berhad

5) SUNGAI BESI – ULU KELANG (SUKE) PLAZA TOLL

Project Title	The execution, construction and completion of sub-structure, toll plaza building, and motorcycle lane works at Alam Damai (TP1) for the development of Sungai Besi – Ulu Kelang Elevated Expressway (SUKE).
Project Value	Sixty Million Two Hundred Twenty Thousand Eight Hundred Sixty-Nine Malaysian Ringgit and Ninety-Seven Cents. (RM 60,220,869.97)
Start Date	25 JUNE 2018
Client	Turnpike Synergy Sdn Bhd

6) 18-STOREY E'ISLAND LAKE HAVEN

Project Title	The execution, construction and completion of sub-structure of the 4 blocks 19-storey apartment complete with designated car park area with link bridge and all other facilities. The work to include exterior and interior finishes and inclusive of all mechanical and electrical works.
Project Value	Two Hundred Fifty Million Malaysian Ringgit (RM 250,000,000.00)
Start Date	DECEMBER 2019
Client	Gabungan AQRS Berhad

CHAPTER 3.0

SELECTION OF SUB-CONTRACTOR FOR SPECIALIST WORK (RC PILES INSTALLATION WORKS)

3.1 Introduction to Case Study

The construction industry has been growing rapidly than it has ever been especially during this age of modernization, hence the market for sub-contractors in a variety of specialist works are seen to emerge increasingly as well. The ever-developing business of sub-contractors that provides similar specialist works has caused a very tight competition among them as they compete to strive as the one who could offer the best bid without compromising on the quality of work.

These subcontractors' main goal is always to become the right choice by the main contractor/owner of a construction project to make responsible for the specialist works. With that being said, the main contractor/owner plays an important role to select the best sub-contractor that could provide the best service at the best price for their construction project. This responsibility is held by the contract's administrator of the main contractor/owner to analyse the most suitable specialist to commence the works on their construction site.

There are several factors that a contract's administrator needs to take into consideration when evaluating the most qualified sub-contractor for the works which includes their financial credibility and strength, resources of materials and equipment, numbers and experience of technical staff, safety record and safety plan, similar work experience etc. For this case study, it will narrow down on the process of subcontractor selection for the installation of RC piles at the E'Island Lake Haven Residence in Puchong, Selangor as shown in Figure 3.1.

Figure 3.1 Reinforced Concrete Piles

This scope of work is a crucial part of the whole project as it is the fundamental support of a building especially for a high-rise, thus it is essential to appoint a subcontractor that can deliver a quality service to guarantee the success of this project. The piling layout for all four (4) blocks together with its details as shown in Figure 3.2, Figure 3.3 and Figure 3.4 were prepared beforehand by the civil and structural consultant, ICON Consulting Engineer Sdn Bhd as a guide for the RC piles installation by the selected subcontractor.

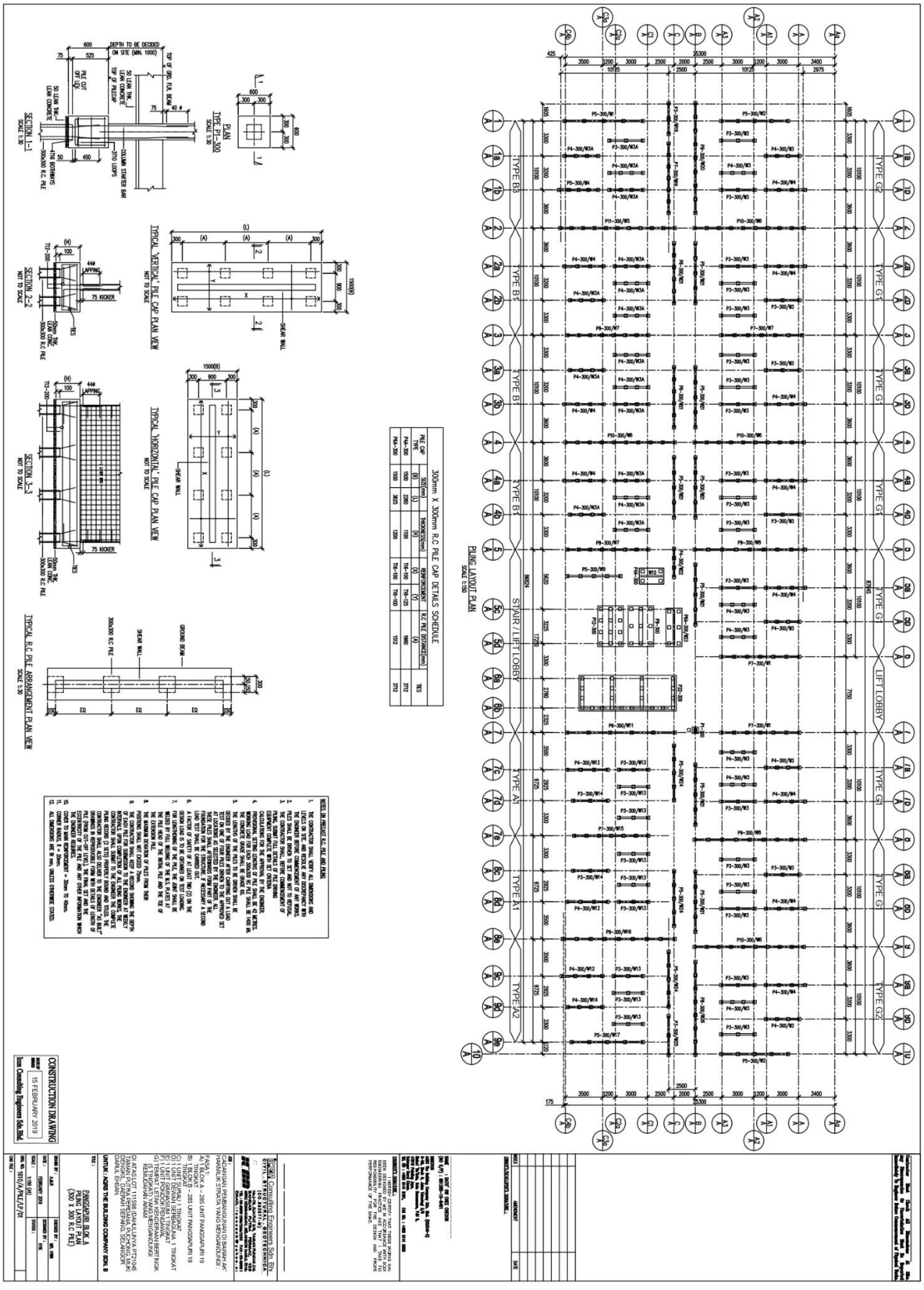

Figure 3.2 Piling Layout and Details for Block A & Block D (mirror)

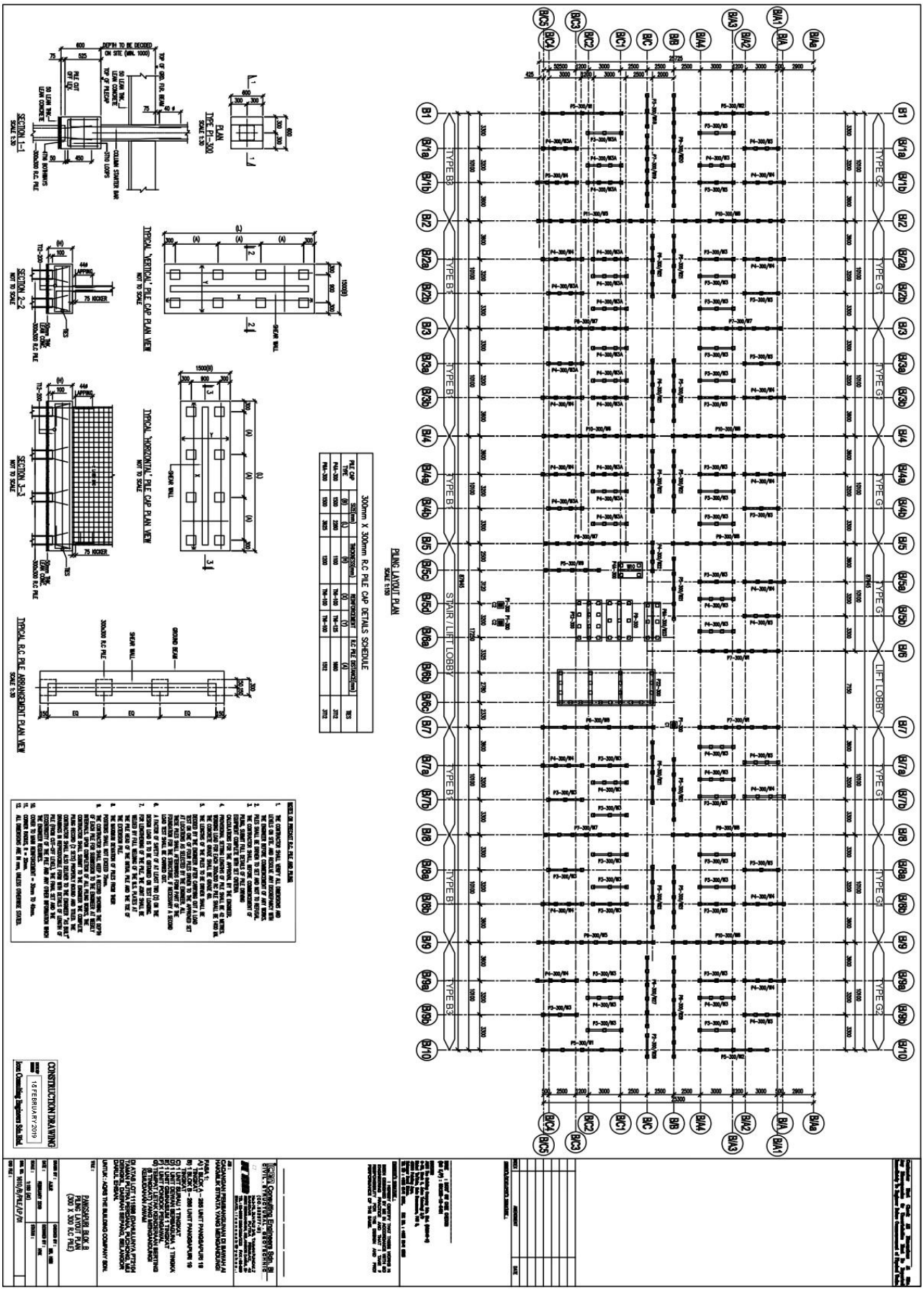

Figure 3.3 Piling Layout and Details for Block B

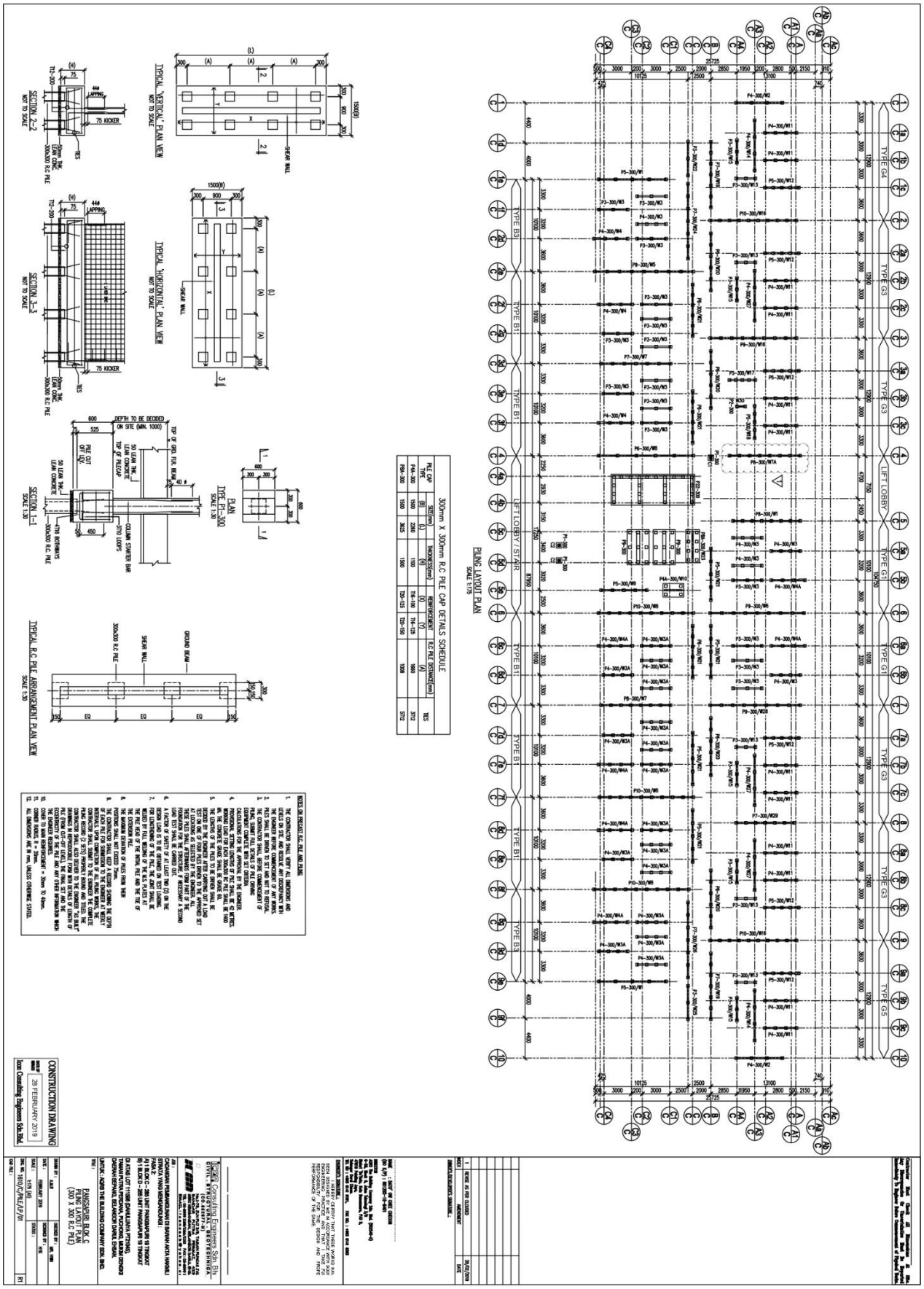

Figure 3.4 Piling Layout and Details for Block C

3.2 Methods of Subcontractor Selection

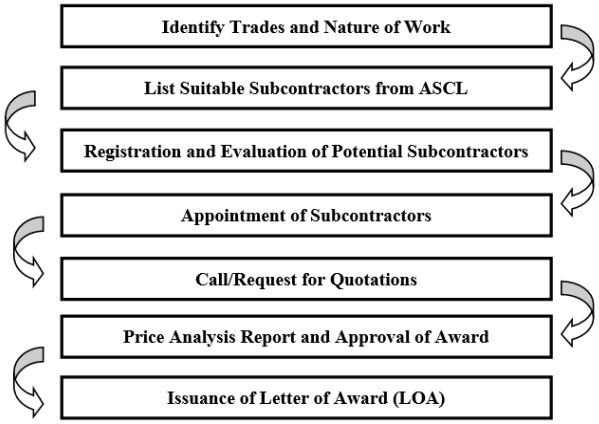

Figure 3.5 Summary of Subcontractor Selection Method

3.2.1 Identify Trades and Nature of Work

Referring to Figure 3.5, the process of subcontractor selection for a specialised work began when there is a need to satisfy a specific trade on a construction site for the identified project. This stage of the process is called the recognition of the needs where the main contractor/owner identifies the requirement to obtain goods or services from an external supplier (Patowarya, 2019). The nature of work can be a large scale and even a small scale depending on the scope of works that is yet to be fulfilled by any subcontractor. For this study, the construction trade that is yet to be satisfied is the supply and installation of RC piles that falls under the civil and structural nature of work. After the nature of work is identified, the civil and structural (C&S) consultant which is Icon Consulting Engineers Sdn Bhd advised them regarding anything related to the trade. As the trade and nature of works are recognised, the next step of the process is to determine the requirements for the scope of works based on the services to be provided as applicable to the project of E'Island Lake Haven Residence. Icon Consulting Engineers Sdn Bhd plays an important role during this stage as they consulted the main contractor/owner of the project by providing the list of potential subcontractors to put responsible for the works, preparation of structural drawings such as the piling layouts of the project, specification of the reinforced concrete piles and the method of works that are adopted for this project. These requirements are then communicated with the potential subcontractors.

3.2.2 List Suitable Subcontractors from ASCL

"ASCL" is the main contractor's Approved Subcontractors and Consultants' List for the supply of construction and professional services and labour. The subcontractors that are on the ASCL have gone through the procedure of selection and approval of subcontractors which they had any experience with the main contractor for any past projects. Potential piling subcontractors to put responsible for the works are listed until there are enough subcontractors to be reached and evaluated. However, the number of potential subcontractors to put responsible for the works might be insufficient, thus the procedure of selection and approval of subcontractors is performed to secure more subcontractors that could provide the same service. The ASCL for this particular subcontract is shown in Table 3.1 below.

Table 3.1 Approved Subcontractors and Consultants List

ITEM	NAME OF TENDERER / ADRESS	TEL. NO.	FAX NO.	CONTACT PERSON	REMARKS
1	**TH PILING SDN BHD** No. 3-1A, Lorong Bendahara 20A, Taman Sentosa Utama, Off Jalan Sg. Jati, 41200 Klang, Selangor	03-5161 6533	03-5162 5987	Mr KB Leong 016-219 0999 thpiling@hotmail.com leongkb28@gmail.com	Received
2	**ECONPILE SDN BHD** Level 8, Tower Block, Plaza Dwitasik, Jalan Sri Permaisuri, Bandar Sri Permaisuri, 56000 Kuala Lumpur	03-9171 999	03-9173 666	Mr Raymond Pang 012-987 8783 mail@econpile.com.my project@econpile.com.my	Received
3	**ONG PILING & JACK IN SDN BHD** 47-B (2nd Floor), Jalan Anggerik Vanilla N31/N, Kota Kemuning 40460 Shah Alam, Selangor	03-5131 5898	03-5525 8581	Mr. Ong Ah Ba 019-216 6688 oab_piling@yahoo.com	Received
4	**PECK CHEW PILING (M) SDN BHD** Lot 15047, Jalan Johan Setia, Batu 5, Kampung Johan Setia, 41200 Klang, Selangor.	03-3323 7333	03-3323 5553	Mr. K. K. Ng ncpiling@gmail.com	Received
5	**UEC GEOENGINEERING SDN BHD** No.38-B, Jalan BPU 9, Bandar Puchong Utama, 47100 Puchong, Selangor.	03-5882 5389	03-5882 4389	Mr. Tan Chee Guan 019-692 2398 tancg@uec.com.my	Received
6	**SIN HUP GUAN PILING & CONST. SDN BHD** No. 123, 1st Floor, Leboh Turi, Off Persiaran Raja Muda Musa, 41200 Klang, Selangor	03-3371 8777	03-3372 0337	Mr. Jack Liaw 019-338 9371 sinhupguan@gmail.com	Received
7	**LONG KEE PILING WORKS SDN BHD** 29-02, Jalan Titiwangsa 2, Taman Tampoi Indah, Johor Bahru,, 81200, Johor Bahru	03-3343 9399	-	Mr. C.S. Goh 016-208 8358 lkpiling@hotmail.com	Received
8	**BUTAN CONSTRUCTION** Lot 4917 & 4918, Jalan Kenangan, 6th Miles Off Jalan Meru, 41050 Klang, Selangor	03-3392 3286	03-3392 3530	Ms Ng Sea Yong steph@engbeng.com.my	Received

3.2.3 Registration and Evaluation of Potential Subcontractors

Due to the insufficient number of subcontractors that could provide installation service of reinforced concrete piles on the approved subcontractor and consultants' list (ASCL), the contracts administrator personnel are responsible to identify and register new subcontractors to be added into the ASCL. New subcontractors were identified through the application of potential subcontractors, referrals, and recommendations of consultants as well as advertisements. However, the most common practice is the contracts administrator personnel conducted their research through the internet to find new subcontractors as it is the most efficient method. After a few potential subcontractors are identified, they are then reached by the contract's administrator personnel to fill in the subcontractors/ consultants/ supplier's registration forms as shown in Figure 3.6 and Figure 3.7 to get more information about the subcontractor other than registering them into the ASCL. The important information that the potential subcontractors must provide in the subcontractors' registration forms is their company background, financial background, license/registration authority as well as their quality, safety, and health management system. Few documents need to be included by the potential subcontractors such as the following:

1. Form 24 & 39 (if applicable)
2. Company audited account for last 3 years
3. Credit facilities – letter from creditors/bank
4. EPF Statement for 2 months
5. Director and key staff CV & organisation chart
6. List of plant and machinery
7. List of previous & current project
8. Prestigious award & appreciation letter from clients

Besides that, copies of certificates were also included as supporting proof of certifications that they claimed to have. Once the forms are filled in and required documents are included, the contract's administrator personnel will collect them back from the potential subcontractors for evaluation purposes.

SUBCONTRACTORS / CONSULTANTS / SUPPLIERS REGISTRATION FORM

A. BACKGROUND

Name of Company : : _____

GST Registration Nc : _____

Mailing Address : _____

_____

_____

_____

Post Code : _____ Town/City : _____

Telephone No : _____ Fascimile No : _____

Contact Person (s) : 1. _____ 2. _____ 3. _____

Handphone No (s) : 1. _____ 2. _____ 3. _____

Service/Goods Offer (please tick / whichever applicable)

☐ Services/Trades Scope : _____

_____

_____

☐ Material/Goods Type : _____
(Attach brochures & Specifications)

No. of year In Business : _____ Year (s)

Type of Company (please tick / whichever applicable)

☐ Sole Proprietor ☐ Partnership ☐ Private Limited ☐ Other (please specify)

Documents required :

1 Form 24 & 49 (If applicable)	☐	5 Director and key staff CV & organisation chart	☐
2 Company audited account for last 3 years	☐	6 List of plant & machinery ~ please enclosed reg. card	☐
3 Credit facilities - letter from Creditors/bank	☐	7 List of previous & current project ~ please enclosed LOA	☐
4 EPF Statement for 2 months	☐	8 Prestiges award & appreciation letter from client (If any)	☐

Human Resource:

Total No. of Staff : _____

No. of Quality Assurance/Control Staff : _____

No. of Operation/Production Staff : _____

B. COMPANY FINANCIAL BACKGROUND

Authorised Capital : RM _____ Total Assets : RM _____

Paid-up Capital : RM _____ Plant & Machinery : RM _____

Working Capital : RM _____

C. LICENSING / REGISTRATION AUTHORITY (please tick / whichever applicable)

☐ PKK (Grade : _____) ☐ JKR ☐ PAM ☐ Jabatan Bomba

☐ TNB ☐ ISO 9001 ☐ Kementerian Kewangan ☐ others (please specity) _____

☐ CIDB (Grade : _____) ☐ ISO 45001 _____

_____

Note : To enclose copy of registration certificate. All of above informations can be included in company profile or CV

Figure 3.6 Subcontractor/Supplier/Consultant Registration Forms (Page 1)

SUBCONTRACTORS / CONSULTANTS / SUPPLIERS REGISTRATION FORM

D. QUALITY,SAFETY AND HEALTH MANAGEMENT SYSTEM EVALUATION

No.	Questions	Please Tick (/) YES	NO	Not Applicable
1.	Does your company have a documented Quality Management System ? If YES, to which standard ? _____ If NO, proceed to Question 3 _____			
2.	Is the Quality Management System certified by third party ? If YES, by which organization ? _____ _____ Please attach certificate.			
3.	Does your company have a person appointed as Quality Manager ? If YES, please state his/her name : _____			
4.	Does your company plan to achieve the Quality Management System certification (I.e. ISO9001) in the near future? If YES, by when ? : _____ Certification Body : _____			
5.	Does your company plan to achieve the Occupational Health and Safety certification (I.e. ISO 45001) in the near future? If YES, by when ? : _____ Certification Body : _____			
6.	Do you calibrate your inspection, measuring and test equipment (eg. Survey instrument, gauges, micrometers, weighing machines, ovens…etc) regularly ?			
7.	Does you company carry out regular plant & machinery servicing/maintenance?			
8.	Do you have a system to control non-conforming materials/works?			
9.	Do you have a procedure to handle customer complaints ?			
10.	Do you perform any inspection on your raw materials? If YES, please attach sample checklists			
11.	Do you perform any inspection on your materials (goods) / workdone? If YES, please attach sample checklists			
12.	Do you perform any tests on your materials (goods)? If YES, please attach test certificates / records			
13.	Do you have a system to control the incoming and outgoing documents (eg drawings, contracts document, letters, memo, P.O, D.O, etc)?			
14.	Do you have brochures and specifications list of material (goods) specified above. If YES, please attach the brochures and specifications list.			
15.	Do you have method statements for services / trades specified above. If YES, please attach the method statements.			
16.	Can our client or we verify of supplied products/services at your premise?			

I/We * hereby declare that the above information is accurate.

Signature: _____ Date :_____

Name:_____

Designation:_____ Company Stamp :

Figure 3.7 Subcontractor/Supplier/Consultant Registration Forms (Page 2)

3.2.4 Appointment of Subcontractors

The appointment of subcontractors is the most fundamental process of subcontractors' selection as it involves the evaluation of potential subcontractors based on various criteria. With all the information provided by the potential subcontractors on the subcontractors/consultants/supplier's registration forms, the contracts' administrator personnel assessed the subcontractors using the subcontractor/consultant evaluation form as shown in Figure 3.8 by totalling up the scores out of 100 that takes into account the subcontractor's track record based on the scale of previously completed projects for the last three (3) years and years in running the business, subcontractor's performance that is indicated by the prestigious awards that the subcontractors have received or prominent clients that they have experience with or any CONQUAS/QLASSIC ratings/experience, their capabilities, resources as well as safety and health practices that they adopted.

E. EVALUATION

(I) FOR SUBCONTRACTORS / CONSULTANTS

	Score (1 to 10)	Weightage
(a) Track record :		20
(i) The biggest project completed/ Secured for last 3 years	RM	Mil
(ii) Years in Business		
(b) Performance		20
(i) Prestigeous award (please state, if any) : No/Yes :		
(ii) Prominent Client (please state, if any) : No/Yes :		
(iii) CONQUAS/QLASSIC Ratings/experience No/Yes :		
(c) Capabilities		10
(d) Resources		10
(e) Safety & Health Practices		10
(f) Project Site/Factory Visit evaluation (Please attach Site Visit Evaluation Report - if any)		30
Total Ratings/Score		100

Figure 3.8 Subcontractor/Consultant Evaluation Form

Once the evaluation of potential subcontractors is completed, the contracts administrator personnel recommended the evaluated subcontractors to the vice president of the contracts department for his approval before registering them into the approved subcontractors and consultants' list (ASCL). The subcontractors that were not approved were issued with the subcontractor/consultant standard rejection letter and to those who are approved, they are registered in the ASCL and are informed with the issuance of the standard approval letter.

As there is already enough number of piling subcontractors in the ASCL to proceed with the selection of subcontractors for reinforced piling installation at E'Island Lake Haven Residence, eight (8) relevant piling subcontractors are shortlisted from the ASCL based on their capability, ability to meet contract requirements, resources, requirements communicated, current workload, previous subcontractors performance evaluation result, statutory and regulatory requirements, OSH requirements and other relevant criteria.

3.2.5 Call/Request for Quotations

The eight (8) shortlisted piling subcontractors is then reached by the contracts' administrator personnel to send their quotations for the subcontract works of reinforced concrete piles installation works at the E'Island Lake Haven Residence project. They were expected to quote for the scope of works based on the requirements highlighted during identification of trades and nature of works by the main contractor/owner which includes the related drawings, materials specifications, method statements and also the bill of quantities as a guide for them to send their quotation. The subcontractors were given two (2) weeks to submit their quotations. When the quotations from subcontractors are received, the quoted prices are then evaluated by the vice president of contracts to see any discrepancies and if there are any spotted, an interview is arranged with the subcontractor to ask for further justification of prices. Negotiations of prices are also involved during the interview between the subcontractor's representative and vice president of contracts. Some agreed to revise their quotation with the negotiated prices, but some even refuse to do so due to clarified reasons.

3.2.6 Price Analysis Report and Approval of Award

When all revised submissions are received and prices quoted by all eight (8) subcontractors are finalised, the vice president instructed a contract's administrator personnel to prepare a price analysis report as shown in Table 3.3 to compare the quoted prices between all subcontractors that participated in the bid and to select a subcontractor to be awarded the subcontracts based on the best bid price. Besides that, the price analysis report also aims to project the terms and conditions and the technical analysis such as the capabilities to meet contractual and quality requirements, construction period, current resources, financial stability/credit limit, latest grading in ASCL and the payment terms. The completed price analysis report is then sent to the authorised personnel for appointment of subcontractors as per the approval limit table as shown in Table 3.2 below.

Table 3.2 Approval Limit Table

SUBCONTRACTOR AWARDS				Signing of LA
Award Limit	Variation Order Limit	Negotiated & Recommended	Approved by	
≤RM10,000	≤RM2,000	CA / SCA + PIC	PM & ACM / CM	SCM
> RM10,000 ≤RM20,000	≤RM10,000	SCA / PIC + ACM	CM / SCM + SrM	SrM
> RM20,000 ≤RM100,000	≤RM20,000	SCA / ACM / PIC + CM	SCM + SrM + VP	ED
> RM100,000 ≤RM500,000	≤RM50,000	CM + SCM / SrM + VP	MD	MD
> RM500,000 ≤RM1,000,000	> RM50,000	SCM / SrM + VP + ED	MD + DGCEO	DGCEO
> RM1,000,000	> RM50,000	SCM / SrM + VP + ED + MD + DGCEO	GCEO	GCEO

Abbreviations:

GCEO – Group Chief Executive Officer

DGCEO – Deputy Group Chief Executive Officer

MD – Managing Director

ED – Executive Director

VP – Vice President

SrM – Senior Manager

SCM – Senior Contracts Manager

CM – Construction Manager

ACM – Assistant Contracts Manager

SCA – Senior Contracts Administrator

CA – Contracts Administrator

Table 3.3 Price Analysis Report

Pricing & Technical Analysis Report

Project Title : E-Island
Job No. : Nil
MRO No. : Nil
Date of Prepared : 21/5/18

Subcontract/Trade/Products : Piling Works

P.O No. / LA Ref. No. : Nil

SUBCONTRACTOR

SUMMARY (R2)

* Revised Costing
* Revised Budget

Pricing Analysis

Item	Description	Unit	***BQ Qty	*Contract Revenue Qty	Rate (RM)	Amount (RM)	Budgeted Cost Rate (RM)	Budgeted Cost Amount (RM)	TH PILING SDN BHD PIC: Mr. KB Leong TEL No: 03-5161 6533 FAX No: 03-5162 5987 HP No: 016-219 0999 E-mail : leongkb28@gmail.com Original Rate (RM)	Original Amount (RM)	Revised Rate (RM)	Revised Amount (RM)	ECONPILE (M) SDN BHD PIC: Mr. Raymond Pang TEL No: 03-9171 9999 FAX No: 03-9173 666 HP No: E-mail : Rate (RM)	Amount (RM)	ONG PILING & JACK IN SDN BHD PIC: TEL No: 03-5131 5898 FAX No: 03-5525 8581 HP No: E-mail : oab_piling@yahoo.c Rate (RM)	Amount (RM)	PECK CHEW PILING (M) SDN BHD PIC: Mr. K K Ng TEL No: 03-3323 7333 FAX No: 03-3323 5553 HP No: N/A E-mail : pcpiling@gmail.com Rate (RM)	Amount (RM)	UEC GEOENGINEERING SDN BHD PIC: Mr. Tan Chee Guan TEL No: 03-5882 5389 FAX No: 03-5882 4389 HP No: 019-692 2398 E-mail : tancg@uec.com.my Rate (RM)	Amount (RM)	SIN HUP GUAN PILING & CONSTRUCTION SDN BHD PIC: TEL No: 03-3371 8777 FAX No: 03-3372 0337 HP No: E-mail : Rate (RM)	Amount (RM)	LONG KEE PILING WORKS SDN BHD PIC: Mr. C S Goh TEL No: 03-3343 9399 FAX No: N/A HP No: 016-208 8358 E-mail : lgpiling@hotmail.c Rate (RM)	Amount (RM)	ENG BENG SDN BHD + BUTAN CONSTRUCTION PIC: TEL No: FAX No: HP No: E-mail : Rate (RM)	Amount (RM)	ICP + TH PILING PIC: TEL No: FAX No: HP No: E-mail : Rate (RM)	Amount (RM)
1	**SUPPLY PILES**									RC Square Pile Supply by EC Piling		RC Square Pile Supply by EC Piling		RC Square Pile Supply by Econpile		RC Square Pile Supply by EC Piling		RC Square Pile Supply by EC Piling		RC Square Pile Supply by EC Piling		RC Square Pile Supply by EC Piling		RC Square Pile Supply by Eng Beng		SPUN PULE Supply by Eng Beng		SPUN PULE Supply by ICP
A	**300MM X 300MM RC SQUARE PILE - TOWER & CARPARK**					8,844,765		8,075,655		7,691,100		7,691,100		8,174,068		7,691,100		7,691,100		7,691,100		7,691,100		7,691,100		7,201,516		7,095,660
B	**200MM X 200MM RC SQUARE PILE - SURAU, MULTIPURPOSE HALL & GYM**					112,916		103,097		98,188		98,188		106,446		98,188		98,188		98,188		98,188		98,188		101,700		101,700
	Sub-Total					8,957,681		8,178,752		7,789,288		7,789,288		8,280,514		7,789,288		7,789,288		7,789,288		7,789,288		7,303,216		7,197,360
2	**INSTALL (DRIVE PILES)**																															
A	**PRELIMINARIES**					inclusive		inclusive		50,000		45,000		380,000		265,000		93,000		100,000		-		45,000		-		45,000
B	**300MM X 300MM RC SQUARE PILE - TOWER**					1,969,793		1,638,363		1,724,952		1,541,416		2,932,392		1,671,748		1,928,013		2,077,672		1,900,376		1,871,928		1,654,704		1,959,832
D	**300MM X 300MM RC SQUARE PILE - CARPARK**					751,421		616,812		643,516		578,528		1,075,636		706,272		785,557		886,848		781,268		799,140		625,340		714,256
C	**200MM X 200MM RC SQUARE PILE - SURAU, MULTIPURPOSE HALL & GYM**					101,324		84,125		92,076		83,238		317,562		98,410		94,834		93,876		80,566		75,160		85,516		83,238
	Sub-Total					2,822,537		2,339,300		2,510,544		2,248,182		4,705,590		2,741,430		2,901,403		3,158,396		2,762,210		2,791,228		2,365,560		2,802,326
	Add SST									-		-		-		-		-		-		-		-		-		-
	Grand Total					**11,780,219**		**10,518,052**		**10,299,832**		**10,037,470**		**12,986,104**		**10,530,718**		**10,690,691**		**10,947,684**		**10,551,498**		**10,580,516**		**9,668,776**		**9,999,686**
	Add; Extra Qty Due to Change from RC Square Pile to Spun Pile					N/A		N/A		N/A		N/A		N/A		N/A		N/A		N/A		N/A		N/A		162,499		162,499
	Add; Pile Plug	No	3,308	32.00		N/A		N/A		N/A		N/A		N/A		N/A		N/A		N/A		N/A		N/A		105,856		105,856
	Grand Total Amount					**11,780,219**		**10,518,052**		**10,299,832**		**10,037,470**		**12,986,104**		**10,530,718**		**10,690,691**		**10,947,684**		**10,551,498**		**10,580,516**		**9,937,131**		**10,268,041**
	Variance Against Budget/Lowest								2%	**218,220**	5%	**480,582**	-23%	**(2,468,052)**	0%	**(12,666)**	-2%	**(172,639)**	-4%	**(429,632)**	0%	**(33,446)**	-1%	**(62,464)**	6%	**580,922**	2%	**250,012**
	Variance Against Revenue						12%	**1,262,166**	13%	**1,480,387**	15%	**1,742,749**	-10%	**(1,205,885)**	11%	**1,249,500**	9%	**1,089,527**	7%	**832,535**	10%	**1,228,721**	10%	**1,199,703**	16%	**1,843,088**	13%	**1,512,178**
	Technical Analysis																															
1	Capabilities to meet contractual & quality requirements																															
	Add row when require																															
2	Construction Period/Lead Time																															
3	Current Workload																															
4	Current Resources																															
5	Financial Stability/Credit Limit																															
6	Latest grading in ASCL/ASL																															
7	Payment Terms																															
8	Recommendation of Award																															
9	Others																															
	Add row when require																															

TERMS & CONDITIONS (delete where not applicable)

1 Awarded to : **TH Piling Sdn Bhd**
2 Contract Amount : **RM 2,248,182.00**
3 Construction Period : Start - TBA
4 Shop Drawing Required : No / Yes/ By : No
5 As-build Drawing Required : No/Yes/ By: Yes
6 LAD : **RM 4,500** / Unit /Day
7 Warranty Required : No / Yes (Period :) **24 Mths**
8 Claims : Fortnightly / **Monthly** / Upon Completion
9 Retention : **Progressive 10% to max 5 %** / 5% Flat / BG 5% / Nil
10 Payment Terms : Cash / 15 days / **30 days** / 45 days / 60 days / Back to back / Others :
11 Others :

3.2.7 Issuance of Letter of Award (LOA)

The final stage in the selection of a subcontractor for specialised work is the issuance of a letter of award (LOA) to the chosen subcontractor. The letter of award is issued when the subcontract price exceeds more than fifty thousand Ringgit Malaysia (RM50,000.00) as it falls under a major award. The contents of the letter of award are as follows:

i. Conditions of Subcontract
ii. Appendix A – Particulars of Subcontract
iii. Appendix B – Responsibility Matrix
iv. Appendix C – Safety & Health Regulations
v. Appendix D – Legislation of Foreign Workers
vi. Appendix E – Specifications
vii. Appendix F – Drawings
viii. Appendix G – Bill of Quantities
ix. Appendix H – Main Contract
x. Appendix I – Programme of Work

3.3 Subcontractor Selection Criteria

3.3.1 Financial Capacity

The selected subcontractor must have the financial capability to fulfil the requirement and meet the expectations of a project to ensure the smooth progression of construction work on-site (Akali & Sakaja, 2018). To evaluate the potential subcontractors' financial status, the finance department of the main contractor/owner can conduct an assessment of the subcontractors' previous, current and upcoming financial commitments to find any flaws or weaknesses in the subcontractor's financial condition that might contribute to future problems, as well as any strengths the applicants could benefit from (Hatush & Skitmore, 1997). The subcontractors can provide their credit status, bank status, bond status as well as their public accounts report clarifying their financial status to the main contractor.

3.3.2 Management Capability

A good management capability must be possessed by any potential subcontractors who are bidding for a subcontract work. This quality is important to ensure that they have the ability to deliver the service in an appropriate manner whilst staying compliant with the industry standards. This will become a critical criterion to be evaluated by the main contractors/owner when the potential subcontractor has multiple workloads that they need to handle at one time. They must be able to give equal attention to all the current projects that they are involved in without compromising on the quality of service provided. By having a well-experienced management team that can coordinate the work with a proper project management system and knowledge, it is said that the subcontractor has a high chance of securing the subcontract.

3.3.3 Experience of Similar Project

Oftentimes, the main contractor/owner is most likely to consider the subcontractor with similar experience in the past to be awarded the subcontract. This is because it proves that the subcontractor has a competent technical staff with experience that is well-versed in the region for previous projects that they have handled. The scale of previous projects completed is also directly proportional to the probability of being awarded the subcontract where the bigger the scale of the successful project that they handled in the past, the higher the chance that they will be considered by the main contractor/owner. Besides that, past relationships with prominent and noticeable clients could also contribute to increasing the chance of the subcontractor to be selected for executing the works as it shows that they have gained trust from the big names of the industry. However, having a bad reputation due to past termination of construction work or failure to complete a contract due to delays could badly affect the subcontractor's chance of being awarded the subcontract. This is because the main contractor/owner would like to avoid a similar scenario from happening again for their project if they had someone that is not well competent to execute the works.

3.3.4 Lowest Bid

Offering the lowest bit is said to be the main key to being awarded the subcontract especially for public construction projects (Alptekin & Alptekin, 2017). Even though it is the typical practice in many organisations and oftentimes the only factor for appointing subcontractors, it is widely criticised by industry players (Rashid et al., 2018). On the surface, it appears to be the most profitable technique for selecting subcontractors, but there are significant risks that the main contractor/owner must incur, as the quality and timeliness of the project may be jeopardised by the bidders.

3.2.5 Occupational, Safety & Health Management

Even though the idea of “safety comes first” are widely spoken, it is not the case for most of the subcontractors that are competing for a subcontract. This can be observed when there are bidders who quoted low prices by compromising the allocation for safety and health at the construction site. This practice will put many workers at the construction site at risk of being involved in unwanted accidents and injury. On the other hand, a subcontractor who does not compromise on the safety aspect will never do such things, besides they will certainly be willing to spend a bit more by providing knowledgeable, skilled, and experienced manpower with adequate resources to meet safety management requirements (ASK-EHS, 2018).

3.4 Problems Associated with Selection of Subcontractor and Its Solutions

1) **Problem: Excessive cost and time delays**

The excessive cost of a construction project can be caused by several factors. Some of them may be due to external factors like sudden fluctuation in prices of raw materials due to economic reasons, overcomplexity of a project and increase in labour and machinery cost. Besides that, it can also be influenced by the incompetency of managing finances that leads to monthly payment difficulties, inaccurate preparation of cost estimates and finally leads to the overrun of project duration.

Solution: Manage project's finances properly

All the stated problems can be overcome by managing the finances properly. This can be done by allocating competent resources during the early stage of project commencement. The finance department must also set a realistic budget so that it can be managed more easily. Furthermore, re-estimating workloads could also help in lowering the burden in any case of inevitable sudden changes.

2) **Problem: Not enough time to assess bidders' documents**

The process of evaluating bidders' documents requires a lot of attention as it involves a lot of tedious paper works, documentation and filing works. It is even harder to manage if several subcontractors participated in the bid. This will result in an inadequate assessment due to a lack of information if there are some documents that they don't have the time to go through and evaluate.

Solutions: Appoint document controller to manage the documents

Having a document controller (DC) in an office will make organizing bidding documents that were submitted more hassle-free. This responsibility should only be entrusted to only one person so that the contract's administrator personnel can focus on other tasks at hand. Moreover, another way of organizing these documents is by establishing a Company Filing Index (CFI). With this approach of having a document management system, the overall work of receiving and evaluating bidding documents can be more organized.

3) **Problem: Dismissal of capable and qualified subcontractors**

Most contractors with high-performance records are observed to have poor results during evaluations since most candidates do not understand how to submit their evidence, information and documents in the proper manner. Due to this, it may cause a competent and qualified contractor is likely to appear incompetent as a result of the evaluation process.

Solution: Establish a standard operating procedure (SOP) for the submission of bidding documents

The main contractor can overcome this problem by simply establishing a standard operating procedure (SOP) that specifically outlines the scope of work of bidding documents submission. This standard operating procedure can be a guide for the bidders when they are required to submit the bidding documents when requested. Thus, the main contractor/owner must ensure that their potential subcontractors were enlightened about the SOP and adhere to it. Besides that, just simplifying the format for the bidding documents submissions by the potential subcontractors can also make the process much easier for them.

CHAPTER 4.0

CONCLUSION

In a nutshell, the process of selection of subcontractors for a specialist works is not an easy task. It involves major decision making by a number of parties that is very influential in the success of construction progress. Every process that is involved in selecting a subcontractor has its significance, thus the responsibility must be carried out accordingly and by a competent contract's administrator personnel. Because the construction industry is constantly evolving, it is necessary to clarify and develop predetermined selection criteria, improve, and organise the assessment of information related to these criteria, and develop methods for evaluating the criteria against the owner's goal during the pre-qualification and bid evaluation stages of the procurement process. This is done in order to keep up with the new developments and invite suitable bidders to put responsible for executing the said scope of works.

REFERENCES

Akali, T., & Sakaja, Y. (2018). Influence of Contractors' Financial Capacity on Performance of Road Construction in Kakamega County. *American Academic Scientific Research Journal for Engineering, Technology, and Sciences, 46*(1), 34–50.

Alptekin, O., & Alptekin, N. (2017). Analysis of Criteria Influencing Contractor Selection Using TOPSIS Method. *IOP Conference Series: Materials Science and Engineering, 245*, 062003. https://doi.org/10.1088/1757-899X/245/6/062003

Hatush, Z., & Skitmore, M. (1997). Criteria for contractor selection. *Construction Management and Economics*, *15*(1), 19–38. https://doi.org/10.1080/014461997373088

Patowarya, J. (2019, March 5). *You Didn't Know These 7 Steps of an Effective Procurement Process*. Retrieved from Zycus Cognitive Procurement: https://www.zycus.com/blog/procurement-technology/you-didnt-know-these-7-steps-of-an-effective-procurement-process.html

Rashid, I., Ismail, S., Mohamed, Z., & Latif Saleh, Abd. (2018). Contractor Selection Criteria: A Study on Malaysian Public Construction Projects. *International Journal of Engineering & Technology*, *7*(3.25), 65. https://doi.org/10.14419/ijet.v7i3.25.17471

Selection Criteria for Contractors. (2018, October 13). *ASK EHS Blog*. https://www.ask-ehs.com/blog/selection-criteria-for-contractors/