DEPARTMENT OF BUILDING

UNIVERSITI TEKNOLOGI MARA

(PERAK)

STEEL STRUCTURE INSTALLATION

(FRAME STRUCTURE)

Prepared by:

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2019222654

DEPARTMENT OF BUILDING

FACULTY OF ARCHITECTURE, PLANNING AND SURVEYING

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SEPTEMBER 2021

It is recommended that the report of this practical training provided

By

MOHAMAD NAZRUL AMIR BIN ZULKIFLI

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STEEL STRUCTURE INSTALLATION

(FRAME STRUCTURE)

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

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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 Koh Lek Construction & Renovation Sdn. Bhd. (KLC) for a duration of 15 weeks starting from 27 September 2021 and ending on 7 January 2022. It is submitted as one of the prerequisite requirements of BGN310 and accepted as partial fulfilment of the requirements for obtaining the Diploma in Building.

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Date : 27 September 2021

ACKNOWLEDGEMENT

Alhamdullilah, praise to Almighty Allah, the Most Merciful and the Most Graceful.

The journey started as a student towards the Professional Life with the aim in mind to learn the Industrial Training of a Construction, ended as a memorable experience, also helped me to come off with flying colours. No work can be completed without others' help or contribution. I would like to extend my heartfelt gratitude for the guidance, advice, and help rendered throughout the period of training by the following amazing esteem company of Koh Lek Construction & Renovations Sdn. Bhd. I would like to thank Mr Lee Ah Lek for the opportunity given to conduct my training in his company. My special thanks to En Khairol Tarmizi – Project Coordinator, En Ahmad Syazwan Arif – Quantity Surveyor, En Shamsul Sharim – Senior Supervisor, En Zulhilmi – Admin Clerk and Cik Umi Yushira – Safety Consultant, has enabled me to learn and develop my practice, knowledge, and feel of real-time projects of building and civil works at the construction site and office work even being extraordinarily busy with their duties. It is an honour for me if given the opportunity to 'work' will of you all.

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Last but not the least, my special thanks to my beloved parents and all people who knowingly and unknowingly supported me in various ways to have good training and morals to make this project reality.

Thank you so much.

ABSTRACT

Structures are one of the essential structural elements of a building. A structure plays many functions in the performance of the building, and these functions need to be fully understood in order to create a strong and comfortable building as well as provide protection from wind load and earthquake. This report will discuss steel structure installation for the building frame structure. This report was conducted for The Construction of One Petrol Station involved of a fuel station, convenience store and TNB substation at Lot 110533 Kampung Cengal Lempung Mukim Sungai Karang Daerah Kuantan, Negeri Pahang that owned by Petron Corporation Malaysia. The objective of this report is to analyze the construction of steel structure and how it is carried out. It will focus on the whole process of steel structure installation. It also investigates the equipment and machinery in the methods of frame structure installation to determine the time that has been used for the construction. This report will also look at the problem and the solution in structure construction that would fulfil the criteria of steel structure. Finally, the consequences of this project will only provide benefits to the villagers as opposed to disadvantages.

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CHAPTER 1.0

INTRODUCTION

1.1 Background of Study

The structure is a collection of components connected so that they serve a meaningful purpose. Solid, framed, shell, membrane, trusses, cables and arches, surface structure, and other models can approach structures. These are generally categorized based on the geometry that allows them to withstand various loads, and their geometrical configuration determines the load-bearing capacities of a structure (Ravindra, 2015). In today's buildings, the most common configurations are known as steel structures or framed structures. In any material, a steel structure is supported by a skeleton that may stand alone as a rigid structure without the need for floors or walls to withstand deformation (Collins, n.a.). The steel structure is one of the most in the light construction method. A framed structure is made up of structural components such as beams, columns, and slabs that are joined together to resist gravity and lateral stresses. These structures are commonly utilized to overcome significant forces and moments caused by imposed loads. It is also referred to as a beam-column structure (Murad, 2021).

Steel Structure is one of the most important for the building because it supports the above slab and column or other building elements in the structure and also supports the weight of the structure (Hamakareem, n.a.). The structure in the components of the building will carry and transfer the load to the ground safely. The structure guarantees the stability of the building and its performance (Front. Build Environ, 2019). By conducting its weight to a foundation structure, a vertical steel structure bears the weight of the elements above the wall resting upon it. (Hamakareem, n.a.).

Steel structures theoretically consist of 2 types of structures which are Rigid Frame Systems and Brace Frame Systems (Haseeb, 2017). Rigid frame systems, also known as moment frame systems, are made up of linear elements such as beams and columns. The term rigid refers to a person's capacity to resist deformation, and it can be found in steel and

reinforced concrete structures. The absence of pinned joints within the frame distinguishes rigid frames, often statically indeterminate. The bending of beams and columns in a rigid frame can resist vertical and lateral loads (Krishna etc., 2015). The rigid frame's stiffness is primarily provided by the bending rigidity of rigidly connected beams and columns. The joints must be constructed to have enough strength and stiffness while exhibiting minimal deformation (Murad, 2021).

Meanwhile, Braced frames are made up of beams and columns that are "pin" connected by bracing to resist lateral stresses (Krishna, 2015). This style of frame is easy to evaluate and put together, and both horizontal and vertical bracing is used to provide resistance to lateral forces. Knee is bracing, diagonal bracing, X bracing, K shapes or chevron bracing, and shear walls that resist lateral stresses in the wall plane are only a few examples. This frame technology is more effective in terms of earthquake and wind resistance, and it performs better than a rigid frame system (Tony, 2019).

The braced framed system is normally used for the towers because it does not require a wall while a rigid frame system is used on the building. However, the aim of this report is to discover the steel structure installation process in the construction.

1.2 Objectives

There are several objectives that have been developed from this construction as follow;

i) To learn the detailed method and procedure of steel structures installation system.

ii) To investigate the problems encountered by the workers during the installation process.

iii) To identify the equipment to be used and party/parties involved to form a building sstructure.

1.3 Scope of Study

The construction Project is about to build a petrol station titled as Cadangan Pembangunan Perniagaan Stesen Minyak Dan Kedai Serbaneka Di Atas Lot 2297 (Lot Baru 110533), Mukim Sungai Karang, Daerah Kuantan, Pahang Darul Makmur be in between 15 kilometers from Kuantan city center and 10 kilometers form Port Kuantan (Industries).The project is operated by Koh Lek Construction & Renovation Sdn. Bhd. as the main contractor and sub-contractors by TNP Global Enterprise Sdn. Bhd. (Plumbing). & KEPM Tech Sdn. Bhd. (Electrical). The project worth is RM 2,650,911,93 including Fuel Station, Convenience Store and TNB substation owned by Petron Corporation with 7 months construction period from 22 February 2021 until 13 September 2021. The project is experiencing delays from April to July due to the Covid-19 pandemic where construction cannot be carried out due to lack of permission and is still under construction with 80% progress where the new expectation of handing over of the building key is on 31 December 2021. Therefore, the focus of the study is to determine how the steel structure process is undertaken. Hence, the study will be explained including the advantages of using steel or frame structure in the construction and types of machinery and tools used. Furthermore, the problems and solutions are also included in this study. Even so, the study does not concentrate on the quantity of manpower or workers, the costs and duration matter. In order to fulfil the data, there were three methods that needed to be carried out which is observation, interview, and document reviews. In conclusion, all further explanations relating above method were explained below.

Figure 1.0 Construction Signage

1.4 Methods of Study

1.4.1 Observation

Observation is a way of collecting data through observation. The observation is about how the construction process of steel structure installation from erect steel until the finishes of the roof structure. The average time is taken for this observation is approximately around 1-2 hours per pole depending on weather conditions and disruption when installation. Overall, it took 4 days for the installation process. Meanwhile, for the roof structure installation, it took 1 and half days because it requires a very careful step of installations (Work At Height). The observation of the structure construction process had been recorded and pictures were taken that lasted for 6 days.

1.4.2 Interview

The interview is one of the methods to collect the construction data by doing a structured or semi-structured interview with the trusted person for the project. The interview was conducted with the construction manager who is responsible for handling the project while at the construction site. This interview was also done to the working at high permit holder during the installation. Semi-structured interviews were also conducted with the project coordinator responsible for checking the plan. The semi-structured interview was recorded through short notes.

1.4.3 Document Reviews

The documents review that has been used to collect all the data for the construction is drawing plan, progress report, inspection checklist and the pictures taken by other workers. The drawing plan will be used as the reference at the site that is under monitoring for the installation process by the site supervisor. The pictures that belong to others are also the best reference during the document reviews.

CHAPTER 2.0

COMPANY BACKGROUND

2.1 Introduction of Company

Koh Lek Construction and Renovation Sdn. Bhd. (KLC) is a leading builder and civil work construction expertise. KLC is a diversified firm with the ability to meet its client construction need through general contracting, at-risk construction management, and design or build relationships. In each case, the company's priority is helping its clients achieve their construction and developmental objectives. Koh Lek Construction & Renovation Sdn. Bhd. is a passion for building and dedication to the future has attracted the local place most knowledgeable management and field staff. In addition, the company leads the industry in its implementation of progressive practices in the areas of project management, scheduling, budgeting and administration. As a full-service construction organization, KLC possesses the in-house abilities to take projects through concept, design, construction, occupancy, and post-construction. As well as providing traditional construction services the company also offers speciality pre-construction, value engineering, and consulting services. The result of this commitment is relationships and projects that endure the test of time.

In 1995 the company was previously named with Koh Lek Renovation & Design which focus on repairing, maintaining, and renovating for average building (G1 to G3 Contractor) where the company was established by experienced construction entrepreneur's Lee Ah Lek. Koh Lek Renovation & Design had given a duty to cooperate in some construction buildings (Sub Contractor). After several years of steady growth in the construction industry, the company have been given the opportunity to build a few commercial properties by their own hand and the company name was changed to Koh Lek Construction and Renovation Sdn. Bhd. (KLC) in 2004 which is fully responsible for coming building construction (Main Contractor).

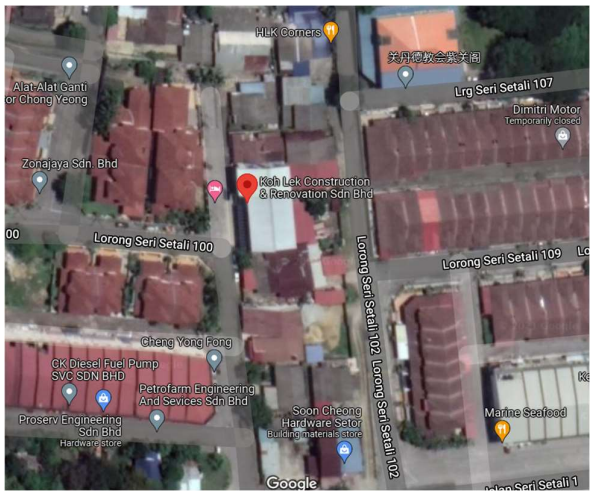


Figure 2.0 Location of the Company based on the satellite map

To this day, Koh Lek Construction & Renovation Sdn. Bhd. (KLC) was a Class G7 contractor registered to Construction Industry Development Board (C.I.D.B) successfully generated profits of more than RM 300 million and it is one of the leading companies and civil work specialists in Pahang such as filling station (petrol), commercial office, multi-unit residential, congregate care facilities, medical, piling and drainage works and other general civil construction through Peninsular Malaysia. Koh Lek Construction & Renovation Sdn. Bhd. currently employed over 200 highly qualified staff and well-trained workers and the methodologies is to ensure focused work and provide clients with enhanced confident solutions. KLC can be contacted via company email at kohlek.lee@gmail.com, fax (09-5680498) or directly contact through company number (06-7649946).

Company Profile

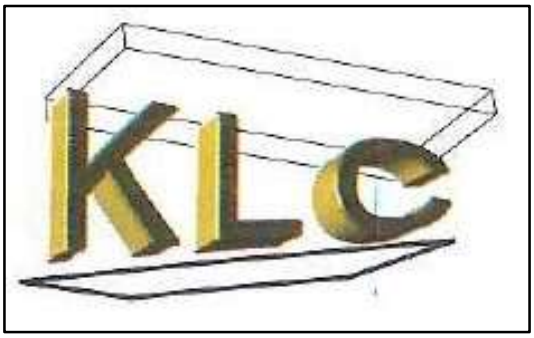


Figure 2.0 Company Logo

COMPANY NAME	**Koh Lek Construction And Renovation Sdn. Bhd.**
ESTABLISHED DATE	**16TH July 1995**
ADDRESS	**Js 16/76, Lorong Seri Setali 107, Jalan Semambu, 25350 Kuantan, Pahang Darul Makmur.**
CONTACT NUMBER	**06-7649946 (Phone)** **09-5680498 (Fax)**
EMAIL	**Kohlek.lee@gmail.com**
BUSINESS TYPE	**Building & Civil Engineering**
LICENSE	**Grade 7 of Construction Industry Development Board (C.I.D.B) and Ministry of Finance (MoF).**

Table 2.0 Company Profile

2.2 Company Organization Chart

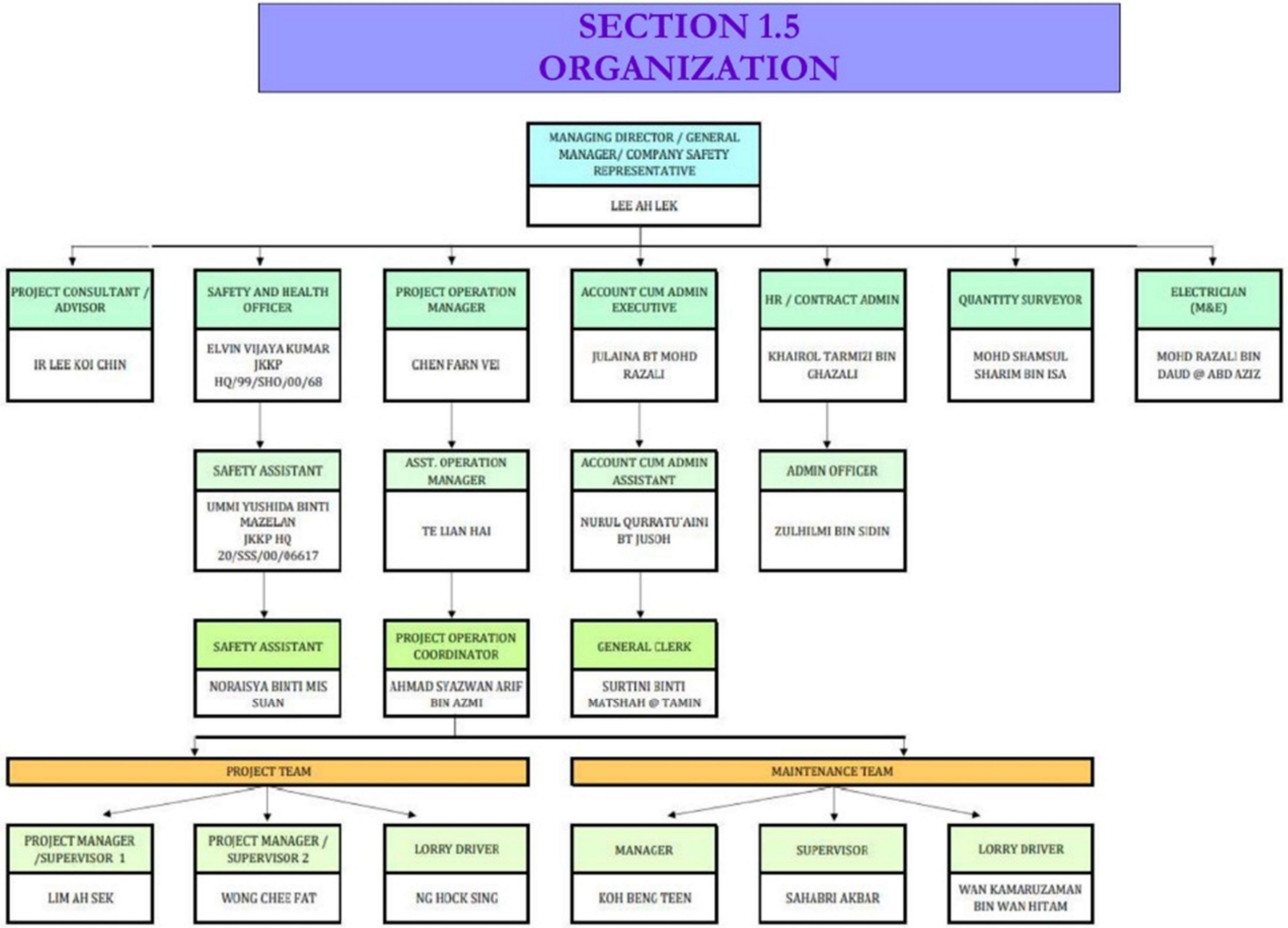


Table 2.1 Company Organization Char

2.3 List of Projects

2.2.1 Completed Projects

PROJECT LIST YEAR 2019 & 2020

No.	Project Title	Project Value	Start Date	Completion Date	Project Duration	Client
1	CADANGAN MEROBOH DAN MEMBINA SEMULA SEBUAH SURAU DI TAMAN KERAMAT PERMAI FASA 3, DI ATAS LOT 12041, TAMAN KERAMAT PERMAI FASA 3 UNTUK TETUAN SURAU AL-ITTIFAQ.	RM 383,798.00	15 OCTOBER 2019	20 DECEMBER 2019	(66 Days)	AJK SURAU AL-ITTIFAQ
2	PROPOSED DESIGN AND BUILD COVERED CAR PARKS FOR GIANT SUPERSTORE GONG BADAK.	RM 545,000.00	10 OCTOBER 2019	8 DECEMBER 2019	(59 Days)	GCH RETAIL (M) SDN. BHD.
3	PROPOSED DESIGN AND BUILD COVERED CAR PARKS FOR GIANT HYPERMARKET KUALA TERENGGANU.	RM 1,279,795.00	18 JULY 2019	07 OCTOBER 2019	(81 Days)	GCH RETAIL (M) SDN. BHD.
4	CADANGAN MEMBINA DAN MENYIAPKAN SEBUAH STESEN MINYAK CALTEX DI ATAS LOT 65, MUKIM HULU NERUS, DAERAH SETIU, TERENGGANU DARUL IMAN.	RM 1,399,988.00	23 MAY 2019	31 OCTOBER 2019	(222 Days)	CHEVRON MALAYSIA LIMITED
5	CADANGAN UBAHAN DAN TAMBAHAN KE ATAS SEBUAH	RM 29,209,861.75	08 OCTOBER 2019	31 MAY 2020	(601 Days)	GCH RETAIL

	PASARAYA (HYPERMARKET) DI ATAS LOT PTD 116058 & 116059, MUKIM PLENTONG, DAERAH JOHOR BAHRU, JOHOR DARUL TAKZIM.					(M) SDN. BHD.
6	CADANGAN MEMBINA DAN MENYIAPKAN SEBUAH STESEN MINYAK SETINGKAT DI ATAS LOT 622, PT 9874, SEKSYEN 49, PEREMBA, BANDAR ALOR SETAR, DAERAH KOTA SETAR, KEDAH DARUL AMAN	RM 2,355,492.77	04 JANUARY 2019	06 FEBRUARY 2020	(398 Days)	CHEVRON MALAYSIA LIMITED
7	CADANGAN MEMBINA SESEBUAH STESEN MINYAK BESERTA KEDAI SERBANGUNA DAN SETINGKAT RESTORAN MAKANAN SEGERA DI ATAS LOT 9169, DI BANDAR TELUK KEMANG, DAERAH PORT DICKSON NEGERI SEMBILAN DARUL KHUSUS UNTUK TETUAN METRO DATA SDN. BHD.	RM 2,841,769.29	02 FEBRUARY 2020	13 DECEMBER 2020	(315 Days)	SHELL MALAYSIA TRADING SDN. BHD.
8	CADANGAN MEMBINA SEBUAH STESEN MINYAK DI ATAS LOT NO. 3841, MUKIM CENDERING, KUALA TERENGGANU, TERENGGAN.	RM 2,345,376.30	28 SEPTEMBER 2020	14 JULY 2021	(290 DAYS)	SHELL MALAYSIA TRADING SDN. BHD.

Table 2.2 Completed Project

2.2.1.1 Projects in Progress

No.	Project Title	Project Value	Start Date	Completion Date	Project Duration	Client
1	CADANGAN MEMBINA SEBUAH PASARAYA BORONG 2 ½ TINGKAT YANG MENGANDUNGI GEDUNG MEMBELI-BELAH, MEDAN SELERA, TEMPAT LETAK KERETA, PENCAWANG ELEKTRIK, PONDOK PENGAWAL, KEBUK SAMPAH SERTA KEMUDAHAN DI TINGKAT BAWAH DI ATAS LOT PT 27931 (HSM 21160), CHENOR, DAERAH MARAN, PAHANG DARUL MAKMUR. **(MYDIN JENGKA)**	RM 62,400,000.00	14 SEPTEMBER 2018	IN PROGRESS	-	MYDIN MOHAMED HOLDINGS BERHAD
2	CADANGAN PEMBANGUNAN PERNIAGAAN STESEN MINYAK DAN KEDAI SERBANEKA DI ATAS LOT 22937 (LOT BARU 110533) MUKIM SUNGAI KARANG, DAERAH KUANTAN, PAHANG DARUL MAKMUR. **(PETRON BALOK)**	RM 2,650,911,93	22 FEBRUARY 2021	IN PROGRESS	-	CHEVRON MALAYSIA LIMITED.
3	CADANGAN PEMBANGUNAN STESEN MINYAK MINI DI ATAS PT 9198, TAMAN DAHLIA, BANDAR BARU SALAK	RM 1,090,792.10	25 September 2021	IN PROGRESS	-	SHELL MALAYSIA TRADING SDN. BHD.

	TINGGI, DAERAH SEPANG, SELNAGOR DARUL EHSAN. **(SHELL TAMAN DAHLIA**)					
4	CADANGAN MEMBINA SEBUAH STESEN MINYAK 2 TINGKAT DI ATAS LOT 122773, JALAN PINTASAN KUANTAN, MUKIM KUALA KUANTAN, DAERAHH KUANTAN, PAHANG DARUL MAKMUR. **(PETRON PINTASAN)**	RM 3,050,000.00	15 MAY 2021	IN PROGRESS	-	CHEVRON MALAYSIA LIMITED
5	CADANGAN MEMBINA DAN MENYIAPKAN SEBUAH STESEN MINYAK YANG MENGANDUNGI KEDAI RUNCIT DI ATAS LOT 3037 & 14297, MUKIM PERINGAT, JAJAHAN KOTA NHARU, KELANTAN. **(PETRON PERINGAT)**	RM 3,290,000.00	15 FEBRUARY 2021	IN PROGRESS	-	CHEVRON MALAYSIA LIMITED
6	TOILET PLUMBING REMEDIATION – SH KUALA KUBU BARU SITE ID: 10208689 **(SH. SERDANG, KEDAH)**	RM 61,019.54	10 NOVEMBER 2021	IN PROGRESS	-	SHELL KUBU BARU.

Table 2.3 Project in Progress

CHAPTER 3.0

INSTALLATION OF ROOFING SYSTEM BY USING STEEL STRUCTURE INSTALLATION (FRAME STRUCTURE)

3.1 Introduction to Case Study

The case study is about the installation of a frame structure construction (steel structure). The Project where has started construction on 22 February 2021 and predictions will be handed over to the client before 1 January 2022. The cost of construction is approximately RM 2,650,911.93 depending on the problems encountered while construction is underway. Currently, the project progress is still ongoing. Thus, the study will be explained not only regarding installation but including the machinery and tools, the time that has been carried out and the problem and solution of the construction. Nevertheless, the study do not concentrate on cost matters and manpower. The site location took place between 15 kilometres from Kuantan City and 10 kilometres from Kuantan Port.

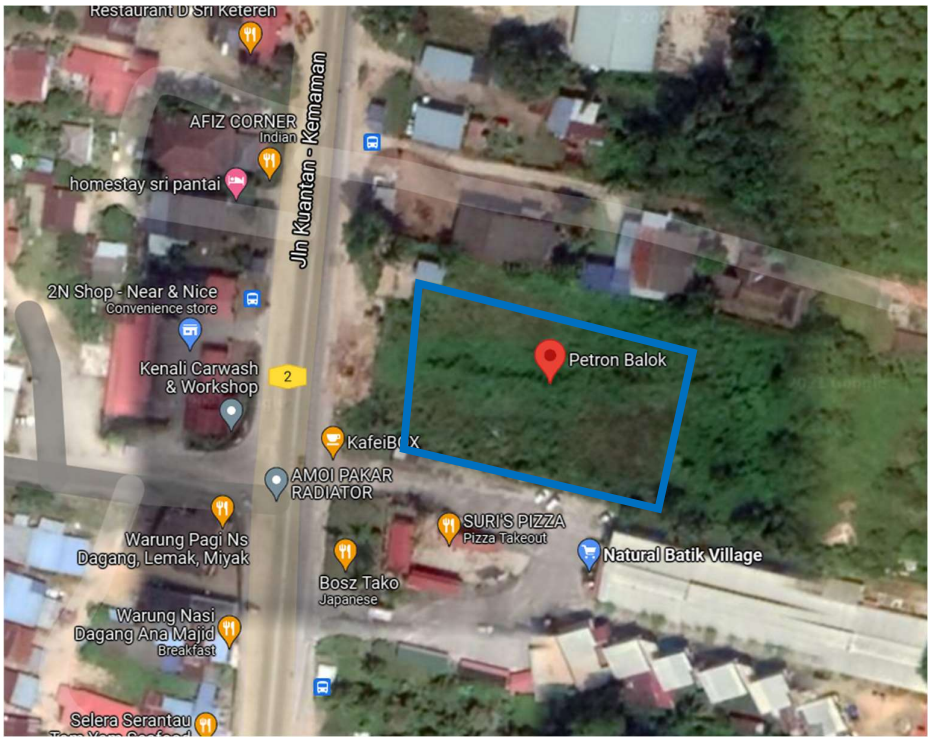


Figure 3.0 Location of the site based on the satellite map

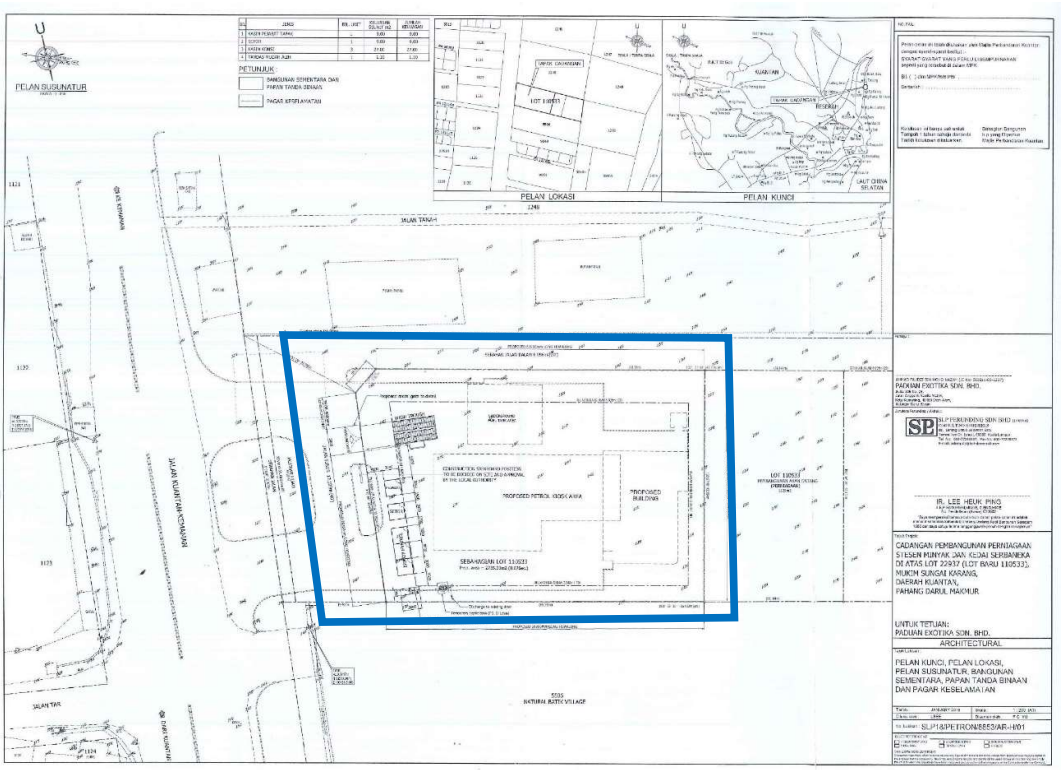


Figure 3.1 The location site and key plan of the project

The project construction located at Lot 110533 Kampung Cengal Lempung Mukim Sungai Karang Daerah Kuantan, Negeri Pahang. This consruction area is facing the main road of Jalan Kuantan – Kemaman. The area was a bit crowded as it was the main road between Kuantan and Terengganu. The main buildings closest o this construction area are Natural Batik Village Shop and restaurant. The construction area is also close o the beach area which is only 500 metre causing a rather strong wind.

The activity that has been carried out on the site is installing a steel structure. This is one of the uneasy work that need to be handled by skilled workers because it required working at a height permit from the National Institute of Occupational Safety and Health (NIOSH) and high-risk works. There are also several unskilled workers that help. The types of machinery and tools involved in this construction are mobile crane, skylift, scaffolding, impact drivers and safety harness.

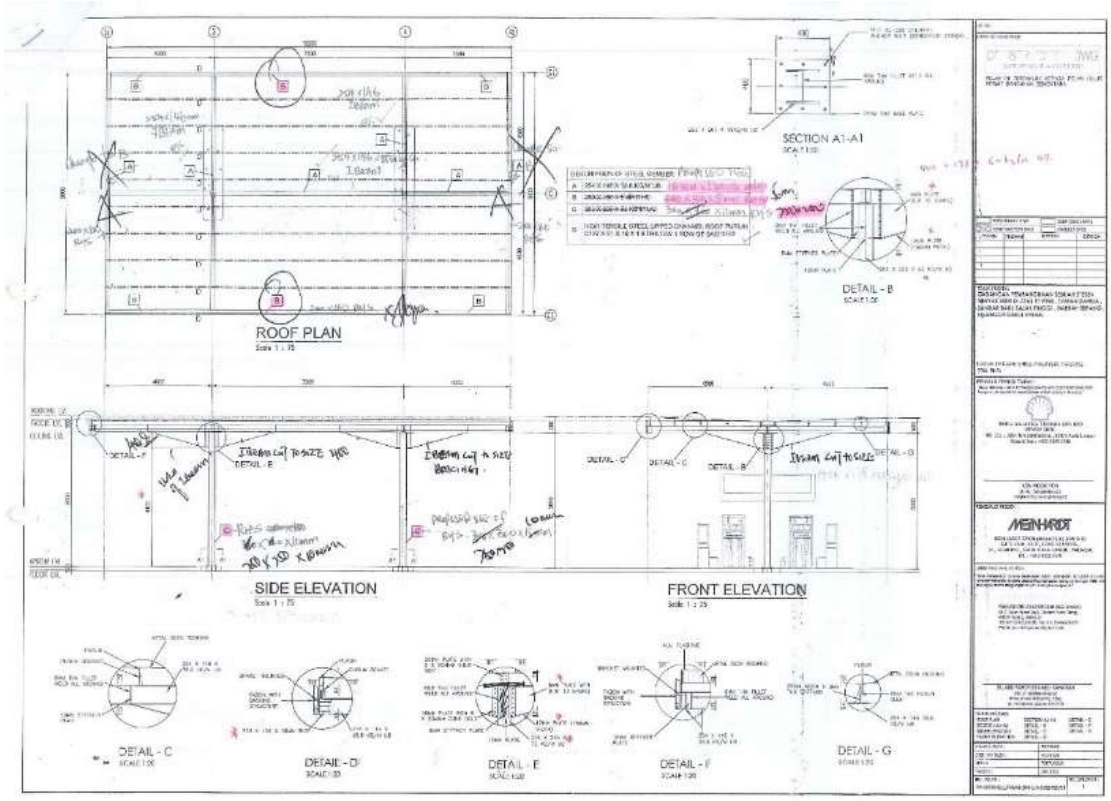
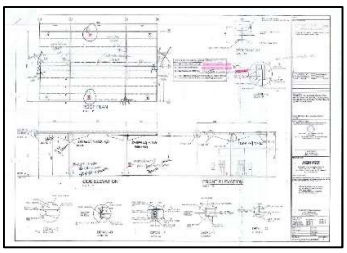


Figure 3.2 Canopy structure drawing plan

Next, time is very important for the success of construction. By referring to the drawing plan of the canopy building (figure ***), the 4 column height is 5000mm and 400mm x 400mm of complement steel and 15200mm total length of the roof structure. While for convenience store it is a bit complicated because it has 23 smaller columns to fix in 9300mm x 13105mm building. Before starting installation work, the footing must be done first and the nuts are appropriate with the steel structure. This process will take a long time as it requires precision. Therefore, the time is used for the installation process will be recorded starting from the first structure until the roof structure finishes the process.

Last but not least, the problems of installation of steel structure process will be determined throughout the construction process. The solutions to the problems also will be stated after determining the problem of the process and solution.

3.2 To Identify the Methods of Steel Structure Installation.

STEP	DIAGRAM	EXPLANATION
1.		Firstly, a site visit will be run between the client, consulting engineers, land surveyor and contractor. Meeting were made to discuss the soil condition and appropriate frame structure to be used.
2.		After the discussion at the site, Ir. Abdul Rahim from H.P. Lee Consult is responsible to proposed and designed to make the structure is efficient. Next, the meeting between the person in (step 1) will be held to get a confirmation and approval towards the system structure.
3.		**Anchor Bolt Setting** Step 1: Marking for boundary line of starting a column on the footing Step 2: Check and adjust the position of starting column rebar if necessary. Step 3: Set form for starting column and support them carefully. Step 4: Marking for Bolt-group-center line on side of the form. Step 5: Set Template with anchor bold. The template position is higher than the concrete Surface level. Step 6: Welding diagonal supporting bar to column rebar and anchor bolt. Step 7: Check the position of the anchor bolt again. Step 8: Protect bolt heads by masking tape. Step 9: Cast Concrete for starting column.

4.		**Steel Structure Erection** Step 1: Set up 2 side columns of the braced bay and erect interior columns. Step 2: Tighten anchor bolts and nuts sufficiently to prevent columns from rocking. Step 3: Install all bolts in rafter splices to proper tension. Step 4: Raise the first assembled rafter on top of columns by cranes. Step 5: Install bolts of rafter through column connection and tighten to the snug position. Step 6: Secure all temporary, wire ropes bracing, plumb and align the columns and rafter before releasing the crane.
5.		**Installing Roof Panels** Step 1: Install wall panels, downspouts and gutters. Step 2: Complete roof angle bracings and all secondary members. Step 3: Complete trims and accessories.

Table 3.0 Method of Steel Structure Installation

3.3 To Determine the Time Streel Structure Installation Process

Time for completion is an important concept in contracts. When a time limit is attached to an obligation under a contract, failure to complete that obligation within the time prescribed is usually a “material” addition because of the pandemic Covid-19 the factory may delay their production breach of contract and the other party may be entitled to damages. If no time obligation is added, then the default position is usually that the allowance has to be reasonable, or in some cases, time is said to be “at large” and it is not considered relevant.

There are a number of reasons why the work has been delayed, and it is not always the contractor's fault. Hold-ups can be caused, for example, nature can often be an unwelcome intruder on a construction project.

For the steel structure installation in this project, it was supposed to take around 6 days but overall it took around 7-9 days to finish the frame structure installation. Throughout the construction, there are some natural obstacles such as rainy days and also pandemic of Covid-19 that control the movement of construction. Those obstacles were the reasons why the work has been delayed.

The structure installation process for The Construction of One Petrol Station involved a fuel station, convenience store and TNB substation at Lot 110533 Kampung Cengal Lempung Mukim Sungai Karang Daerah Kuantan, Negeri Pahang started from 22 February 2021 and predictions will be handed over to the client before 1 January 2022. The time of the installation process is recorded by observation and the pictures taken by a smartphone.

3.4 To Identify the Problems and Solutions in Structure Installation.

Problem: Heigh and vertical are not uniformly.

The horizontal error of the embedded anchor bolt after foundation construction is substantial. Columns are not built in a straight line, stagger east, making the look of the building difficult to observe, causing errors in the installation of steel columns, causing the structure cannot be connected.

Figure 3.0 Interrupted Installation

Solution:

The skilled workers are using levelling and measuring objects or line positions either measurement vertically or horizontally such as automatic level, digital waterpass and laser distance meter of the steel structure during installation. These are the best solutions that have been approved by the Consultant and Contractor.

Figure 3.1 Levelling Process

CHAPTER 4.0

CONCLUSION

As a conclusion, as a whole based on what has been previously described the construction of petrol station through almost 5 months to practical experiences, I can conclude that steel structure one of the most important for building to be installed as the factors of strength and structure accuracy. There are some advantages of using steel structure for the building, for example, it does not require many steps to build a building structure where it may shorten the time of a construction and steel structure is flexible, which means it can withstand heavy winds or earthquakes such as bridges or tall towers. (Xiaoxiao et al, 2017) Therefore, the steel structure method is very suitable in construction because the building is only 500 meters from the beach area.

The process took around 6-7 weeks starting from 23 September until 7 November 2021 with wall finishing works. The steel structure installation was delayed a few days because of the weather and also the strong wind effect. Therefore, it takes more time than estimated.

In Conclusion, the method for the steel structure installation process in construction is a common method for large buildings such as factories, assembly buildings and etc. There is nothing that is carried out differently during the steel structure installation process.

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