DEPARTMENT OF BUILDING

UNIVERSITI TEKNOLOGI MARA

(PERAK)

PRACTICAL REPORT TITLE

CONSTRUCTION INSPECTION

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2019203774

DEPARTMENT OF BUILDING

FACULTY OF ARCHITECTURE, PLANNING AND SURVEYING

UNIVERSITI TEKNOLOGI MARA

(PERAK)

FEBRUARY 2022

It is recommended that the report of this practical training provided

By

Mohamad Safwan bin Ismail

UiTM ID No:

2019203774

Practical Report Title

Construction Inspection

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

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DEPARTMENT OF BUILDING

FACULTY OF ARCHITECTURE, PLANNING AND SURVEYING

UNIVERSITI TEKNOLOGI MARA

(PERAK)

JANUARY 2022

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 Sixtynine Nation Sdn Bhd for duration of 20 weeks starting from 23 August 2021 and ended on 7 January 2022. It is submitted as one of the prerequisite requirements of BGN310 and accepted as a partial fulfillment of the requirements for obtaining the Diploma in Building.

…….

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Date : 10 JANUARY 2022

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I would also like to thank ALL the UiTM lecturers who have taught and nurtured me to become a better student and person. During my training stint, I would also like to extend my most profound appreciation to the directly involved lecturers. To Cik Nor Azizah Binti Talkis, Supervising Lecturer, Puan Nurhasyimah Binti Ahmad Zamri, Evaluation Lecturer, En. Muhammad Naim Bin. Mahyuddin, Practical Training Coordinator, and Dr. Dzulkarnaean Bin Ismail, Programme Coordinator, I value the time, effort, encouragement, and ideas that they have contributed towards the successful completion of my training. This report and the valuable knowledge that has been shared over the last few semesters.

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

Thank you so much.

ABSTRACT

Construcion inspection assessment is growing and become more important in the context of the built environment in Malaysia. This report presents the working environment of site inspection and method to identify the defect to evaluate the physical condition of the building. The methodology was based on interview, observation, and document review which is involved study on the existing methods, discussion, and improvement. A case study involved of 5 buildings with various unit such as banglo and semi-D. It will focus on how to read the drawing and how to check the drawing, it also focus on defect and how to solve it.The findings shows that the using of the standard for condition assessment, the building inspectors or assessors can provide the data and condition rating to the buildings according to the standard.

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CHAPTER 1.0

INTRODUCTION

1.1 Background of Study

Inspections are an approach to control the quality of completed development work. Therefore, the inspection routine is an essential part of each part of a construction project. Daily inspection is an important part that can assure the work progress as planned, both quality and compliance. When we are running a building site, it requires the coordination of individuals, materials, and gear subsequently, construction inspections are executed for an extraordinary number of purposes in each development stage and all through the whole project period to guarantee that things are advancing without a hitch. Construction site inspection also do checklist in the planning phase of construction project as it determine the project requirements. Cause once the project progress has broken ground, progress of inspection become part of the site daily routine to make sure that these requirements are met.

Construction inspection carries a lot of responsibilities for the project to progress smoothly. But still, there are more benefits than drawbacks to having an inspection done throughout every stage of your project. One of the benefits is identifying the potential hazards that could occur at the site. Construction Inspection can also improve quality by having an inspection performed throughout the construction process to ensure that the project is sticking to regulations and codes. There are many things that we can learn about construction. However, the aim of this is to know the job scope of construction inspection.

1.2 Objectives

- To know what construction inspection are working at site.
- To learn how to check the defect that occur at site and how to solve it.

1.3 Scope of study

The study is on three projects which are Atas Tol, Durian Burung, and Kubang Parit site, Kuala Terengganu, Terengganu. This practical report focuses on how Construction Inspection were doing their job at the site. Therefore, this study intends to know the progress inspections, quality inspections, building regulations compliance inspections, and when construction site inspections occur at the site? And a checklist for construction inspections. The study also pays attention to what types of machinery, equipment, and materials. Therefore, construction inspections need to check and note what machinery, equipment, and materials are used, such as lorry, excavators, spirit level, trowel, cement, etc. Not only that, this report shows how many general workers are required to do each work, such as tile installations, painting, roofer, bricklayer, etc. Lastly, this report shows the problems at the site and what solution will be taken to solve the issues.

1.4 Methods of Study

1. Observation- the research method is mainly by observing how construction inspections are carried out during practical training. The observation was taken in the morning until the evening when the workers were doing the work at the site. Written notes and taking some pictures truly helped in collecting data during observation.
2. Interviews- The interview was undertaken using an unstructured interview while doing the observation. Several respondents, such as site supervisors and general workers, were involved with the interview session regarding the work at the site.
3. Document reviews- Documents such as construction drawing and architecture drawing were shown and retrieved to acknowledge several data such as the dimension of each component.

CHAPTER 2.0

COMPANY BACKGROUND

2.1 Introduction of company

Sixtynine Nation Resources are incorporated in Malaysia on 17th August 2020 with an objective to emerge asa leading construction and service company. As a registered CIDB G1 and Registered Contractor (by ConstructionIndustry Development Board, CIDB), specializing in construction of building construction works, civil engineering,various mechanical fittings, work services and any others specialization works. Being a new player in this field, Sixtynine Nation Resources applies an effective strategy to undertake small projects as a beginning and carryout work services. With the strong desire and passion to achieve the mission and vision, Sixtynine Nation Resources seeks to professional capabilities of staffs. Our company supervises all of our projects to ensure the highest level of quality and craftsmanship right from the start to the ends of the projects and services.

Main projects that be focusing by Sixtynine Nation Resources are construction and completion of housing. Starting from one unit to more upcoming unit in the future. Our company hopes for the upcoming years will win the trust many clients and will provides efficiency and quality of work. Other works that be focusing in Sixtynine Nation Resources are building cleaning work, construction and renovation, repair and maintenance work, grass cutting work and other services.

DESIGN, BUILD AND SELL

Our company focusing on the design and build concept, where we can integrate our ability and creativity into our design functions to produce and creates the excellent project. Upon completion, the building will be sold to the potential buyers.

FAST, QUALITY AND SATISFACTION

Our company offers professional cleaning services ranging from general maintenance of hygiene and toiletry

2.2 Company Profile

Name of Company : Sixtynine Nation Resources

Date of Incorporation : 17th August 2020

Nature of Business : Construction

Registered Address : PT 1740, Jalan Seri Nilam, Kg. Seberang Baroh,21000 Kuala Terengganu, Terengganu.

Business Address : No. 45, Pusat Komersial Chabang Tiga,21000 Kuala Terengganu, Terengganu.

Hotline : 017-980 5969

Tel / Fax : 09-622 5959

2.3 Company Organisation Chart

Figure 2.1 Company Organization Chart

2.4 List of Projects

2.4.1 Completed Projects

- There are no complete project right now.

2.4.2 Project in Progress

No.	Project Title	Project Value	Start Date	Completion Date	Project Duration	Client
1.	1 UNIT BUNGALOW DURIAN BURUNG	RM510,000.00	FEBRUARY 2021	DECEMBER 2021	10 MONTH	
2.	1 UNIT BUNGALOW JASMINE	RM460,000.00	APRIL 2021	APRIL 2021	1 YEAR	
3.	1 UNIT BUNGALOW CAMELIA	RM445,000.00	APRIL 2021	APRIL 2021	1 YEAR	
4.	1 UNIT BUNGALOW ATAS TOL	RM335,000.00	MARCH 2021	JANUARY 2022	10 MONTH	
5.	2 UNIT SEMI D 1 TINKAT KUBANG PARIT	RM365,000.00	APRIL 2021	APRIL 2021	1 YEAR	

Table 2.1 List of Project

CHAPTER 3.0

WORK PROCESS OF CONSTRUCTION INSPECTION

CASE STUDY

3.1 Introduction to Case Study

In this case study, the inspection for four construction projects which are One Unit bungalow Durian Burung, One Unit Bungalow Jasmine, One unit Bungalow Camelia, One Unit Bungalow Atas Tol, and Two Unit Semi D Kubang Parit were chosen. Most of the projects are one-story buildings. Project at Durian Burung was the first project built in the company, and the place is surrounded by a rice field and residential area in the village. The estimated cost for this project was RM 510,000.00. This project was started in February 2021 and is expected to be finished in early 2022. The project at Atas Tol is also surrounded by a residential area, and the estimated cost for this project was RM335,000.00. And for the project unit bungalow, Jasmine, Camelia, and 2-unit Semi D are in the same place in Kubang Parit. The project took place in a forest area because the site was new. The estimated cost for one unit bungalow Jasmine is RM 460,000.00, and for one unit bungalow Camela is RM 445,000.00, and for 2-unit Semi D is RM 365,000.00.

3.1.1 Site Location

Figure 3.1 Location Project Durian Burung

Figure 3.2 Location Project Jasmine, Camelia and Semi D

Figure 3.3 Location Project Atas Tol

3.1.2 Site Plan

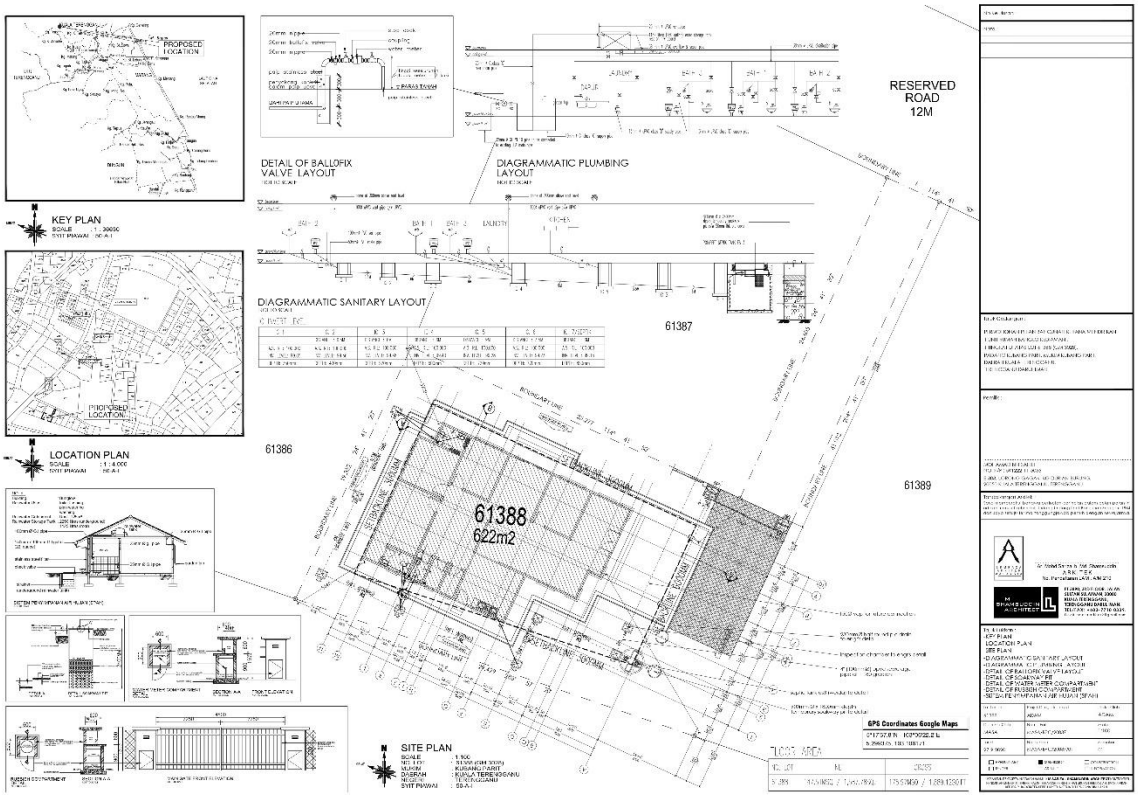


Figure 3.4 Site plan Durian Burung

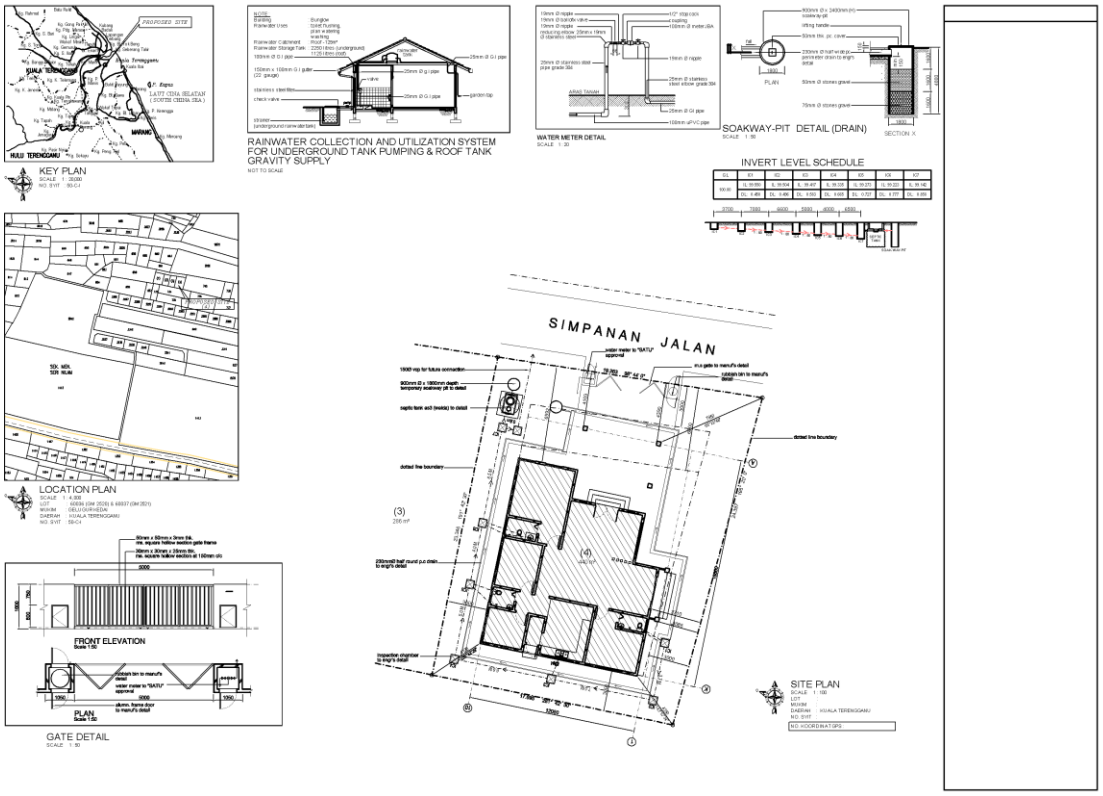


Figure 3.5 Site Plan Camelia

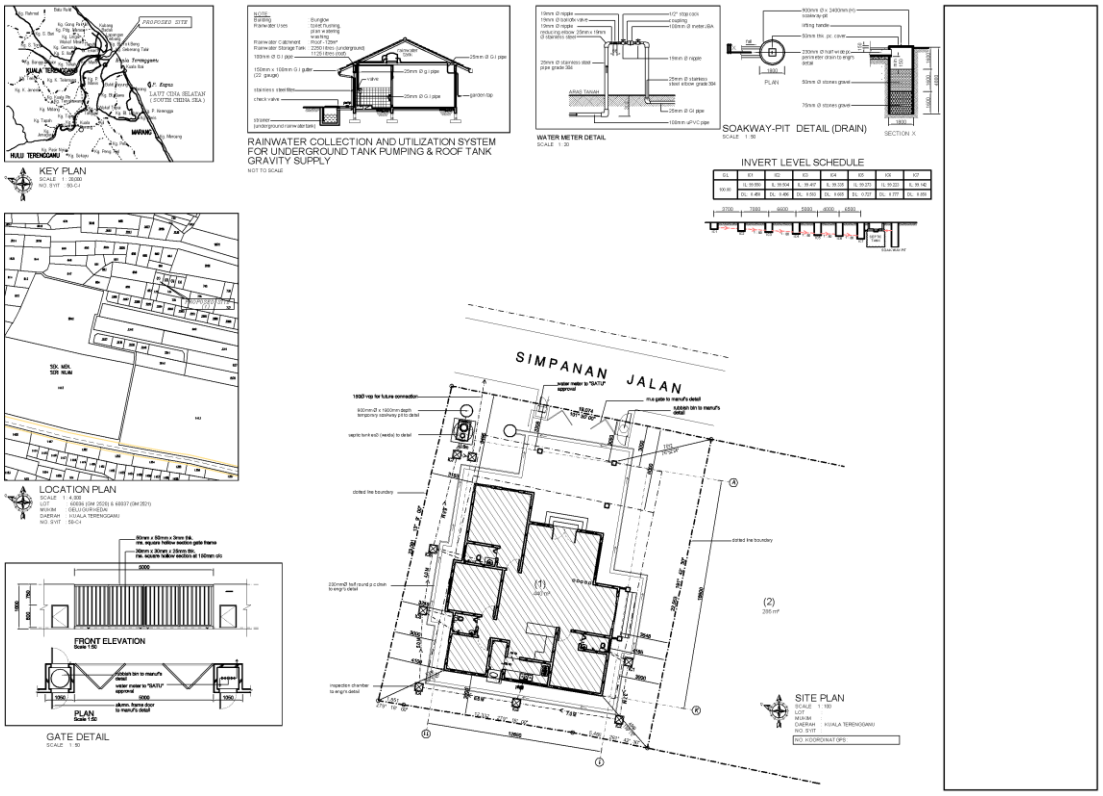


Figure 3.6 Site plan Jasmine

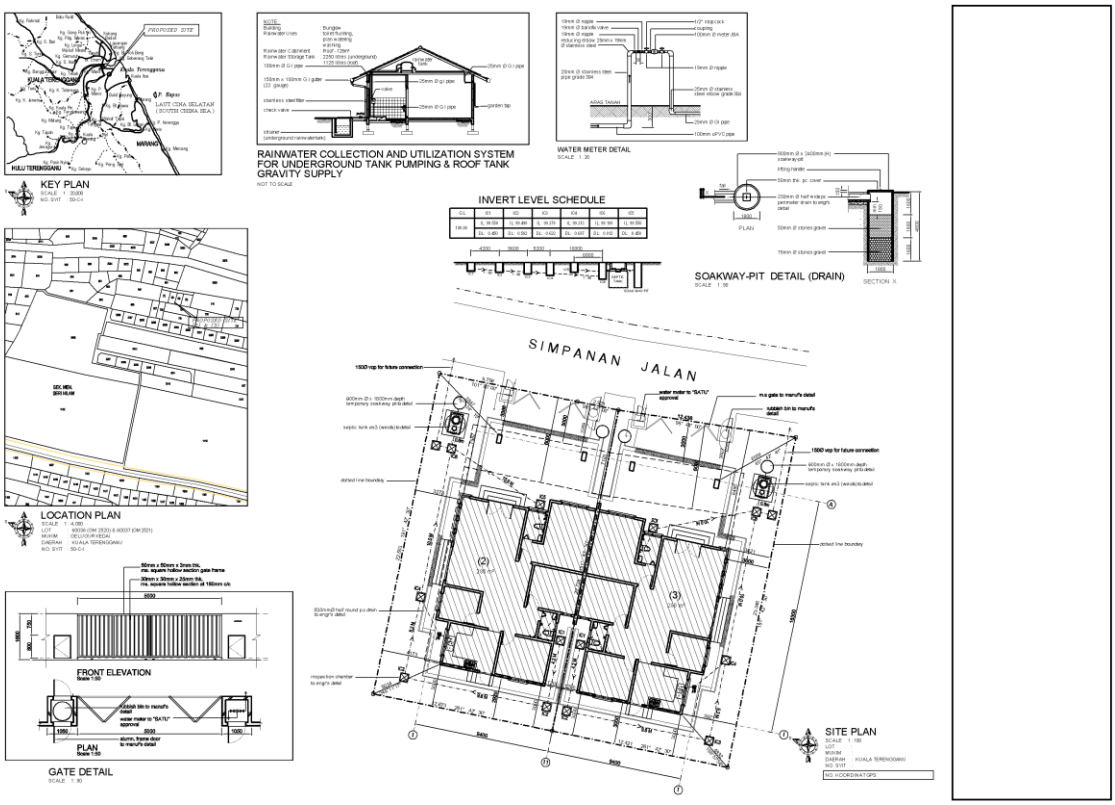
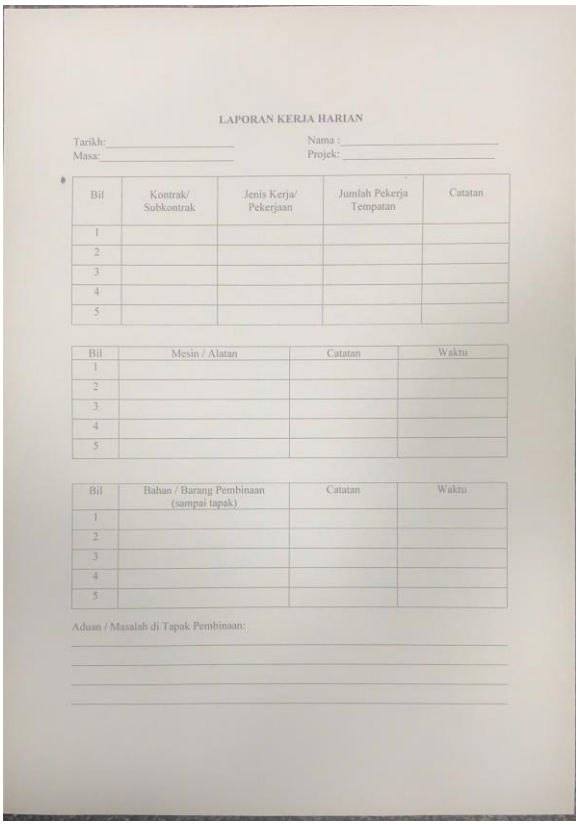


Figure 3.7 Site Plan Semi-D Kubang Parit

3.1.3 Project Schedule and Daily Report

Based on the picture, this report is focus on site inspection to monitor all the progress and schedule on site and problems that occur on stie.



LAPORAN KERJA HARIAN

Tarikh: _____ Nama : _____

Masa: _____ Projek: _____

Bil	Kontrak/ Subkontrak	Jenis Kerja/ Pekerjaan	Jumlah Pekerja Tempatan	Catatan
1				
2				
3				
4				
5				

Bil	Mesin / Alatan	Catatan	Waktu
1			
2			
3			
4			
5			

Bil	Bahan / Barang Pembinaan (sampai tapak)	Catatan	Waktu
1			
2			
3			
4			
5			

Aduan / Masalah di Tapak Pembinaan:

Figure 3.8 Daily report on site

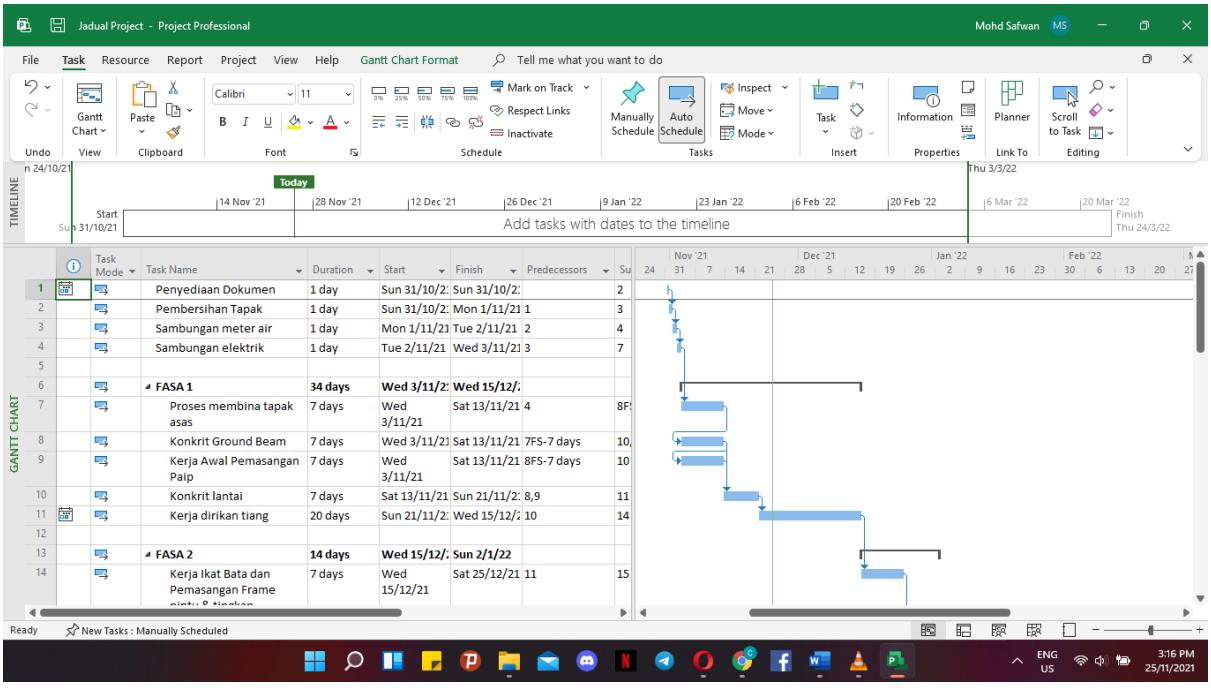


Figure 3.9 Project Schedule

3.2 To know what construction inspection are working at site.

Construction inspector has a responsibilities dan duties at site such as reviewing plans to make sure that they meet all requirements, what method used in construction and doing regular inspections at construction sites

3.2.1 Drawing checking on plan and on site.

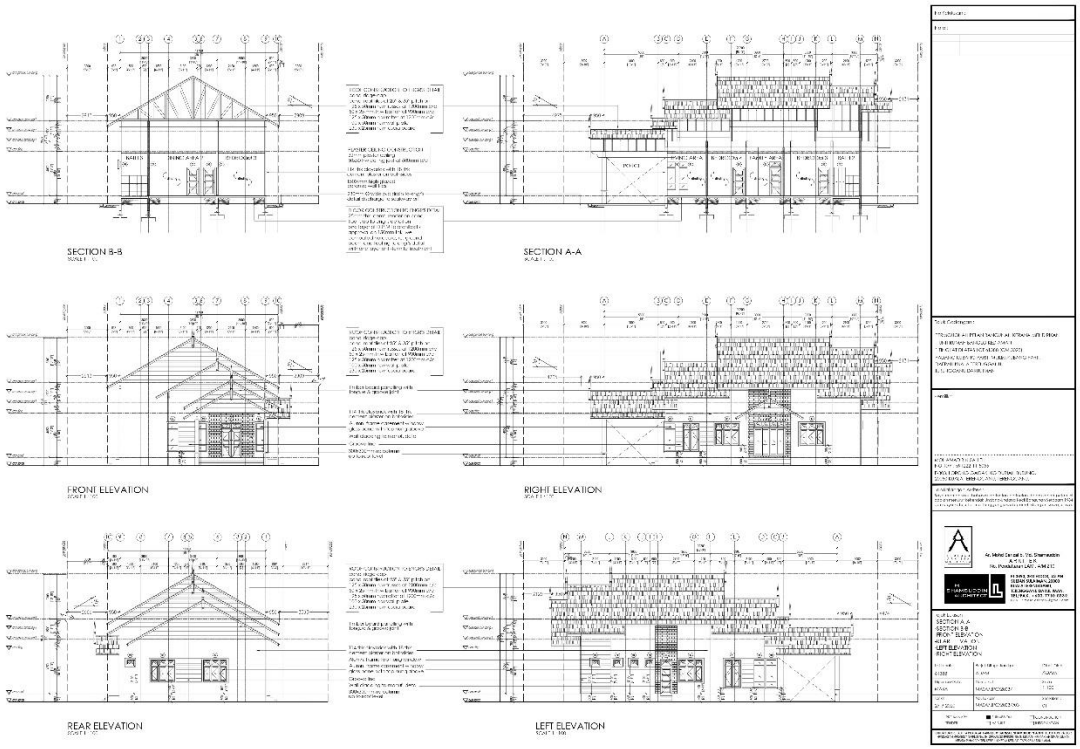


Figure 3.10 Plan Durian Burung

Figure 3.11 Right Elevation at Durian Burung

Figure 3.12 Front Elevation at Durian Burung

Figure 3.13 Rear Elevation at Durian Burung

3.2.2 Method used in constructions.

a. Coping Installation Method.

1)Cut the coping in 45 degress angle to ease the joining process between each end of coping.

Figure 3.14 Worker cutting the coping

2)Measure length needed according to the size of the window and cut accordingly.

3)Hammer concrete nails onto the position of installation.

4)Apply cement gum mixture to the bottom of the coping and press the bottom gently into nail to reinforce coping position.

Figure 3.15 Worker place the coping.

5)Apply cement gum mixture to the jointing area (including the wall) and left it dry for a while.

6)Smothen out the joint area using concrete sponge and let it dry again.

Figure 3.16 Worker check the coping

b. Tiles Installation.

-The tilers are using spirit level 1.2meter to check the evenness of surface.

Figure 3.17 Worker check the wall.

- The tilers measure the tiles with a measuring tape to cut them to put it at the wall.

Figure 3.18 Worker cut the tile.

3.2.3 Do regular inspections.

- Environmental inspections related to pollution and installations like kitchens, bedroom and drains.

Figure 3.19 Kitchen at site Durian Burung.

Figure 3.20 Drains at site Atas Tol.

Figure 3.21 Master bedroom at site Durian Burung.

- Building inspections are carried out to make sure that it follows building regulations. These can be carried out by a local authority building inspector or by an approved inspector. Inspections may be required for:
    - Excavations work
    - Foundations work
    - Damp-proof course.
    - New drains before covering up.
    - Ground beams and steelwork.
    - Insulation.
    - Roof construction.
    - Completion.

Figure 3.22 Check building insulation at site Durian Burung.

Figure 3. 23 Roof beam inspections at site Kubang Parit.

Figure 3.24 Roof construction at site Durian Burung.

- Inspections of materials delivered and used

Figure 3.25 Lorry send the cement at site Durian Burung.

Figure 3.26 Accesories at site Atas Tol.

3.3 To learn how to check the defect that occur at site and how to solve it.

Construction inspection also has to check the defect to ensure it does not affect the project schedule and the building. Construction defects are very common in buildings, even though the defect is minor and not essential to look at. However, if the defect is big enough, that could damage either people or the building itself. Nevertheless, whether the defect is crucial or insignificant, the problems will be discovered after completing the work. But based on the objectives, the inspection on construction defects is in the construction process. Neither the defects are materials or workmanship that could lead to error in the structure being built, and that could cause damage to people property.

Two types of defects have been included in this report which is :

- Material Defects.
- Workmanship Defects.

3.3.1 Material Defects

Material defects happen due to defective or poor building material. Although most of these defects come from the maker, the maker using the materials usually does not notice the defects until they have been built into the projects. Because of this, material defects are costly because they may require extra labor and new materials.

Figure 3.27 Holes at door.

The picture shows holes at the door that can see the light from the outside piece through the door. This defect happened because the type of wood used was not of good quality, and the door was exposed to the sun. And to minimize the repair cost, the worker used wood filler to close the holes.

3.3.2 Workmanship Defects

Poor workmanship is one of the most significant sources of concern. To put it simply, workmanship is the skill and quality that goes into creating a product or finishing a job. The workmanship is all about quality, whether it's excellent or terrible. If workers aren't careful or don't follow the process, you may wind up with a completed product that falls short of your expectations.

Figure 3.28 Window cannot open because of coping

1. The picture above shows that the window cannot be open because the coping is too close to the frame, which can cause the window to break. This happened because the worker did not measure the right angle for the coping, thus making the window installations complicated. To solve the problem, the worker needs to grind the coping so that the window can be open smoothly.

Figure 3.29 Worker fix the coping.

Figure 3.30 Pipe leaking

2. This is also one workmanship defect that shows the pipe is leaking because the worker did not install it properly. And this can affect the furniture at the sink. After that, the worker fixed and tightened the pipe so that the water was not leaking.

Figure 3.31 Toilet window broken.

3. Inside the frame supposedly have the toilet window, but it's broken because the worker did not install it correctly. This is not the company's responsibility because it was the worker's fault. After that, the worker replaces it with a new window.

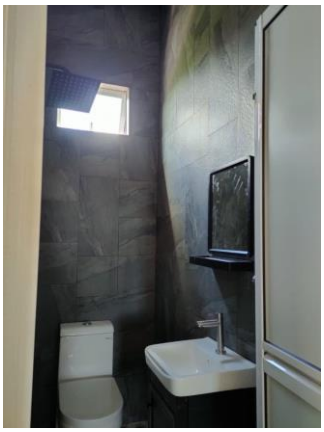


Figure 3.32 New toilet window

CHAPTER 4.0

CONCLUSION

This report helped to explain the construction inspection job and how to surveillance at the site cause every construction project involves some level of risk. Construction site inspections serve to reduce some of that risk by offering a method for teams to cope with human error and unplanned changes that arise throughout the course of the project. It also show that the problem can solve without any misunderstanding if both sides compromise with each other. A well-developed checklist for construction site inspections will aid in the project's successful completion and also reveal areas for improvement. Teams can stay ahead of safety concerns and avoid danger this way.

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