

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

DECEMBER 2019

It is recommended that the report of this practical training provided

By

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2017208798

Entitled

Plasterboard Gypsum Ceiling Finishes At Tijani Ukay, Ampang

be accepted in partial fulfilment of the requirement for obtaining the 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 IDW Design & Build Sdn Bhd for duration of 20 weeks starting from 5th August 2019 and ended 20th December 2019. It is submitted as one of the prerequisite requirement of BGN310 and accepted as a partial fulfilment of the requirements for obtaining the Diploma In Building.

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

Thank you so much.

ABSTRACT

Malaysia is one of the developing countries. Building construction is the process of constructing a building or infrastructure and typically involves mass production of similar items without a designated purchaser, while construction typically takes place on location for a known client. This report presents summary of research project for plasterboard gypsum ceiling finishes at Residential Tijani Ukay, Ampang. The prime objective of ceiling finishes is to make sure that the performance of the building can be continued to the most throughout its design life plus to give aesthetics value for interior building. The objectives of this report is to identify the construction method of plasterboard ceiling and determine the equipment and machineries that used for construction. The method of study used are interview, case study and literature review that sure helped a lot in making this report. To illustrate, the construction industry makes a vital contribution to the competitiveness and prosperity of the economy. A modern and efficient infrastructure is a key driver of productivity, and the construction industry has a major role in delivering the built infrastructure in an innovative and cost effective way.

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CHAPTER 1.0

PREFACE

1.1 INTRODUCTION

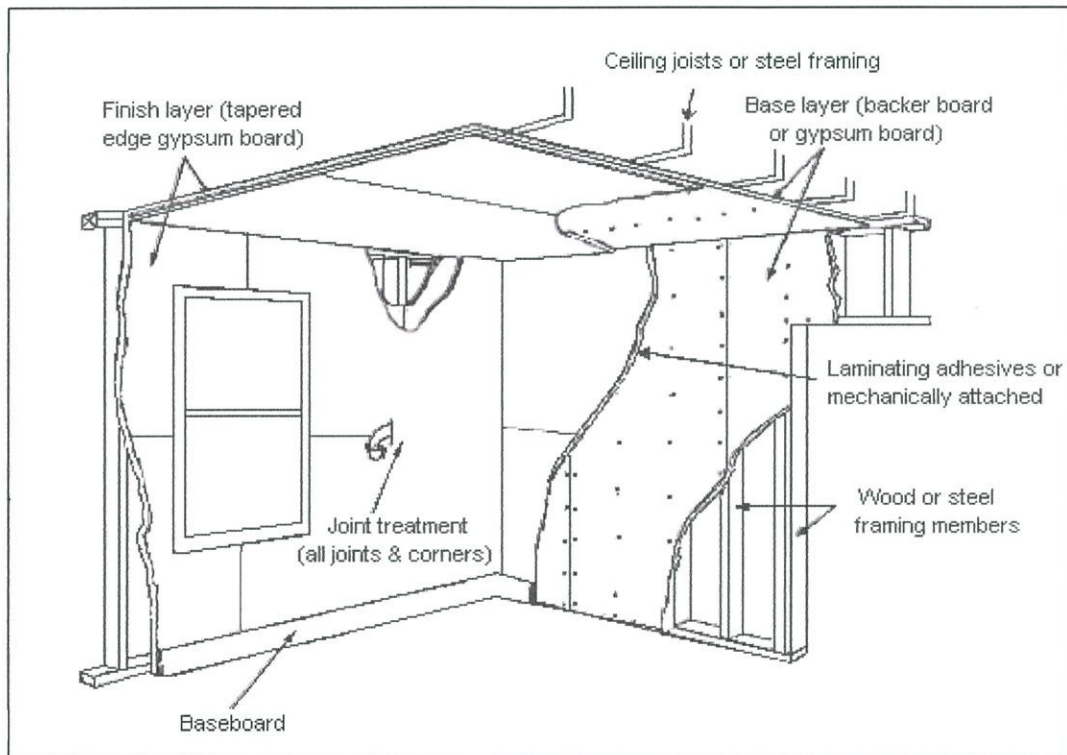


Figure 1.1: Ceiling finishes component

Finishing materials improve the appearance of buildings. There are different types of finishes and methods applied during the construction process of a house, residential, commercial building or any type of building projects.

Perhaps the best way to define building finish is to say that it comprises those nonstructural parts of the building. The finishes are divided into EXTERIOR finish (located principally on the outside of the structure) and INTERIOR finish (located inside). The work involved in the installation of nonstructural members on the structure is called finish carpentry(Blakemore & J.Wiley, 2006)

A ceiling is an overhead interior surface that covers the upper limits of a room. It is not generally considered a structural element, the ceiling finish or product

is attached to the ceiling battens under the roof framing and is generally a plasterboard of some form. Typically, we see ceilings as the flat plane above us that hides the roof or floor framing (Clive Edwards, 2005). They are usually made of plasterboard on a light timber frame attached to the roof or floor framing.

There are many types of ceiling finishes that can be used such as plasterboard, suspended ceiling, ply and batten ceiling. So the architect must choose wisely. Architect must know whether the chosen ceiling finishes is suitable with the environment, temperature and use of the space. This report will explain detail about the plasterboard ceiling for the ceiling finishes.

1.2 OBJECTIVE

The objectives of this report are as follow:

- i. To explain the definition of gypsum plasterboard in ceiling finishes.
- ii. To identify machineries and equipment that is being used in the ceiling installation.
- iii. To investigate the method of construction for ceiling finishes.

1.3 SCOPE OF STUDY

In this report, it will present about finishes. The case study for this report was located at one of the main purpose for this report that will be represented in this report is the method of installation for finishes at ceiling until completion. Secondly, this report will give some knowledge about the material of the finishes and the conformity of the material with the area.

1.4 METHOD OF STUDY

Various methods are used to obtain information for completing the Practical Training Report. The methods used are as follows:

1. Observation

Overall methodology of this report is actually based on observations conducted while at the construction site. Observations that have been made are recorded and photographed as evidence while doing a report. Observations are done on site with me taking the view and snapped every parts in the phone and notes are made. This method is also able to know the ways and methods of work done at construction site.

2. Interview

Interviews are a very efficient and effective way to get information effectively. Interviews will be conducted by the experienced employees and staff. This is because they have a lot of knowledge and experience work at construction site as site supervisor. The interview is one of the direct ways to get more useful information from the respondents interviewed. Such as to interview directly the workers for around six to seven minutes for each methods.

3. Books

Book is a very useful to get knowledge and information available about construction work. This is because the information contained in the book is more relevant information and cannot change the truth information that have contained at the books. The information in the book can provide some guidelines to complete the Practical Training Report successfully

4. Internet

Internet is one of the easiest and quick ways to obtain the necessary information and info. By just surfing the internet and open a web page that is required, the information actually can be obtained quickly and accurately depending with other ways to get information

CHAPTER 2.0

COMPANY BACKGROUND

2.1 INTRODUCTION OF COMPANY



Photo 2.1.1: IDW Design & Build Sdn Bhd staff
Source: IDW Design & Build Sdn Bhd

IDW Design & Build Sdn Bhd was established in 2006 and was formerly known as INFINITE DESIGNWORK. IDW Design & Build Sdn Bhd is an interior design company that focuses design excellence through responsible development and technological innovation. A unique skill base enables the company to achieve success in various commissions.

As an Associate Member of Malaysian Society of Interior Design (MSID) and Malaysian Institute of Interior Design (MIID), IDW is committed to promote legal practice of interior design and support the environmentally sustainable transformation in every project we undertake.

The way IDW Design & Build Sdn Bhd work is in innovative concepts enabling the creation of an optimal standard of living with and inside the structure that has been designed. The design is not as an end for itself, but serve the needs of human beings. IDW Design & Build Sdn Bhd consist of staffs and teams that enable the composition of creative, innovative and communicative individuals who share a fascination for their work, and a readiness to become emotionally involved with each project as it develops. Meeting the daily challenge of competition, in both large-scale and small-scale context and succeeding in work only possible with a team that is capable of enthusiasm, and which is built on a basic of friendship and mutual trust.

IDW Design & Build Sdn Bhd provides professional interior design service covering the below scope of work:

- a) Clients meeting for design requirement
- b) Conceptualization and schematic design for design development
- c) Presentation to client using computer aided colour visual perspective, shop drawing and cost estimations.
- d) Tender documentations and calling of tenders
- e) Project management and administrations. Project weekly meeting, inspection to completion.
- f) Defect checking.
- g) Project hand over.

h) IDW Design & Build Sdn Bhd role include:

- a) Institutional building
- b) Urban design
- c) Commercial office
- d) Industrial developments
- e) Niche residential design
- f) Hospitality



Photo 2.1.2 : Scope of design
Source: IDW Design & Build Sdn Bhd

2.2 COMPANY PROFILE

2.2.1 Company Director

- IDR Lokman Hakim Ahmad Subki
- IDR Rabiatul Adawiyah Rasol

2.2.2 Company Address

- IDW DESIGN & BUILD SDN BHD NO 36A, JALAN KRISTAL J7/J, SEKSYEN 7, 40000 SHAH ALAM , SELANGOR

2.2.3 Company Detail

Company Name : IDW DESIGN & BULD SDN BHD

Telephone :

Email : hello@idw.design

2.2.4 Company Location Plan

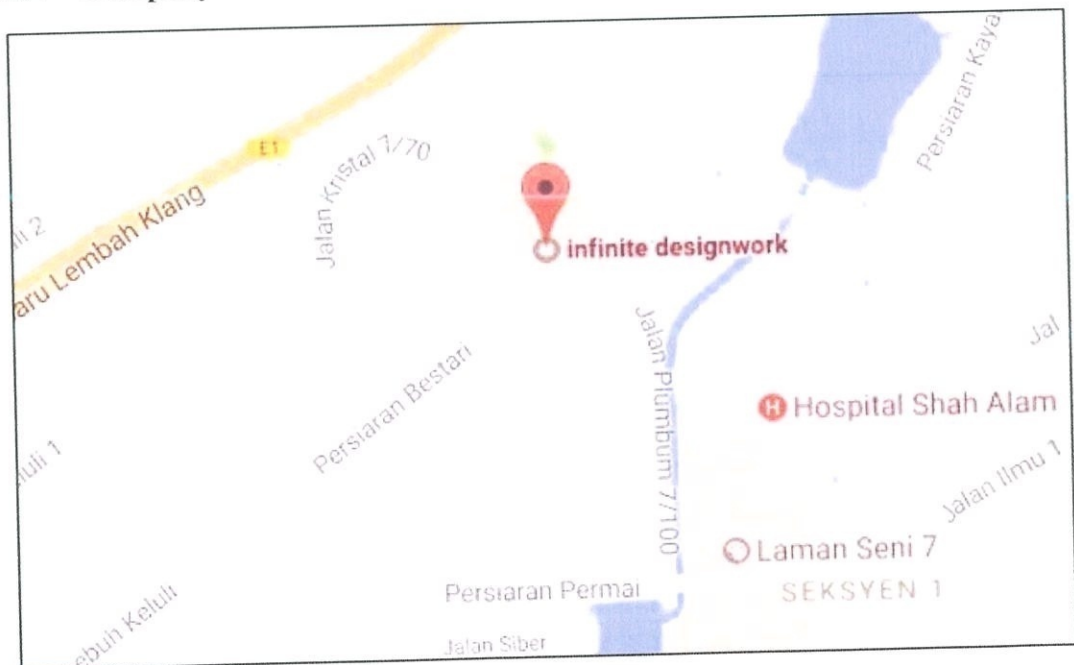


Figure 2.2.1: location headquarters
Source: googlemap.com

2.2.7 Official Logo & Symbol

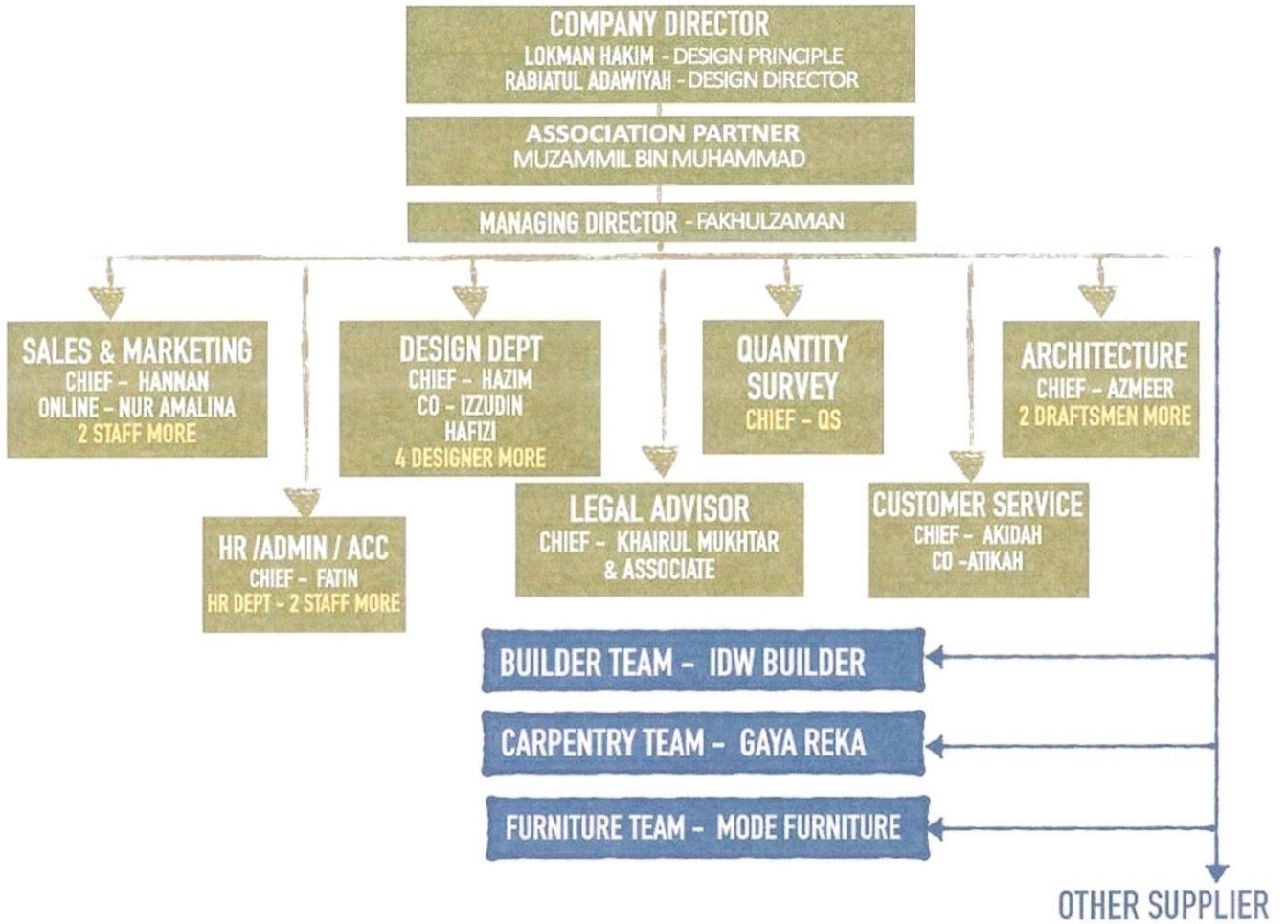


Figure 2.2.3: Company logo
Source: IDW Design & Build Sdn Bhd

IDW symbol:

IDW itself intends as Infinite Design Work. It refers to a quantity without bound or end. People have developed various ideas throughout history about the nature of *infinity*.

2.3 ORGANIZATION CHART



2.4 LIST OF PROJECTS

2.4.1 Completed Project

Table 2.0: Completed project

NO.	CLIENT	LOCATION	AMOUNT
1	Feiyue International Ltd.	Suite 7.04, Level 7, Wisma Goldhill, No. 67 Jalan Raja Chulan 50200 Kuala Lumpur.	RM 273,143.41
2	Sabrina Bakery Sdn. Bhd	Jalan PJS 3/34 Taman Sri Manja, 46000 Petaling Jaya, Selangor.	RM 52,464.33
3	Stealth Solution Sdn Bhd	Unit B – 3a – 01, Arena Mentari, No 1, Jalan Pjs 8/15, Dataran Mentari, Bandar Sunway, 46150 Petaling Jaya, Selangor	RM 350,572.83
4	Al – Hijrah Media Corporation	Kompleks Pusat Islam Malaysia 50480 Kuala Lumpur.	RM 895,980.74
5	Silawati's Residence	No. 3, 10 Residensi, Jalan Senangin 2c, Seksyen 17, Shah Alam.	RM 310,131.28

Source: Source: IDW Design & Build Sdn Bhd

2.4.2 Project in Progress

Table 2.1: Project in progress

NO.	CLIENT	LOCATION	AMOUNT
1	Shazlina's Residence	No. 7, PJU 7/19 Mutiara Damansara, 47800 Petaling Jaya.	RM 261,416.39
2	Farhani's Residence	No. 50, Jalan Elektron U16/75, Denai Alam, 40160 Shah Alam, Selangor.	RM 210, 611. 70
3	Amir's Residence	No. 14, Jalan Gunung Nuang U11/39, Seksyen U11, Bukit Bandaraya, 40170 Shah Alam.	RM 216, 648. 60
4	Saliza's Residence	No. 7, Jln Awan Larat U8/74, D'Puncak, Bukit Jelutong, 40150 Shah Alam, Selangor.	RM 117,000.00

Source: Source: IDW Design & Build Sdn Bhd

CHAPTER 3.0

CASE STUDY

3.1 INTRODUCTION OF PROJECT

IDW Design & Build Sdn. Bhd. is currently executing a renovation project which is proposed new interior design for Tijani Ukay, Ampang that is Mr. Shahrizal's office and covered on design area such as bedrooms, wet and dry kitchens, dining area, living area. This project is located at No 1, Jalan Tijani 3/B, Taman Tijani Ukay, 68000 Ampang, Selangor. IDW Design & Build Sdn. Bhd commenced this renovation project on 18th September 2019 and expected to complete the project referring to master work program by month of 15th November 2019. The total cost for the renovation works for this project is approximately RM613,00,00 not including special request or variety order by client.



Photo 3.1.1: View with client



Figure 3.1.2: site location
Source: googlemap.com

These are the descriptions for the ongoing projects:

Table 3.0: ongoing project

NO.	CLIENT	LOCATION	AMOUNT
1	Shazlina's Residence	No. 7, PJU 7/19 Mutiara Damansara, 47800 Petaling Jaya.	RM 261,416.39
2	Farhani's Residence	No. 50, Jalan Elektron U16/75, Denai Alam, 40160 Shah Alam, Selangor.	RM 210, 611. 70
3	Amir's Residence	No. 14, Jalan Gunung Nuang U11/39, Seksyen U11, Bukit Bandaraya, 40170 Shah Alam.	RM 216, 648. 60
4	Saliza's Residence	No. 7, Jln Awan Larat U8/74, D'Puncak, Bukit Jelutong, 40150 Shah Alam, Selangor.	RM 117,000.00

Source: Source: IDW Design & Build Sdn Bhd

The description of renovation total cost is stated below:

Table 3.1: Grand total renovation works

BILL OF QUANTITIES			
Project: PROPOSED NEW INTERIOR DESIGN FOR RAHIMAH'S RESIDENCE			
MAIN WORKS			
		Date:	4 FEB 2019
		Ref. No.:	IDW/RR/BQ/REV00
		Revision:	4
		Copy for:	Client/ Contractor
ITEM	DESCRIPTION	NO.	AMOUNT (RM)
	General Notes The description stated in the Bills of Quantities are not comprehensive and reference shall be made to: 1) Specification of Materials and Workmanship 2) General Conditions and Preliminaries and 3) Preambles/ Method of measurement The rates and prices inserted shall be deemed to have allowed for compliance with the above stipulation and other documents forming part of the Contract.		
A	WORK SUMMARY		
1	ID WORKS		444,212.72
	TOTAL ID WORKS		444,212.72
B	PROJECT MANAGEMENT CONSULTANT (PMC) FEES		
1	The service rendered by the consultant is 10% . Final services fees will be prior upon completion of project final account.	10%	44,421.27
2	Design Package Paid		(5,000.00)
	SST	6%	2,665.28
	TOTAL ID FEES		42,086.55
	TOTAL MAIN ID WORK + ID FEES		486,299.27

Source: Source: IDW Design & Build Sdn Bhd

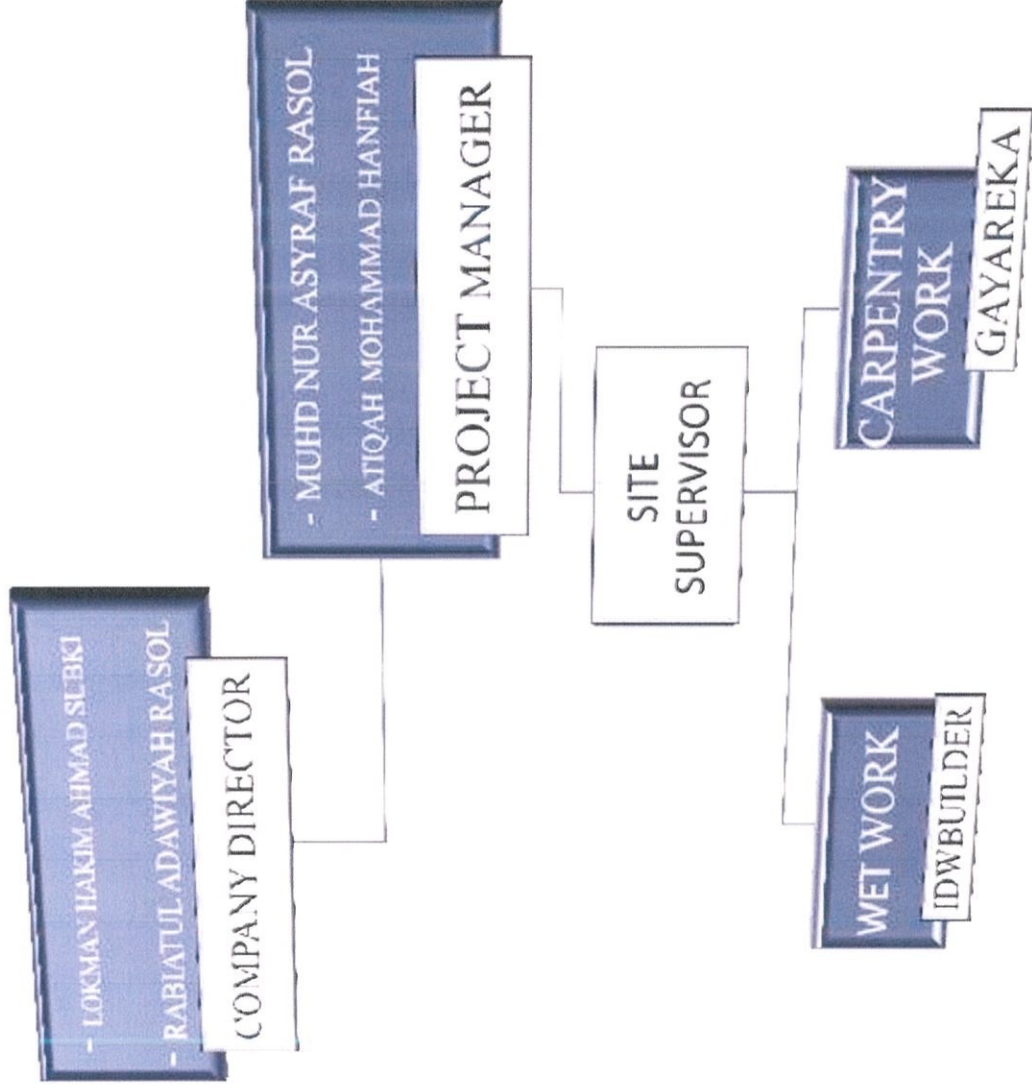
3.1.1 List of Consultant

Table 3.2: List of consultants

No	Consultant	Company name	Address
1	Client/owner	Tuan Mohamad Shahrizal Bin Mohammadn Idris	No 1, Jalan Tijani 3, Tijani Ukay, 68000 Ampang, Selangor
2	Interior design consultant	IDW Design & Build Sdn Bhd	No 36a, jalan kristal j7/j, seksyen 7 , 40000 shah alam , selangor
3	Contractor	IDW BUILDER	No 36a, jalan kristal j7/j, seksyen 7 , 40000 shah alam , selangor

Source: IDW Design & Build Sdn Bhd

3.1.2 Site Organization Chart



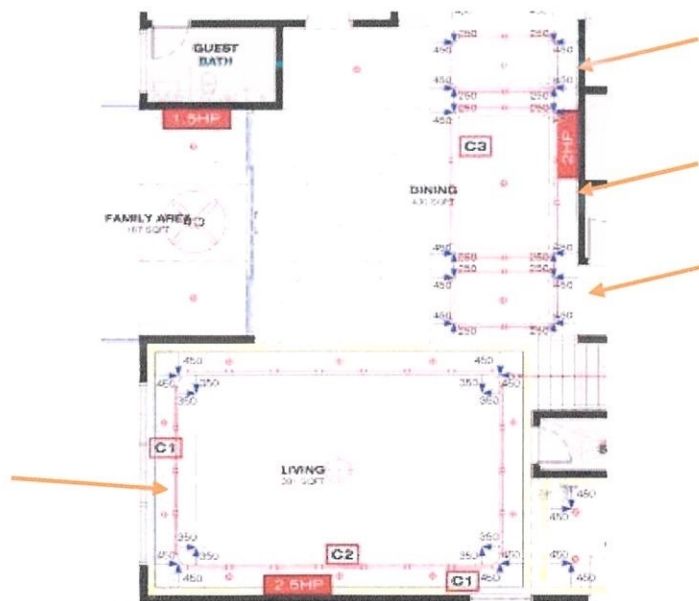
3.2 CASE STUDY

3.2.1 Plasterboard gypsum Ceiling

In general, plaster is a building material used for the protective or decorative coating of walls and ceilings and for moulding and casting decorative elements. In English “plaster” usually means a material used for the interiors of buildings, while “render” commonly refers to external applications. Plaster can be relatively easily worked with metal tools or even sandpaper, and can be moulded, either on site or to make pre-formed sections in advance, which are put in place with adhesive. Plaster is not a strong material; it is suitable for finishing, rather than load-bearing, and when thickly applied for decoration may require a hidden supporting framework, usually in metal. The plaster is manufactured as a dry powder and is mixed with water to form a stiff but workable paste immediately before it is applied to the surface. The reaction with water liberates heat through crystallization and the hydrated plaster then hardens. (Gillian Perry,1999)

Plasterboard gypsum ceiling has been designed to construct on all area and there is specific area which living room and dining area that include a structural element which is l-box. Refer to the reflected layout plan which that indicates ceiling design and lighting points (refer appendix D)

Figure 3.2.1: Plasterboard gypsum ceiling construct area



Arrows indicate the l-box mentioned shaped square and rectangle following the T5 lamp in the reflected ceiling plan. L-box is located at the dining & living area. What is L-box? L-box is light holder which usually used for boundary of room or to terminate section of the drop ceiling. The cost is computed by per foot run.

Table 3.2: bill of quantities

2	To supply & install light box.	ft/run	75.00	14.40	1,080.00
---	--------------------------------	--------	-------	-------	----------

Basically, most of the plaster types, they all work in a similar way. There are several common types of plaster in market which is gypsum

1. GYPSUM PLASTER



Figure 3.2.2: Installing ceiling

For this project, gypsum plaster is used for the entire ceiling finishes. Gypsum is used for various purposes, this hemihydrate gypsum became known as PLASTER OF PARIS. Upon addition of water, after a few tens of minutes plaster of paris becomes regular gypsum (dehydrate) again, causing the material to harden for casting in construction. Plasterers often use gypsum to simulate the appearance of surfaces of wood, stone, or metal, on movie and theatrical sets for example. Nowadays, theatrical plasterers often use expanded polystyrene, although the job title remains unchanged. Plaster of Paris can be used to impregnate gauze bandages to make a sculpting material called plaster bandages. It is used similarly to clay, as it is easily shaped when wet, yet sets into a resilient and lightweight structure. This material is widely used for construction compared with lime plaster.

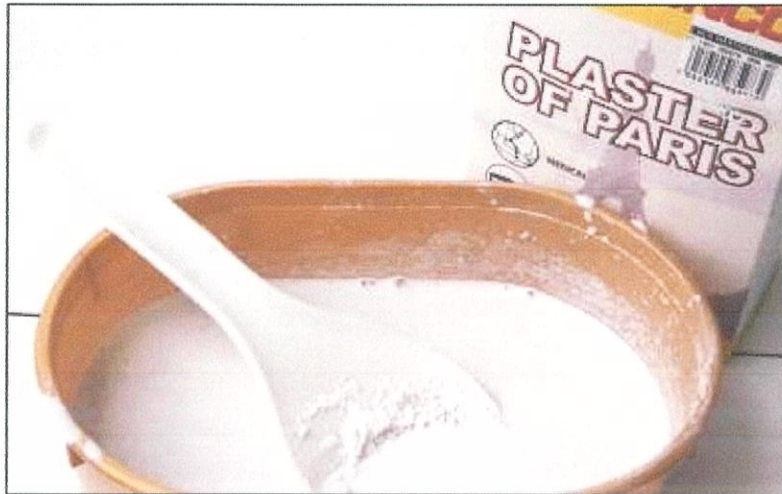


Figure 3.2.3: Plaster of paris
Source: googlemap.com

There are benefits of using gypsum plaster which is for builders and developers or for end customer:

1. FOR BUILDERS AND DEVELOPER:

- a. Green material
- b. Shrinkage crack free surface (smooth finish)
- c. High productivity which is reducing plastering time by 70%
- d. Reduce dead load on structure
- e. Durable and light weight
- f. Cleaner site because direct application bagged product and requires no curing

2. FOR END CUSTOMERS:

- a. No shrinkage crack on wall or ceiling
- b. Reduction in the time required for plastering
- c. Perfectly lined, levelled, smooth surface
- d. Saving on electricity used for air conditioning as gypsum has very low thermal conductivity.

Next, plasterboard ceiling is a rigid composing a gypsum sandwiched between durable lining paper outer facing. For ceiling applications, the following types can be used to add aesthetic value:

i. **WALLBOARD**

9.5, 12.5 and 15 mm thickness 900 and 1200 mm width and lengths of 1800 and 2400 mm. Longer boards are produced in the two greater thickness and a vapour check variation is available. Edges are either tapered for taped and filled joints for dry lining or square for skimmed plaster or texture finishes. (Roy Chudley 2014)



Figure 3.2.4: Wallboard

To deduce, these are the same type specification of gypsum plaster board that has been used for construction in this site. Plasterboard should be fixed breaking joint to the underside of floor or ceiling joists with zinc plated (galvanised) nails or dry – wall screws at 150 mm max. spacing. The junction at ceiling to wall is reinforced with glass fibre mesh scrim tape or a preformed plaster moulding.

ii. L - BOX



There are primary benefits attribute to the l – box which is the first is aesthetic because l-box improves on the attractiveness of any interior space. The second is related to the air conditioning where l-box reduces the overall volume in the room leading to significant energy cost. Although having l-box installed may be expensive. But the costing depends largely on design, and there are designs that are more affordable.



Figure 3.2.5 : L-box

3.2.2 Tools And Equipment

Table 3.4: table tools and equipment

NO	EQUIPMENT/PLANT	FUCTION
1	 <p>Figure 3.2.6: Beam laser</p>	<ul style="list-style-type: none">• As a benchmark to set the ceiling level
2	 <p>Figure 3.2.7: Screw</p>	<ul style="list-style-type: none">• To tie object with cordless screwdriver

3



Figure 3.2.8: Putty trowel scraper

- To limit the thickness of the putty.

4



Figure 3.2.9: Plaster trowel

- To apply a smooth finish of plaster to a ceiling.

5



Figure 3.2.10 Plaster tray

- Easily hold compound mixture while working

6



Figure 3.2.11: Mild Steel framing

- To support and hold plaster board

7



Figure 3.2.12: Tray

- To preparing the mix of compound and water

8



Figure 3.2.13: Stopping compound

- compound that use to fill in gap on plasterboard ceiling

9



Figure 3.2.14: Cordless screwdriver

- Tighten screws to a specified torque without damage or over-tightening

10



- Easily to cut mild steel framing



Figure 3.2.15: Side cutting pliers

11



- To measure length or wide object

Figure 3.2.16: Measuring tape

12	 <p data-bbox="359 918 702 952">Figure 3.2.17: Spirit level</p>	<ul style="list-style-type: none"><li data-bbox="957 302 1396 459">• Used to check horizontal level in brickwork, plastering, flooring.
13	 <p data-bbox="319 1433 734 1467">Figure 3.2.18: Carpenter pencil</p>	<ul style="list-style-type: none"><li data-bbox="957 1041 1276 1075">• For marking purpose

14

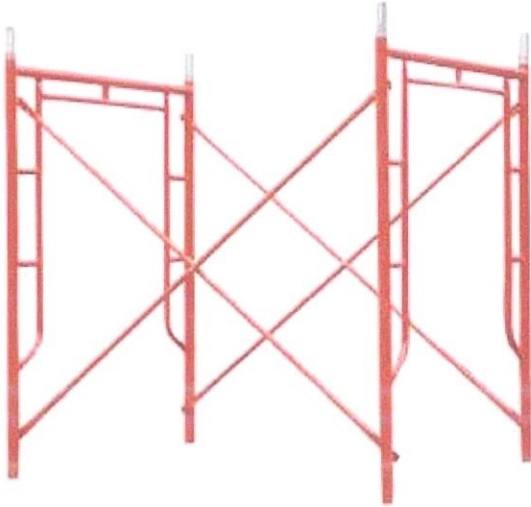


Figure 3.2.19: Frame scaffolding

- Use when working at height.

15



Figure 3.2.20 : Plaster board saw

- To cut off plasterboard by piece.

16



Figure 3.2.21: marking string line

- Temporary marking to set up ceiling framework.

18



Figure 3.2.22: paint tray

- Tray used to hold paint for decorating with a paint roller, typically having a well and a ridged slope with which to spread paint evenly over the roller.

19

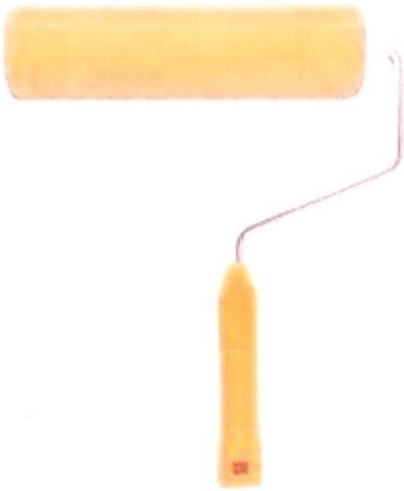


Figure 3.2.23: roller paint

- Produce the smoothest finish and are ideal for use on walls, wood, and metal surfaces.

3.3 METHOD STATEMENT

This is method statement installation of plasterboard ceiling at Mr. Shahrizal's Residence located at No.1, Jalan Tijani 3/B, Taman Tijani Ukay, 68000 Ampang, Kuala Lumpur.

STAGE 1: FLOOR COVERING



Figure 3.3.1: Floor covering process

Before ceiling works are constructed, there is preliminary work needs for execution at first which is floor covering. For this project, canvas with 45 feet long is used as a floor covering. Two rolls of canvas are used to cover up the whole construction area. This step is taken to reduce the risk of damaging and to protect client's property because of renovation work by contractor. This process takes 1 day to complete with 2 general workers. The installation method for floor covering is canvas is lay on the ground roll to the end of the area. By using a paper cut, canvas is cut at the end and taped using masking tape to avoid canvas from moving or removed.

STAGE 2: DEMOLISHING AND DISMANTLE PLASTERBOARD CEILING

Next stage is demolishing and dismantle phase, existing plasterboard gypsum ceiling need to be demolished and dismantled due to changes on design for this area. There are two items need to be demolished which are mild steel framing and existing plaster board ceiling. This process takes two days and three manpower which are 1 ceiling fixer and 2 general worker and equipment or tools used in this process are plasterboard saw, side cutting pliers, claw hammer.



Figure 3.3.2: Dismantle existing plaster board

Dismantle method for plasterboard gypsum ceiling is by using plasterboard saw, plasterboard ceiling is cut by piece to easier for the worker to demolish the ceiling. Next, mild steel framing is dismantled follow the design that been proposed by using side cutting pliers.

STAGE 3: LEVELLING FOR CEILING INSTALLATION



Figure 3.3.3: Determine floor level using beam laser

After that, whole ceiling in the area needed to be at the same level to let air-cond concealed and wiring get the some space to let maintenance work. To get the ceiling precisely levelled, the ceiling needs to be leveled by beam laser and marking with string line. This process takes 1 day to complete with 2 manpower which are 1 ceiling fixer and 1 general worker.

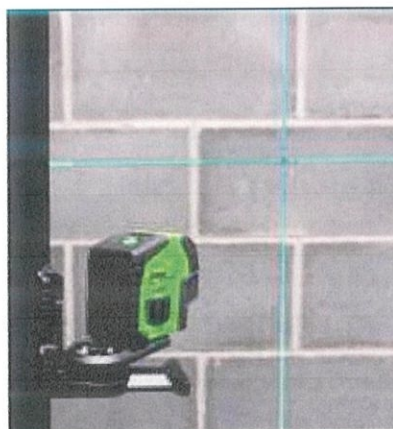


Figure 3.3.4: Beam laser
Source: imextools.co.uk

Beam laser attached on the wall by screws to indicate ceiling level perfectly.

STAGE 4: STEEL FRAME INSTALLATION



Figure 3.3.5: Ceiling framework

Usually framework for plasterboard gypsum ceiling is mild steel, mild steel widely use in market because source is easily to find and always available. This steel framing is the main structure to support load which is plaster board.

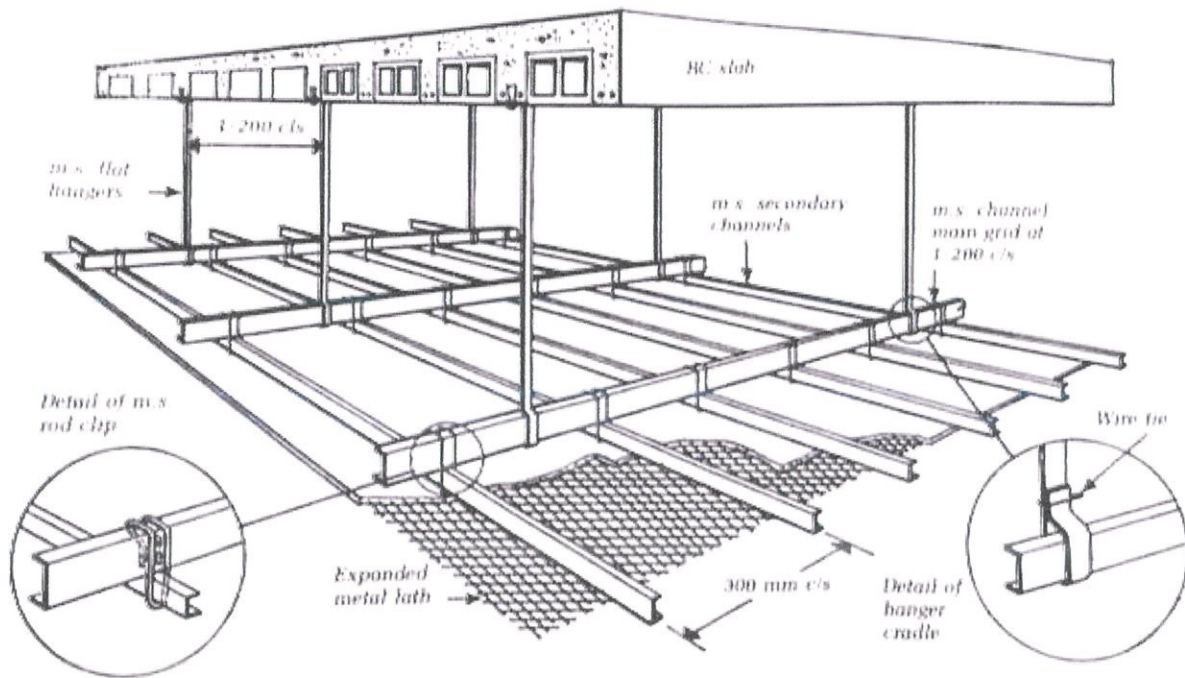


Figure 3.3.6: Ceiling component
Source: Alan blanc. 1994

Figure shows the diagram steel framing component used on ceiling. This stage takes 2 days to be done and requires 1 ceiling fixer and 1 general worker. Tools and equipment used are side cutting pliers, measuring tape, cordless screwdriver, beam laser, screw and scaffolding. Based on stage 3 after setting out the ceiling level using beam laser.

Installation of steel framework needs to be executed by step:

1. Wall angle needs to be screwed on parallel wall above beam laser which are ceiling level.
2. Hanger is attached to the void and the additional fixing point are placed at the maximum of 1200 mm centres in each direction. Final check and make sure each fixing is tightened.

3. Apply channel up to hanger with one edge resting on channel and clamp to hold position when its level and in position fix with screw. Continue the installation until have rows of channel all fixed.

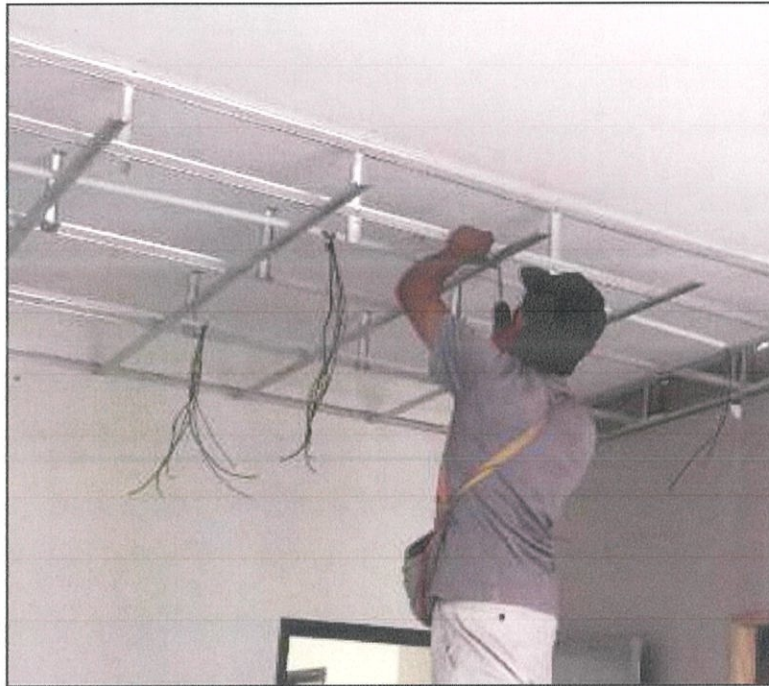


Figure 3.3.7: Tying channel and hanger

STAGE 5: PLASTERBOARD & L – BOX INSTALLATION

Plasterboard is the crucial part in this installation which are used to cover up void, concealed or wiring from being exposed. Plasterboard dimension comes with 9mm thickness, 1220mm width and 2440 length. The duration for the installation takes 4 day to finish installation works. Installation requires 1 ceiling fixer and 2 general worker and tools that in used is cordless screwdriver, tray, measuring tape, plasterboard saw, scaffolding, putty trowel scraper, plaster trowel and stopping compound.



Figure 3.3.8: Installing plasterboard

There are several steps to install plasterboard on steel frame which are:

1. Board up to steel framework and begin to install with screw through the plasterboard and channel.
2. Screw work is continued on the plaster board at a maximum of 300mm centres continue fitting all plaster board until framework is completely covered.
3. Along the way, l-box with size 6"x 8" is fixed around the drop ceiling and attach and screwed to the framework with tightened.

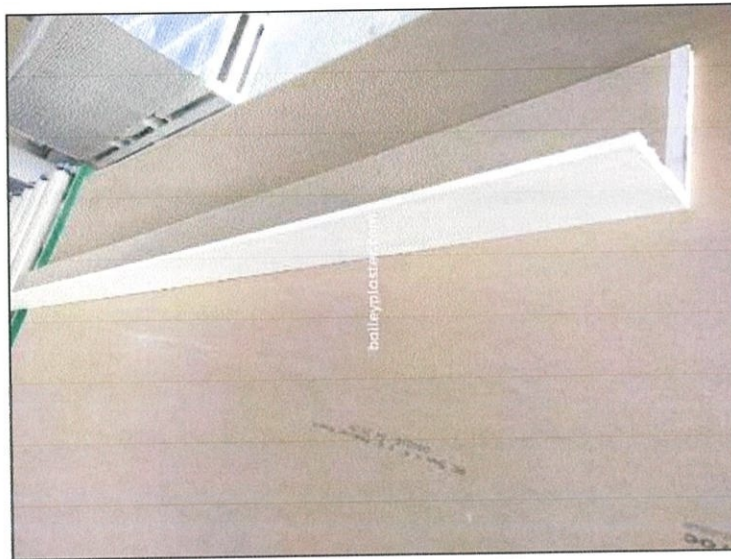


Figure 3.3.9: 6" x 8" L box
Source: www.baileyplaster.com

4. After plasterboard completely covered, there is gap between the plasterboard which needs to be filled up with stopping compound.

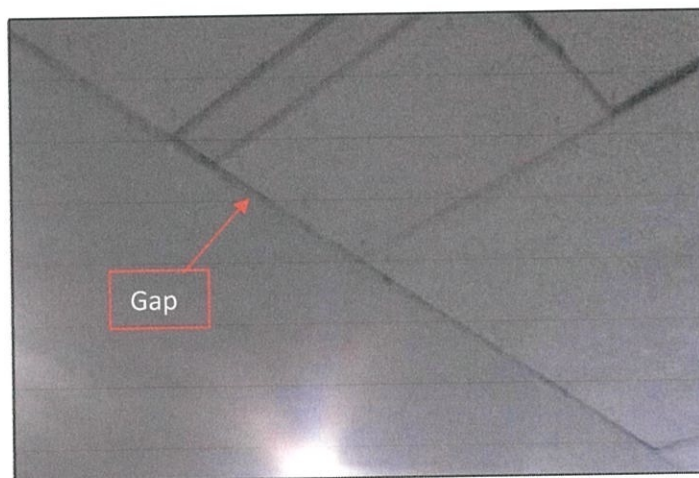


Figure 3.3.10: Gap between plaster board

5. Stopping compound prepared and applied at this gap to fill up that area:
 - i. Pour clean water into tray.
 - ii. Add stopping bonding to clean water at a ratio of $2 \frac{1}{4}$ parts of plaster to 1 part water. Allow to soak for approximately 2-3 minutes before use
 - iii. Lastly, apply stopping bonding to plasterboard gap equally to get smooth surface



Figure 3.3.11: Mixing compound and water



Figure 3.3.12: After completed filling the gap with stopping compound

6. This process continues until all plasterboard fixed to framework and covered all construction area.

STAGE 7: PAINT WORKS

To give even surface on ceiling due to colour mixture of stopping compound and plasterboard or to cover up, dirt must be painted. Usually for ceiling painting, Maxilite Plus paint is widely used and available everywhere. For this kind of work white (15245) paint is used for painting work for interior ceiling.



Figure 3.3.13: Paint used for ceiling

To complete the task, two manpower were needed that are one painter and one general worker and this task takes 1 day to complete. Equipment used for whole process are roller tray and roller paint.

There are few steps for applying paint on ceiling:

1. Ceiling needs to be clean at first from dust or grease spot that can ruin smooth surface.
2. Mix the paint thoroughly with handheld stirrer for a few minutes with consistency. This will prevent the oil pigments from separating.
3. Pour paint into roller tray and apply roller paint with dip the tip of 2” white paint and covered all area on the ceiling.



Figure 3.3.14: Applying paint on ceiling



Figure 3.3.15: Ceiling is completely constructed

4. Lastly, after underlaid paint on ceiling. Paint needs to be left dry by allowing the paint to set up overnight.

CONCLUSION 4.0

4.1 CONCLUSION

Overall after involvement in the construction of Residential Tijani Ukay, Ampang located at No 1, Jalan Tijani 3/B, Tijani Ukay, 68000 Ampang, Selangor, ceiling is one of the main component as a must have in every building due to safety, protection and aesthetic value for building identity itself. A proper care for the material is a must so that it would not cause problem in the future. Few precautions was established when ceiling is constructed on some area that need to be considered for structures around the space if there are any consequences in the future.

One of the main precautions that had been applied at Residential, Tijani Ukay is the ceiling must be in a good condition and arranged accordingly to the correct place based on master layout plan. This small mistake needs to be avoided because it might cause a long term period problem, especially in a few years due to weakness of material used.

In completing this report, the method of installation of plasterboard ceiling is explained in detail. The construction of plasterboard ceiling starting on site with delivering material, floor covering, demolishing and dismantle plasterboard ceiling, levelling for ceiling installation, steel frame installation, plasterboard and l- box installation. After that, installation on site is made. The installation process, site need to be cleaning to facilitate further work.

Many tools and equipment such as, beam laser, stopping compound, scaffolding and others was used while the construction. This equipment and tools will give new experience and knowledge for student practical. The surroundings of site construction full with equipment like nail, hammer, and screw. This situation will create intention to learn something new and develop this skill using these equipment for benefit.

For safety and health, it can be concluded that construction site area is safe to enter. Although, there are certain worker not wearing personal protective equipment (PPE) and protective clothing, there are no injuries or fatal cases that occur during the construction work process.

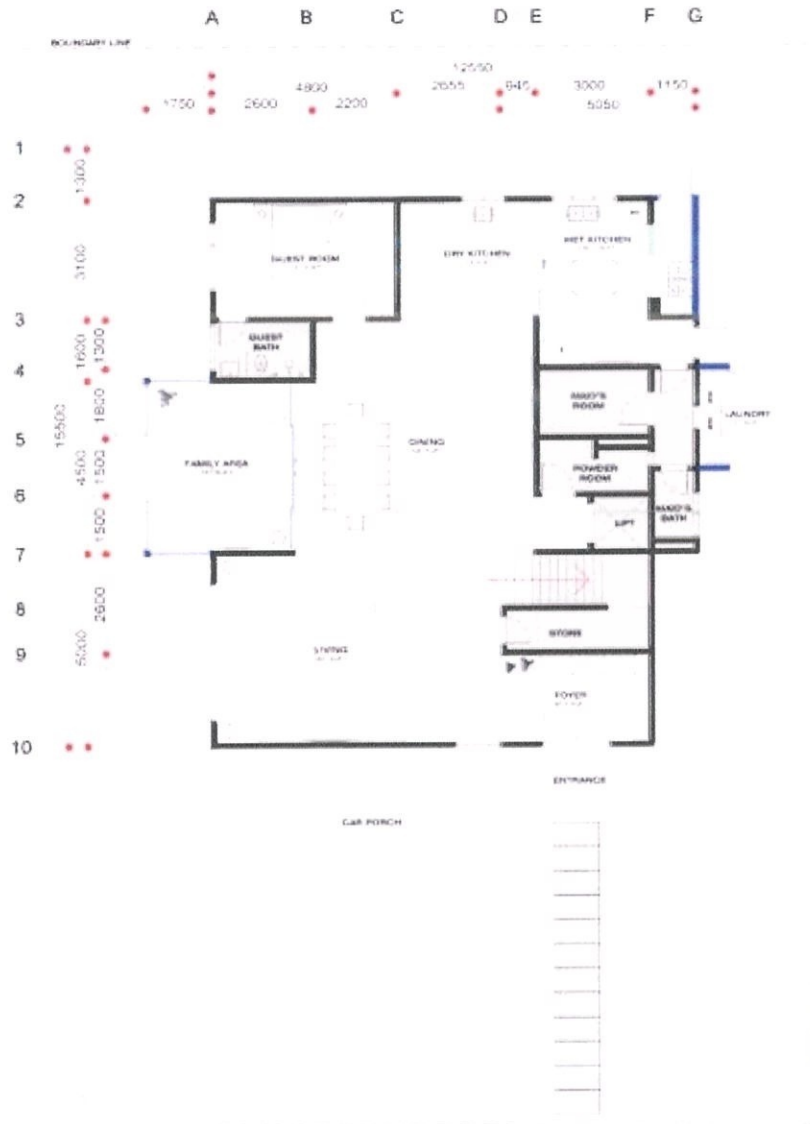
Therefore, it is recommended to all parties to take safety precaution regarding the installation of reinforcement concrete slab to minimize other contribution factor in building defect and human injury.

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3. Clouse, Doug. “The Handy Book of Artistic Printing: Collection of Letterpress Examples with Specimens of Type, Ornament, Corner Fills, Borders, Twisters, Wrinklers, and other Freaks of Fancy”. Princeton Architectural Press, 2009. P. 66.

APPENDIX



LEGEND
 ——— EXISTING
 ——— NEW
 ——— DEMOLISH

**GROUND FLOOR
 MASTER LAYOUT PLAN - SCALE 1:100**

PROJECT
 PROPOSED NEW DESIGN WORK FOR
 RAHIMAH'S RESIDENCE

GROUND FLOOR 1524 SQFT
 TOTAL SQFT 3524 SQFT

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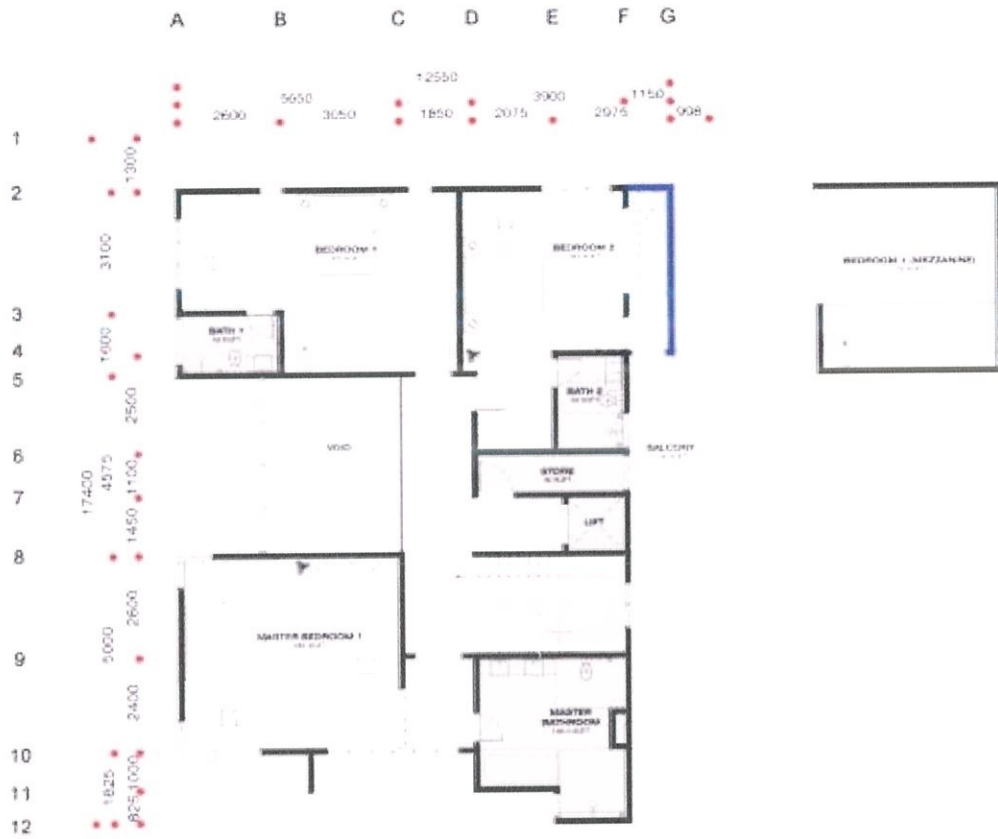
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 MASTER LAYOUT PLAN

RAHIMAH / IDW / MLP / GF / D1 /
 REV14

Appendix A: master layout plan (ground floor)



- EXISTING
 - ALL NEW
 - DEMOLISH

**FIRST FLOOR
MASTER LAYOUT PLAN - SCALE 1:100**

PROJECT
PROPOSED NEW DESIGN WORK FOR
RAHIMAH & BINTI SALLEH

FIRST SQFT 1182.9 SQFT
TOTAL SQFT 2912.35 SQFT

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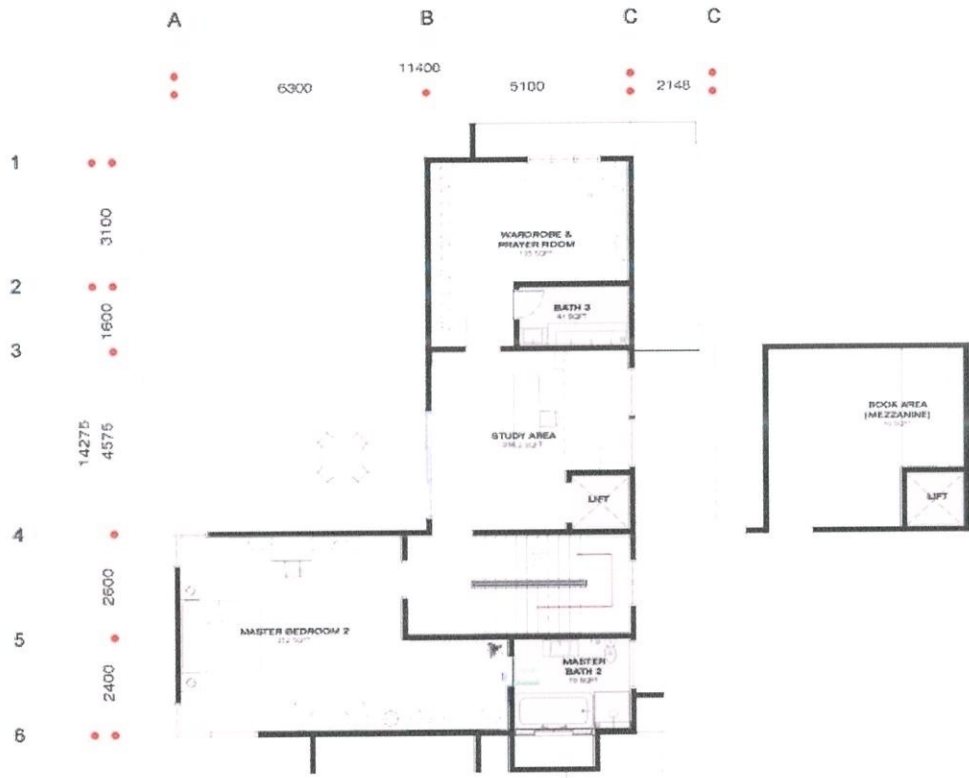
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MASTER LAYOUT PLAN

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Appendix B: master layout plan (first floor)



**SECOND FLOOR
MASTER LAYOUT PLAN - SCALE 1:100**

PROJECT
PROPOSED NEW DESIGN WORK FOR
RAHIMAH'S RESIDENCE

SECOND SOFT 756 65 SQFT

TOTAL SOFT 3200 03 SQFT

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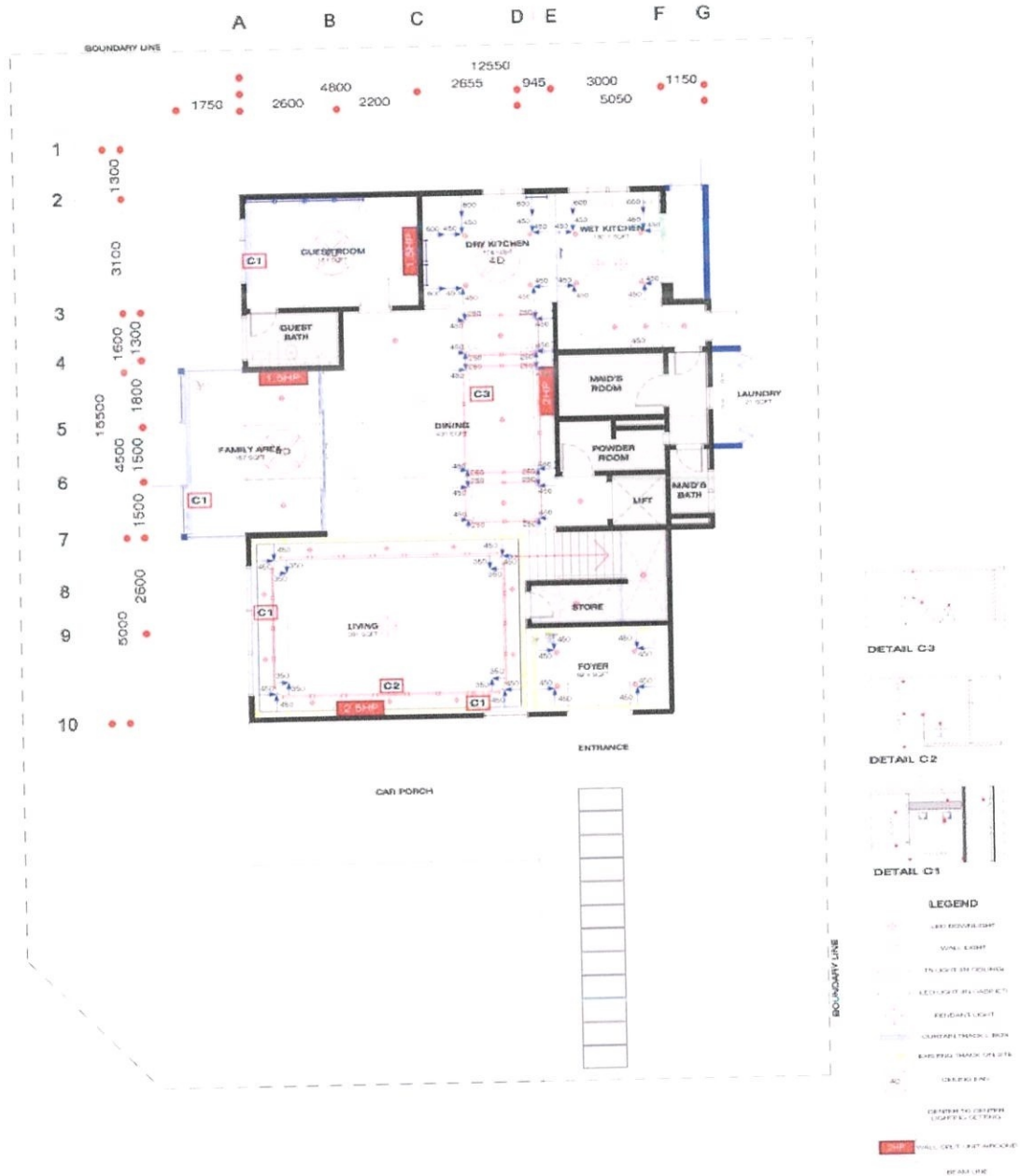
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IDW DESIGN & BUILD SDN BHD
MASTER LAYOUT PLAN

RAHIMAH / IDW / MLP / SF / 03 /
REV14

LEGEND
— EXISTING
— ADD NEW
- - - DEMOLISH



Appendix C: master layout plan (second floor)



**GROUND FLOOR
REFLECTED CEILING PLAN - SCALE 1:100**

PROJECT
PROPOSED NEW DESIGN WORK FOR
RAHIMAH'S RESIDENCE

GROUND SQFT 1576.1 SQFT

TOTAL SQFT 2000.33 SQFT

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REFLECTED CEILING PLAN

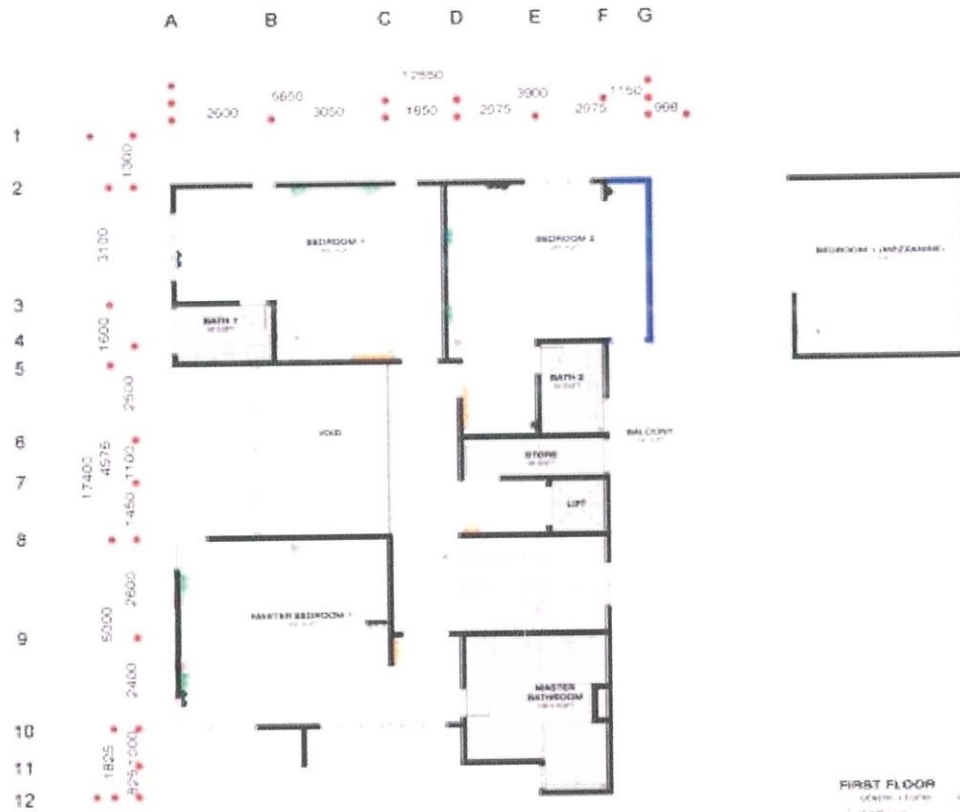
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Appendix D: reflected ceiling plan (ground floor)



Appendix F: reflected ceiling plan (second floor)



FIRST FLOOR

NO.	DESCRIPTION	QTY
1	CEILING	10
2	FLOOR	10
3	WALL	10
4	DOOR	10
5	WINDOW	10
6	STAIR	10
7	ROOF	10
8	SKYLINE	10
9	MECHANICAL	10
10	ELECTRICAL	10
11	PLUMBING	10
12	PAINTING	10
13	MECHANICAL	10
14	ELECTRICAL	10
15	PLUMBING	10
16	PAINTING	10
17	MECHANICAL	10
18	ELECTRICAL	10
19	PLUMBING	10
20	PAINTING	10

Height from floor

NO.	DESCRIPTION	QTY
1	CEILING	10
2	FLOOR	10
3	WALL	10
4	DOOR	10
5	WINDOW	10
6	STAIR	10
7	ROOF	10
8	SKYLINE	10
9	MECHANICAL	10
10	ELECTRICAL	10
11	PLUMBING	10
12	PAINTING	10
13	MECHANICAL	10
14	ELECTRICAL	10
15	PLUMBING	10
16	PAINTING	10
17	MECHANICAL	10
18	ELECTRICAL	10
19	PLUMBING	10
20	PAINTING	10

**FIRST FLOOR
PLUG POINT PLAN - SCALE 1:100**

PROJECT
PROPOSED NEW DESIGN WORK FOR
RAHIMAH'S RESIDENCE

PROJECT NO 1100-0-001

TOTAL SQFT 1600.00 SQFT

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PLUG POINT PLAN

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Appendix H: plug point plan (first floor)



SECOND FLOOR

GENERIC LEGEND

SYMBOL	DESCRIPTION	LEVEL
▲	WATER POINT	00
▲	WATER POINT	10
▲	WATER POINT	20
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Height from Floor Level

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**SECOND FLOOR
PLUG POINT PLAN - SCALE 1:100**

PROJECT
PROPOSED NEW DESIGN WORK FOR
RAHIMAH RESIDENCES

SECOND FLOOR (1F - 10/10)

TOTAL BUILT AREA (GROSS)

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PLUG POINT PLAN
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REV04



Appendix I: plug point plan (second floor)



**GROUND FLOOR
WALL FINISHES PLAN - SCALE 1:100**

PROJECT
PROPOSED I&W DESIGN WORK FOR
RAHIMAH'S RESIDENCE

GROUND FLOOR - 110 x 100 FT

TOTAL GORT 500.30 SQFT

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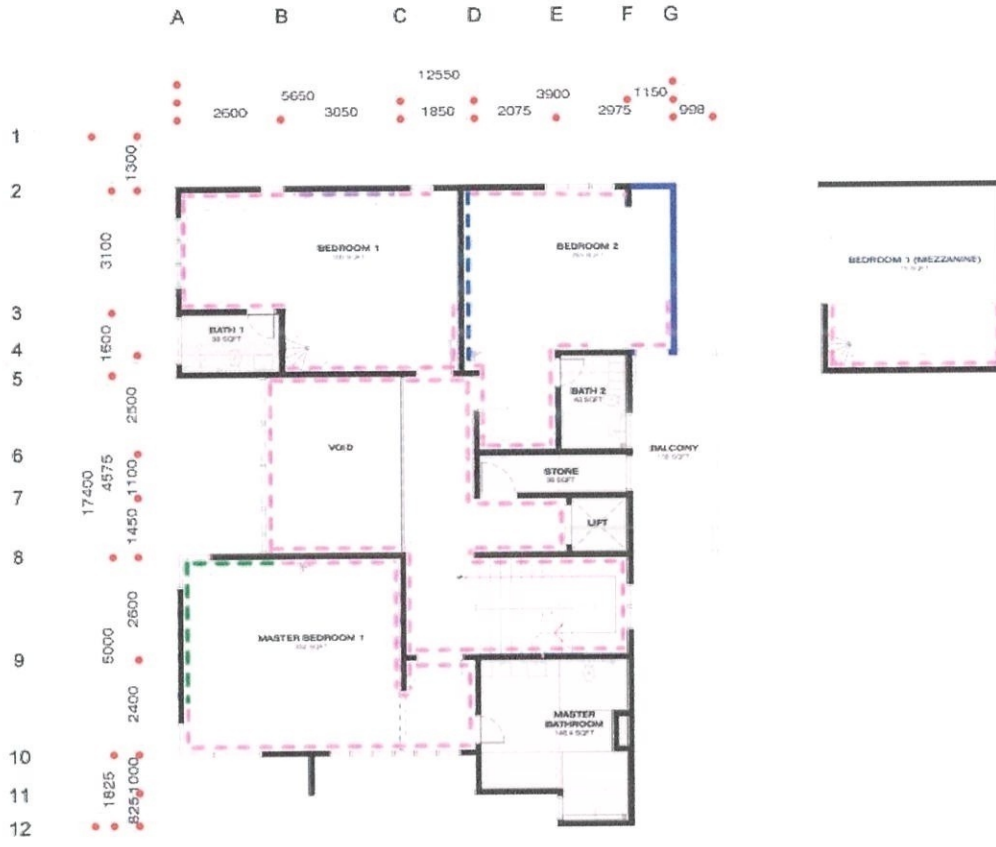
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WALL FINISHES PLAN

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REV04



Appendix J: wall finishes plan (ground floor)



FIRST FLOOR
WALL FINISHES PLAN - SCALE 1:100



PROJECT
 PROPOSED NEW DESIGN WORK FOR
 RAHIMAH'S RESIDENCE

FIRST SQFT 1155.8 SQFT

TOTAL SQFT 3500.25 SQFT

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 WALL FINISHES PLAN

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Appendix K: wall finishes plan (first floor)



LEGEND

	REFINISH WALLING COLOR: SF / 1455
	PAINT WORKS COLOR: SF / 1454
	WALL PANEL
	GALV. PAPER

**SECOND FLOOR
WALL FINISHES PLAN - SCALE 1:100**

PROJECT
PROPOSED NEW DESIGN WORK FOR
RAHIMAH'S RESIDENCE

SECOND FLOOR 765 65 SQFT

TOTAL SQFT 3500 35 SQFT

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WALL FINISHES PLAN

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Appendix L: wall finishes plan (second floor)

Appendix M: 3D design



RAHIMAH RESIDENTIAL

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RAHIMAH- BE RESIDENTIAL

REV 08/04/2019

DINING AREA

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DESIGN & BUILD
SDN BHD



RAHIMAH RESIDENTIAL

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FAMILY AREA

RAHIMAH RESIDENTIAL

RLV 07/04/2019

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RAIHANA ROOM

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RAIHANA ROOM

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RAIMI ROOM

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RAIMI ROOM

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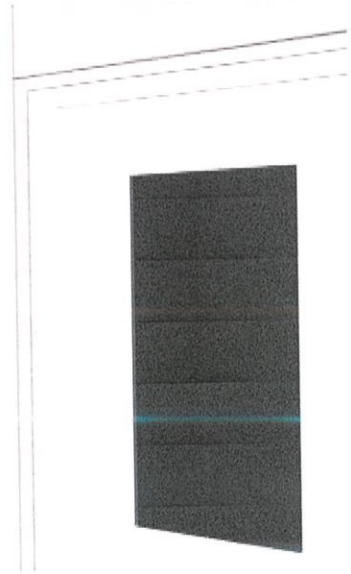
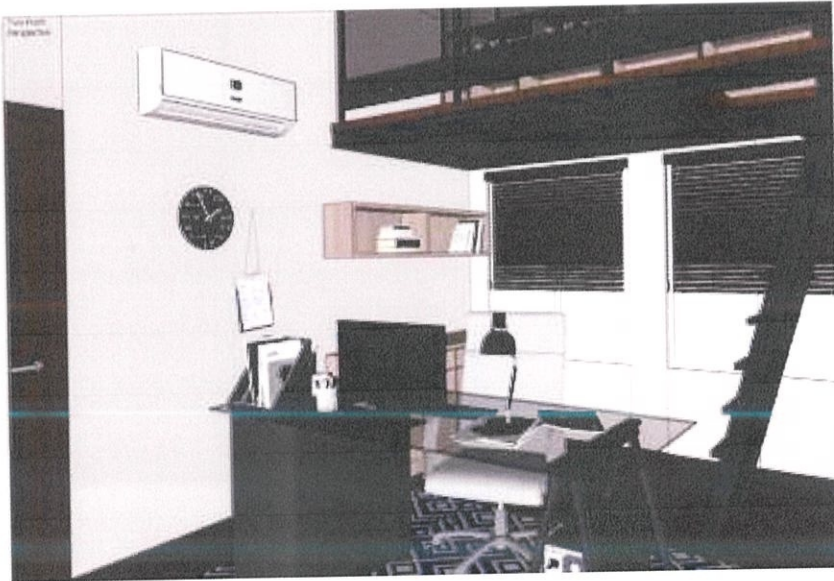


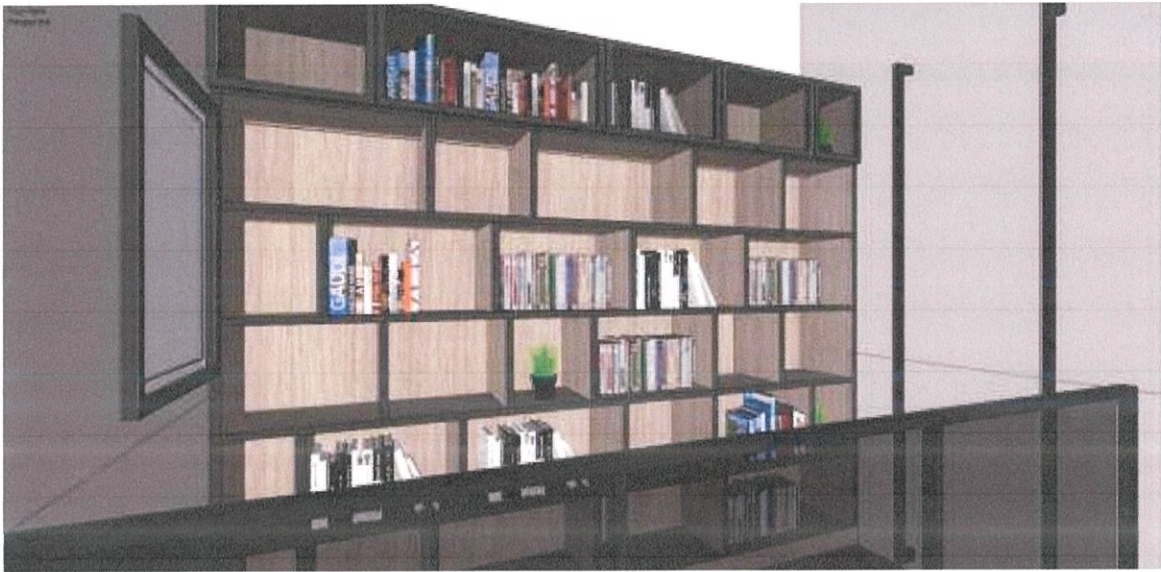


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Appendix M: after construction





