



اُونِيُوَرَسِيْتِي تِيكْنُوْلُوْجِي مَارَا
UNIVERSITI
TEKNOLOGI
MARA

**DEPARTMENT OF BUILDING
UNIVERSITI TEKNOLOGI MARA
(PERAK)**

SEPTEMBER 2014

It is recommended that this practical training report prepared

By

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Entitled

PAD FOUNDATION

Be accepted in partial fulfillment of the requirement for obtaining the Diploma in
Building

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SEPTEMBER 2014

STUDENT DECLARATION

I hereby declare that this report is my own work, except for extract and summaries for which the original references are stated in, prepared during a practical training session that and underwent at Jabatan Pelaksanaan Projek dan Penyelenggaraan Bangunan, Dewan Bandaraya Kuala Lumpur for duration of 5 month starting from 12th May 2014 and ended on 29th September 2014. It is submitted an one of the prerequisite requirements of DBN307 and accepted an a partial fulfillment of the requirement for obtaining the Diploma in Building.

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ACKNOWLEDGEMENT

Alhamdulillah, I would like to devote my gratitude and humble thankfulness to Allah S.W.T. for the accomplishment of this practical training report was already completed with perfectly. The special thanks for all individual with helpful, and give the cooperation for me to complete this report perfectly especially to Architect, Miss Hanani Binti Haji Ibrahim as my supervisor in-charge for her supervision and constant support. Her invaluable help of constructive comments and suggestion throughout the experimental and report work have contributed to the success of this research. Not forgotten, my appreciation to my site engineer, Mr. Faizal Bin Zain for his support and knowledge regarding this topic. My acknowledgement also goes to all the technicians and office staffs of Jabatan Pelaksanaan Projek Dan Penyelenggaraan Bangunan, Dewan Bandaraya Kuala Lumpur for their co-operations. Sincere thanks to my lecture supervisor Mr. Mohd Reeza Bin Yusof for their guidance, advice and moral support during do this report successfully. Thanks for their concern in ensure to being success at training time. Not forget, great appreciation go to the rest Practical Training Coordinator Madam Wan Nordiana Binti Wan Ali, and Faculty's Coordinator Dr. Mohd Rofdzi Bin Abdullah. Last but not least, I also would like to award the thanks to all my friends and also my family especially to _____ : as my father and _____ 1 as my mother because of their understanding and giving me support the encouragement since I start this practical training. To those who indirectly contributed in this report, your kindness means a lot to me and the cooperation is much indeed appreciated. Thanks you very much.

ABSTRACT

This report, described the installation of a pad foundation and the operation on construction site of 'Cadangan pembangunan yang mengandungi, ubah dan tambah sebuah bangunan pejabat pengurusan 1 tingkat sediaada , bangunan baru yang mengandungi 1 unit rumah rehat pekerja 1 tingkat , 1 unit tempat penyimpanan media 1 tingkat , 1 unit rumah teduhan 1 tingkat , 1 unit pondok pegawai serta kerja-kerja yang berkaitan di atas sebahagian Lot 60454, Pusat Jabatan Lanskap dan rekreasi, Dewan Bandaraya Kuala Lumpur, Mukim Kepong Utara, Kuala Lumpur'. This report was based on the observation and experience of five month at the Jabatan Pelaksanaan Projek Dan Penyelenggaraan Bangunan, Dewan Bandaraya Kuala Lumpur. This report is divided into several parts beginning with an introduction, company background, case study, conclusion and suggestion. From the observation, the installation of pad footing are not very difficult because have a specification on drawing. This report, described about the difference between footings such as pad foundation, strip foundation and raft foundation. Then, were explained the method statement of operation installation of pad foundation. There are many problems have been identified during installation of pad foundation. Then, this report was being reported to give some suggestion to solve the problems. In conclusion, this report explained and described about installation and operation of pad foundation in this project

CONTENTS			PAGE
Acknowledgements			i
Abstract			ii
Table of Contents			iii
List of Tables			vi
List of Figure			vii
List of Appendices			xi
List of Abbreviations			x
CHAPTER	1.0	PREFACE	
	1.1	Introduction	1
	1.2	Objective	3
	1.3	Scope of Study	4
	1.4	Method of Study	5
CHAPTER	2.0	COMPANY BACKGROUND	
	2.1	Introduction DBKL	7
		2.1.1 Vision of DBKL	9
		2.1.2 Mission of DBKL	9
		2.1.3 Logo of DBKL	9

2.1.4	Client Charter of DBKL	10
2.1.5	Organization Chart of DBKL	11
2.2	Introduction JPPPB	12
2.2.1	Background of JPPPB	14
2.2.2	Vision of JPPPB	16
2.2.3	Mission of JPPPB	16
2.2.4	Function of JPPPB	16
2.2.5	Objective of JPPPB	17
2.2.6	Client Charter of JPPPB	18
2.2.7	Organization Chart	19
2.3	Introduction KCESB	20
2.4	Company Profile	21
2.5	Organization Chart	22
2.6	List of Project	23
2.6.1	Completed projects	23
2.6.2	Project in progress	28

CHAPTER	3.0	CASE STUDY	
	3.1	Introduction	29
	3.2	Project Background	30
	3.3	List of Owner and Contractor	32
	3.4	Case Study	34
	3.4.1	Different between pad, strip and Raft foundation	34
	3.4.2	Method statement of Pad Foundation	40
	3.4.3	Problem when using pad foundation	46
CHAPTER	4.0	CONCLUSION AND RECOMMENDATION	
	4.1	Conclusion	55
	4.2	Recommendation	56
REFERENCES			57

LIST OF TABLES

Table 2.1:	Profile Company of Kelcare Engineering Sdn. Bhd.	21
Table 2.2:	Completed project under Kelcare Engineering Sdn. Bhd.	27
Table 2.3:	Project in progress under Kelcare Engineering Sdn. Bhd.	28
Table 3.1:	Profile Project under project Kelcare Engineering Sdn. Bhd.	31
Table 3.2:	List of Owner, Contractor and Consultant of Project at Jinjang, Kepong	33
Table 3.3:	List of different between pad, strip and raft foundation	39
Table 3.4:	List of method statement for pad foundation	45

LIST OF FIGURES

Figure 2.1:	List of Company	6
Figure 2.2:	Mayor of Dewan Bandaraya Kuala Lumpur	8
Figure 2.3:	Logo of DBKL	9
Figure 2.4:	Organization Chart of Dewan Bandaraya Kuala Lumpur	11
Figure 2.5:	Organization Chat of team builder Architect Miss Hanani	19
Figure 2.6:	Organization Chart of team builder at Kelcare Engineering Sdn. Bhd	22
Figure 3.1:	Pad foundation	38
Figure 3.2:	Strip foundation	38
Figure 3.3:	Raft foundation	38
Figure 3.4:	Setting Out	40
Figure 3.5:	Excavation	40
Figure 3.6:	Reinforcement bar	41
Figure 3.7:	Formwork	41
Figure 3.8:	Formwork at the position	42
Figure 3.9:	Formwork with reinforcement	42
Figure 3.10:	Mixing a concrete	43

Figure 3.11:	Concrete commences	43
Figure 3.12:	Open the formwork	44
Figure 3.13:	Pad foundation will set and curing	44
Figure 3.14:	Fill the foundation with clay	45
Figure 3.15:	Problem of Fixes for Misplaced Footing	47
Figure 3.16:	Wider footings	50
Figure 3.17:	Making the most of rebars	50
Figure 3.18:	Jump Footings	52
Figure 3.19:	Footing trench is wet	54

LIST OF APPENDICES

Appendixes A:	The Layout Plan of This Project	58
Appendixes B:	The Earthworks Layout Plan	59
Appendixes C:	Pad Footing & Column Layout Plan, Typical Pad	
	Footing Detail, Pad Footing And Column Schedule	60

LIST OF ABBREVIATIONS

CIDB	Construction Industry Development Board
DBKL	Dewan Bandaraya Kuala Lumpur
JPPPB	Jabatan Pelaksanaan Projek dan Penyelenggaraan Bangunan
KCESB	Kelcare Engineering Sdn. Bhd.
PKK	Pusat Khidmat Kontraktor
UBBL	Uniform Building By-Law
UiTM	Universiti Teknologi MARA

CHAPTER 1

PREFACE

1.1 Introduction

The most important thing when build a home is sighting the foundation, and no matter what type of foundation you end up using, they all begin the same way with the footings. The foundation is the part of a structure that is usually placed below the surface of the ground to transmit the load from the superstructure ton the underlying soil or rock. A footing is typically concrete and typically reinforced with steel. The footing is the bottom part of the foundation. It's the base sometimes called a "spread footing" because it's spread wide and it spreads the vertical loads that are coming down in the building.

In construction if soil of sufficient bearing capacity lies immediately below the structure then the load can be spread by footings. Footing range from isolated pads supporting individual columns, through strips supporting walls or closely spaced columns, to a raft footing supporting the whole structure. However, if the soil has insufficient bearing capacity then it is necessary to use deep foundation, such as piles, to transmit the load to deeper, firmer strata.

Foundation has two types In construction there are shallow foundation and deep foundation. Shallow foundations are generally constructed in excavations or trenches. A common method is to pack down the area under isolated foundations or trenches under continuous foundations with tampers. This makes it possible to eliminate earthwork operations, and the bedding soil can be made more compact. About 80 percent of residential and industrial buildings have shallow foundations.

Deep foundations are laid with drill-filling and driven piles, deep piers (driven or made of casings), and caissons. Their use is recommended for weak, subsiding, swelling, and other soils having special properties and a high ground-water level, particularly in the building of bridges and deep underground structures.

1.2 Objective

Objective of the study is to know and are learning about pad foundation in construction that used in this project, hence the following objectives are as follow:

- i. Identified the different between pad, strip and raft foundation
- ii. Identified method statement of pad foundation
- iii. Identified the problem of pad foundation if using in construction

1.3 Scope of Study

The study of project 'Cadangan pembangunan yang mengandungi, ubah dan tambah sebuah bangunan pejabat pengurusan 1 tingkat sediaada , bangunan baru yang mengandungi 1 unit rumah rehat pekerja 1 tingkat , 1 unit tempat penyimpanan media 1 tingkat , 1 unit rumah teduhan 1 tingkat , 1 unit pondok pegawai serta kerja-kerja yang berkaitan di atas sebahagian Lot 60454, Pusat Jabatan Lanskap dan rekreasi, Dewan Bandaraya Kuala Lumpur, Mukim Kepong Utara, Kuala Lumpur'.

This study scope is more focused to pad foundation for footings before build a structure building. Pad foundation is often used to support individual columns that in turn can be out of concrete, masonry or steel. Sometimes in the case of steel columns that are cast into an augured pad footing then no reinforcing steel is used, but mostly they consist of reinforced concrete. Besides that, to study the method statements of using pad foundation in construction and identify the problem when using pad foundation and ways overcome the problems.

Later on, to study the different between pad, strip and raft foundation because there are have different definition, advantages, disadvantages and so on likes pad foundations a discrete square or rectangular foundation supporting columns or piers. Strip foundations a linear foundation which generally support walls. Raft foundations a large single foundation supporting a whole structure.

1.4 Method of study

Generally this report completed by using method:

i. Reference

Overall this report method carried out is by referring book reference. Reference by this more too theoretical and what contained inside depends on fact. With this method it can facilitate process of the information search.

ii. Print media

Reference through print media also important complete this report. At the same time, reference use print media is more effective method. Among this method example journals, newspaper and catalogue.

iii. Electronic media

Obtaining information through internet from website related.

iv. Observation

Observation is a learning method that most can get information and indirectly through observation can also member comprehension. With this method we be able to see any information accurately. This method also be able to see ways and work method carried out clearer on site build.

v. Interview

Interview is one of the methods that is more effective and more effective to get information. This method need interview workers or experts like project manager with experience that is more detailed to get information

CHAPTER 2

COMPANY BACKGROUND



Figure 2.1: List of Company

DEWAN BANDARAYA KUALA LUMPUR (DBKL)

2.1 Introduction

From a small town Kuala Lumpur has grown to become the nation's Capital City and the biggest city in Malaysia. Kuala Lumpur City has become the centre for many socio-economic various activities including business, finance, administration, education, religion, culture and sports. Since 1961, Kuala Lumpur has been governed by one single corporate entity that was then known as the office of the Federal Capital Commissioner. On the 1st February 1972, Kuala Lumpur was officially conferred the status of a city.

Tan Sri Dato' Lokman Yusof the former Federal Capital Commissioner was elected as the first Mayor of Kuala Lumpur. When he passed away on 15.5.1972, he was succeeded by Tan Sri Yaakob Latiff who served for a period of 10 years. The third Mayor of KL was Tan Sri Dato' Elyas Omar who took office on 1.2.1981. The fourth Mayor was Dato' Dr Mazlan Ahmad whose appointment was on 17.11.1992. Tan Sri Dato' Kamarruzaman Shariff then took over as the fifth Mayor and served between 14.12.1995 and 13.12.2001. He was then replaced by Y Bhg Kol. Datuk Hj Mohmad Shaid b Mohd Taufek whose appointment was on 14.12.2001. Then from 14.12.2004 until 13.12.2006 the post of the seventh Mayor was held by Y Bhg Dato' Hj Ruslin bin Hj Hasan. The office of the eighth Mayor was held by Y. Bhg Dato' Ab Hakim bin Borhan. He was then replaced by Y. Bhg Tan Sri Ahmad Fuad bin Ismail whose appointment was on 14.12.2008. The current and tenth Mayor of the city is Y Bhg Datuk Seri Hj. Ahmad Phesal bin Hj. Talib who has been in office since 18.7.2012



Kuala Lumpur's First Mayor *Kuala Lumpur's Second Mayor* *Kuala Lumpur's Third Mayor* *Kuala Lumpur's Fourth Mayor* *Kuala Lumpur's Fifth Mayor*

Tan Sri Dato' Lokman Yusof **Tan Sri Yaakob Latiff** **Tan Sri Dato' Elyas Omar** **Dato' Dr. Mazlan Ahmad** **Tan Sri Dato' Kamaruzzaman Shariff**



Kuala Lumpur's Sixth Mayor *Kuala Lumpur's Seventh Mayor* *Kuala Lumpur's Eighth Mayor* *Kuala Lumpur's Ninth Mayor* *Kuala Lumpur's Tenth Mayor*

Datuk Hj. Mohmad Shaib Mohd Taufek **Dato' Hj. Ruslin bin Hj. Hasan** **Datuk Seri AB Hakim bin Borhan** **Tan Sri Ahmad Fuad bin Ismail** **Datuk Seri Hj. Ahmad Phesal bin Hj. Talib**

Figure 2.2: Mayor of Dewan Bandaraya Kuala Lumpur

2.1.1 Vision of DBKL

'DBKL akan menjadi Pihak Berkuasa Tempatan terunggul bagi merealisasikan Kuala Lumpur sebagai bandar raya bertaraf dunia menjelang tahun 2020'

2.1.2 Mission of DBKL

'Untuk mencapai kemajuan, kemakmuran dan kesejahteraan Ibu Kota Kuala Lumpur menerusi program pembangunan fizikal, sosio-ekonomi, kawalan perancangan dan perkhidmatan perbandaran secara terancang dan terselaras berteraskan tadbir urus yang cemerlang'

2.1.3 Logo of DBKL



Figure 2.3: Logo of DBKL

2.1.4 Client Charter of DEWAN BANDARAYA KUALA LUMPUR

1. To plan the development of the capital in an efficient, organized, controlled and transparent manner to make the city grow and remain competitive through the approval of development orders, building plans and earthworks within the prescribed period from the date of receipt of complete application.
2. To facilitate and to spur business transactions and, and to ensure the safety of the consumers through the practice of consumers' safety business activities with the experience of quality business activities to stimulate high performance economic growths in the capital.
3. To provide and to maintain public facilities and infrastructure which are of quality, adequate, efficient, user-friendly and accessible to meet the needs of the city residents.
4. To provide localized social / community development activities with the residents' associations / Non-Governmental Organizations based on the schedule in each parliamentary constituency at least 2 times a month to foster a culture among the society that is united and harmonious.
5. To ensure that the initial feedbacks to the complainants are given within 24 hours and to provide the update on the status of implementation of the actions taken at least within 3 days of receipt of the complaint and to follow through to completion.
6. To ensure that all online services are accessible at all times (24 hours x 7 days).
7. To manage the collection of revenue efficiently and to spend prudently.
8. To enforce laws and regulations in a fair, transparent and continuously for the wellbeing and safety of the city residents through notices issued.
9. To ensure the continuous development of human capital to produce a competent workforce.

2.1.5 Organization Chart

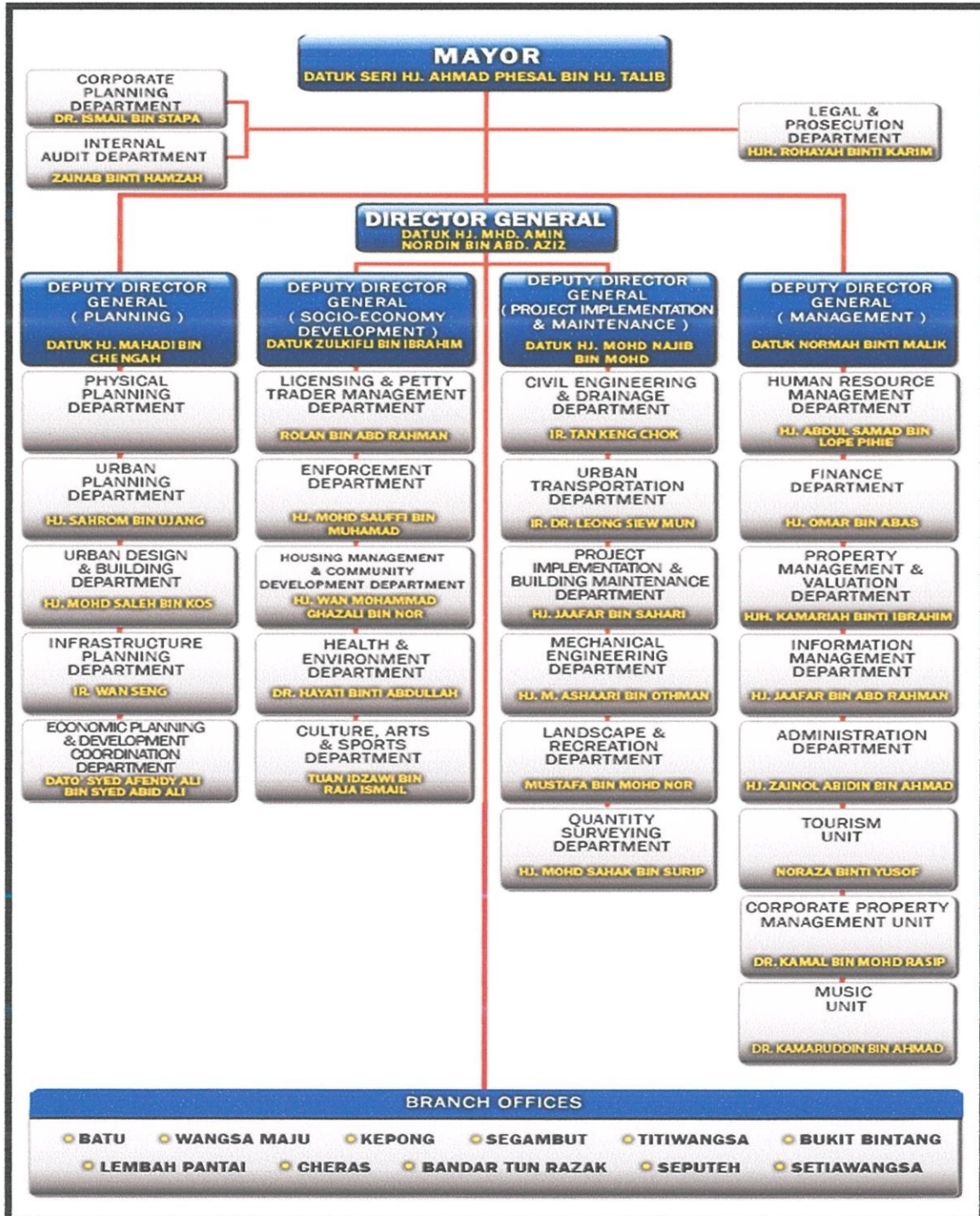


Figure 2.4: Organization Chart of Dewan Bandaraya Kuala Lumpur

JABATAN PELAKSANAAN PROJEK DAN PENYELENGGARAAN BANGUNAN (JPPPB)

2.2 Introduction

In accordance with Pelan Struktur Kuala Lumpur 2004, Jabatan Pelaksanaan Projek Dan Penyelenggaraan Bangunan mission is to help DBKL accomplishes the vision to make Kuala Lumpur a world standard city in year 2020, by implementing public housing projects, public amenities like community hall, multi-purpose hall, public toilet, community Centre, public clinic, cemetery, crematorium, library, market, stall / hawkers Centre, sports facilities and recreation, children playground, recreational park and so on.

Apart from that, this department also helps to manage and implementing maintenance works under Tabung Penyelenggaraan 1 Malaysia like works paint, replace water pipeline, replace roof and maintenance work other. Department also gives advisory service and supervision help to jobs upgrade office building under Federal Territories and Urban Wellbeing Ministry like KWP&KB Pejabat in Menara Sri Wilayah and latest Kampung Baru Perbadanan Pejabat in ROHAS Wisma.

To further stabilize this project implementation matter and in accordance with Pelan Strategik ICT DBKL, department had created system 'Enterprise content Management System' (ECMS) namely information management by virtual in all delivery aspect and document storage like letters, painting and report.

On 27 September 2012, department has implemented a career programmer to Sekolah Menengah Puteri Wilayah's student as social responsibility to society. Besides drawing near government staff to society, this programmer also intended to give school student understanding to technical work field and choose architect task and engineer as choice career.

2.2.1 Background JPPPB

This department operating since year 1976 with the original name Jabatan Pelaksanaan Projek Khas, play an important role in development in Kuala Lumpur Federal Territory especially in develop public housing projects in Cheras area, Lembah Pantai, Gombak, Sentul, Setapak Jaya and area nearby Bandar Pusat 1.

Due to DBKL organisational restructuring, in year 1989 to 2005 department name changed to Jabatan Arkitek dan Projek Khas. This department including architect discipline, land survey, civil engineering, structural engineering and electrical engineering in implementing development projects and building maintenance.

In year 1997, Unit Pengekalan dan Seni Bandar from Jabatan Perancang dan Kawalan Bangunan have been absorbed to department and in June 2000, JAPL task widened further with intake move all DBKL buildings maintenance duties like quarters, sports complex, market, Ibu Pejabat DBKL building, old DBKL stage and maintenance and Dataran Merdeka usage.

Besides involved with DBKL projects implementation itself, Department also involved with under Kerajaan Pusat dan Negeri seperti Projek Perumahan Rakyat (PPR), Kompleks Sukan dan Stadium, Pusat Komuniti, Kompleks Penjaja, Pasar, Masjid, Surau, Tanah Perkuburan, padang and others more. In year 2005, name of Jabatan Arkitek dan Projek Khas changed to Jabatan Arkitek.

Following DBKL organizational restructuring on 15 July 2011, this department were merged with public housing maintenance part and named Jabatan Pelaksanaan Projek dan Penyelenggaraan Perumahan Awam. After that in year 2012, Unit Penyelenggaraan Perumahan Awam was restored to Jabatan Pengurusan Perumahan dan Pembangunan Komuniti make this department to Jabatan Pelaksanaan Projek dan Penyelenggaraan Bangunan.

2.2.2 Vision of JPPPB

“Perancangan, rekabentuk, pelaksanaan dan penyelenggaraan projek pembangunan dan kemudahan awam diurus secara sistematik dan professional serta selamat sejahtera melalui penyelenggaraan yang efisien dan berkualiti”.

2.2.3 Mission of JPPPB

“Membangun, mentadbir dan mengurus projek-projek pembinaan dan penyelenggaraan bangunan milik DBKL”.

2.2.4 Functions of JPPPB

1. This department plan and design building projects and public amenities in Wilayah Persekutuan Kuala Lumpur.
2. This department manages building projects construction and DBKL public amenities.
3. This department manages building maintenance and public facilities owned by Kuala Lumpur Mayor.

2.2.5 Objective of JPPPB

1. Ensuring planning and building projects design and public amenities exercised in accordance with professional practice and clients will and comply with authorities' law which approved
2. Ensuring building projects implementation and public amenities carried out efficient, systematic and professional.
3. Ensuring government's wish and DBKL by planting culture love to property and public amenities to maintain city that is clean beautiful and comfortable to staff and city dweller with maintenance that is systematic and continuous.

2.2.6 Client Charter

1. Sending Dokumen Pelantikan Konsultan to Jabatan Undang-undang dan Pendakwaan in 3 month period from *Surat Mula Kerja* date.
2. Delivering Permohonan Perintah Pembangunan documents to Urusetia Pusat Setempat (OSC) in 3 month period from Rekabentuk date of confirmation by Pengurusan Tertinggi DBKL.
3. Providing Tender Document in 3 month period from Perancangan Kelulusan date.
4. Sending Kontrak Document to Jabatan Undang-undang dan Pendakwaan in 2 month period for conventional tender from contract price adjustment date of confirmation from Jabatan Ukur Bahan .
5. Delivering payment certificate to Jabatan Kewangan in period of 5 working day from payment certificate accession date from Jabatan Ukur Bahan.
6. Having project monitoring one month once in department level.
7. Evaluating Contractor Performance Report 2 times a year.
8. Ensuring all emergency damage complaint which involves life and hartabenda take action in 24 hour period after complaint accepted.
9. All damages namely other than emergency take action in period of three working day from complaint date accepted.
10. Ensuring bill, invoice and progress payments certificate that are complete shipped to Jabatan Kewangan in period of ten day from accession date / assessment.

2.6.7 Organization Chart



Figure 2.5: Organization Chart of team builder Architect Miss Hanani

KELCARE ENGINEERING SDN. BHD. (KCESB)

2.3 Introduction

Kelcare Engineering Sdn.Bhd. (KCESB) came a long way since its inception as a small company starting 16th APRIL 2002 involved in the project management in the construction field. However with the help of the directors and staff this company now keeps on growing.

Kelcare Engineering has built its reputation from an engineering construction company essentially due to its commitment to produce high quality products confirming strictly to the specification to the satisfaction and delight of its customers. The projects are undertaken deliver in timely manner.

KCESB has been recognized by the Pusat Khidmat Kontraktor (PKK) as contractor (Bumiputera status) and also registered as a class D contractor. In addition, KCESB is also recognized by CIDB as a contractor Gred G5. The achievement of such quality product and service has been made possible through expedient utilization of resource, a highly motivated staff and good management practice.

2.4 Company Profile

NAME	:	KELCARE ENGINEERING SDN. BHD.
BUSINESS REG. NO	:	577351-A
BUSINESS ADDRESS	:	LOT PT 538, TINGKAT 2, JLN HOSPITAL, CABANG 4 CHERANG, 15200 KOTA BHARU KELANTAN
TELEPHONE NO.	:	
FAX NO.	:	
DATE OF INCRPORATION	:	16 th APRIL 2002
AUTHORIZED CAPITAL	:	RM 100,000.00
PAID-UP CAPITAL	:	RM 50,002.00
STATUS	:	100% BUMIPUTERA
BOARD OF DIRECTORS	:	Ir. IBRAHIM B. MOHAMAD WAN SABARIAH BT WAN YUSOFF
COMPANY SECRETARY	:	A TO Z ACCOUTING & SECRETARIALSERVICES 4706-C TINGKAT 1, TAMAN MAJU, JALAN LONG YUNUS, 15200 KOTA BHARU, KELANTAN
BANKER	:	MAYBANK WAKAF SIKU
BANK ACCOUNT NO.	:	5530038019606

Table 2.1: Profile Company of Kelcare Engineering Sdn. Bhd.

2.5 Organization Chart

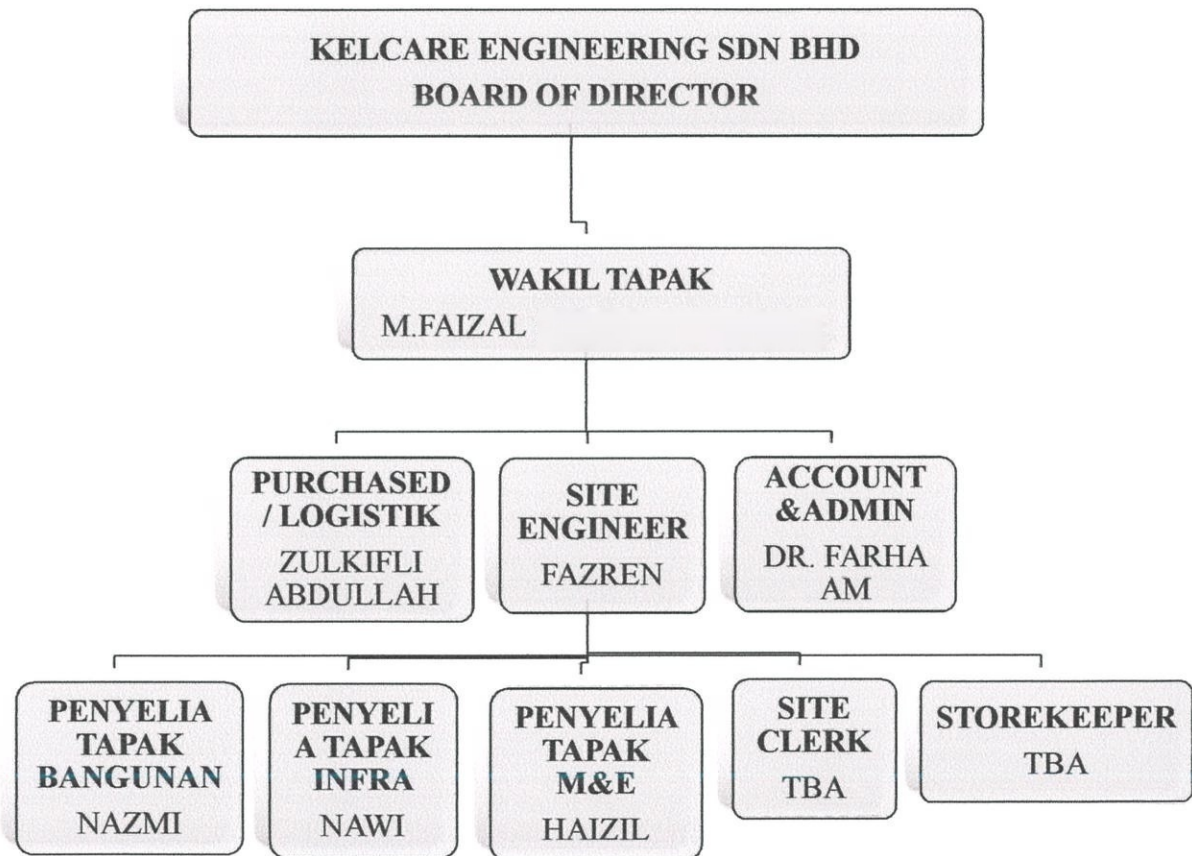


Figure 2.6: Organization Chart of team builder at Kelcare Engineering Sdn. Bhd

2.6 List of Project

2.6.1 Completed project

NO.	PROJECT	VALUE (RM)	CLIENT	COMMENCEMENT DATE	COMPLETION DATE
1.	Penggantian dan pemasangan FCU dan AHU system hawadingin di Jabatann Patologi, Hospital Kuala Terengganu.	175,620.00	Radicare (M) Sdn Bhd/ Kuala Terengganu	April 2004	Mei 2004
2.	Membekal, Memasang dan Mengujijguna Sistem Hawadingin Jenis VRV di Bangunan Tambahan Fakulti Sains Komputer dan Teknologi Maklumat, UiTM Dungun	273,440.00	UiTM DUNGUN	Julai 2004	Sept 2004

NO.	PROJECT	VALUE (RM)	CLIENT	COMMENCEMENT DATE	COMPLETION DATE
3.	<p>Kerja-Kerja Pembaikan dan Penggantian Menara Penyejuk (Cooling Tower) dan Pam di Bangunan Ibu Pejabat Lembaga Tembakau Negara, Kubang Kerian, Kelantan.</p>	75,665.00	Lembaga Tembakau Negara	Oktober 2004	Oktober 2004
4.	<p>Cadangan Kerja- Kerja Membekal, Memasang dan Mengujijguna Sistem Hawadingin, Elektrik, Telefon dan lain-lain Kerja Berkaitan di Plaza MARA Pasir Puteh, Kelantan</p>	695,781.91	MARA	Oktober 2005	Disember 2005

NO.	PROJECT	VALUE (RM)	CLIENT	COMMENCEMENT DATE	COMPLETION DATE
5.	Membaiki dan Mengganti Bilik Sejuk di Kabin Simpanan Sisa Klinik, Hospital Kota Bharu, Kelantan	49,192.70	Radicare (M) Sdn Bhd / Hospital Kota Bharu	Oktober 2005	November 2006
6.	Kerja- Kerja subkontrak bagi membekal, memasang dan mengujitguna sesalur udara (aircond ducting) untuk system pendingin udara di Jabatan Farmasi, Hospital Kuala Terengganu	45,220.00	Saznor Industries Sdn Bhd / Radiare (M) Sdn Bhd / Hospital Kuala Terengganu	Disember 2004	April 2005

NO.	PROJECT	VALUE (RM)	CLIENT	COMMENCEMENT DATE	COMPLETION DATE
7.	Membekal, memasang dan mengujitguna pam air 2 buah pam air bersih (treated water pump) di Loji Air Wakaf Bharu , Tumpat, Kelantan	76,450.75	Air Kelantan Sdn Bhd	Februari 2004	April 2004
8.	Pemasangan Sistem Hawadingin Jenis Berasingan (Air cooled Split Unit) di Klinik Kesihatan, Kota Bharu Kelantan.	43,410.15	Pejabat Kesihatan Daerah Kota Bharu	Jun 2005	Julai 2005
9.	Kerja- kerja subkontrak penyelenggaraan paip LPG di City Gate Station , Gebeng Kuantan	32,550.00	Habart Resources Sdn Bhd / Gas Malaysia Sdn. Bhd.	November 2005	Mac 2006

NO.	PROJECT	VALUE (RM)	CLIENT	COMMENCEMENT DATE	COMPLETION DATE
10.	Kerja – Kerja membekal, memasang dan mengujuguna system pam pengalok (Booster Pump) dan Kerja- kerja Elektrik dan Kawalan di Istana Kubang Kerian, Kota Bharu Kelantan	51,5660.90	JKR Kota Bharu / Air Kelantan Sdn Bhd	Ogos 2005	Oktober 2005
11.	Kerja- kerja membekal, memasang dan mengujuguna system pemampatan udara (Comprese Air- Air Receiver dan Air Compressor) di Hospital Kota Bharu Kelantan	76,163.50	Radicare (M) Sdn Bhd / Hospital Kota Bharu	Februari 2006	Mei 2006

Table 2.2: Completed project under Kelcare Engineering Sdn. Bhd.

2.6.2 Project in progress

NO.	PROJECT	VALUE (RM)	CLIENT	COMMENCEMENT DATE	COMPLETION DATE
1.	Cadangan Pembangunan Yang Mengandungi Pengubahan Dan Penambahan Sebuah Bangunan Pejabat Pengurusan 1 Tingkat Sediaada, Bangunan Baru Yang Mengandungi 1 Unit Rumah Rehat Pekerja, 1 Unit Tempat Penyimpanan Media, 1 Unit Pondok Pengawal Serta Kerja-Kerja Berkaitan Di Atas Lot 60454 Pusat Jabatan Landskap Ndan Rekreasi, Dewan Bandaraya Kuala Lumpur, Mukin Kepong Utara, Kuala Lumpur	3,393,452.32	Dewan Bandaraya Kuala Lumpur	April 2014	January 2015

Table 2.3: Project in progress under Kelcare Engineering Sdn. Bhd.

CHAPTER 3

CASE STUDY

3.1 Introduction

Pad foundations are used to support individual or multiple columns, spreading the load to the ground below. They are generally square or rectangular in plan, with the plan area being determined by the permissible bearing pressure of the soil. The shape in plan will be dictated by the arrangement of the columns and the load to be transferred into the soil.

The thickness of the slab must be sufficient to ensure distribution of the load. The top of the pad may be sloping (i.e. the pad is thicker in the center than it is at the edge). This is an economic solution, although there may be construction problems involved with casting the slope.

In simple cases the pad may be constructed from mass concrete. In general, some reinforcement (either welded steel fabric or reinforcing bars, depending on the loads involved) will be required in both directions. For design purposes, the pad is treated as if it were an inverted cantilever carrying the soil pressure and supported by the column.

3.2 Project Background

TAJUK PROJEK : CADANGAN PEMBANGUNAN YANG MENGANDUNGI PENGUBAHAN DAN PENAMBAHAN SEBUAH BANGUNAN PEJABAT PENGURUSAN 1 TINGKAT SEDIAADA, BANGUNAN BARU YANG MENGANDUNGI 1 UNIT RUMAH REHAT PEKERJA, 1 UNIT TEMPAT PENYIMPANAN MEDIA, 1 UNIT PONDOK PENGAWAL SERTA KERJA-KERJA BERKAITAN DI ATAS LOT 60454 PUSAT JABATAN LANDSKAP NDAN REKREASI, DEWAN BANDARAYA KUALA LUMPUR, MUKIN KEPONG UTARA, KUALA LUMPUR.

NAMA & ALAMAT : **KELCARE ENGINEERING SDN. BHD.**
 KONTRAKTOR NO 1B, JALAN ANGGERIK VANILLA N31/N,
 KOTA KEMUNING,
 40460 SHAH ALAM,
 SELANGOR DARUL EHSAN.

NO KONTRAK : SST No. (13)d/m.DBKL./JP//02/1010/2013/A275.JLD.2

HARGA KONTRAK : RM 3,393,452.32

JUMLAH KOS : **BUTIRAN HARGA (RM)**

Preliminaries : 124,000.00

General Condition

Rumah Teduhan Anak : 93,553.45

Pokok

	Rumah Rehat Pekerja	:	493,398.92
	Renovation Of Pejabat Pengurusan	:	287,587.03
	Ancillary Building	:	799,547.56
	External Works	:	1,010,827.6
	Provisional Sum	:	50,000.00
	Mechanical & Electrical Works	:	534,537.50
TARIKH MILIK TAPAK (MULA KERJA)	:	8hb. APRIL 2014	
TARIKH SIAP KERJA	:	26hb. JANUARY 2015	
LANJUTAN MASA NO.1	:	TIDAK BERKAITAN	
TEMPOH KONTARK	:	42 MINGGU	
'PERFORMANCE BOND' ATAU WANG TAHANAN	:	WANG JAMINAN PELAKSANAAN	
POLISI INSURAN	:	COVER NOTE NO: SIME/DBKL/ECR/203/2014 COVER NOTE NO: SIME/DBKL/WWC/204/2014	
NO PENDAFTARAN CIDB	:	0120040209-KN092476	
NO PENDAFTARAN PKK	:	200400209-KN092476 (NO SIRI TB : 114918)	
LAD	:	RM 900.00 SEHARI	
KELAS BERDAFTAR	:	GREDD G5 (STATUS BUMIPUTERA)	

Table 3.1: Profile Project under project Kelcare Engineering Sdn. Bhd.

3.3 List of Owner and Contractor

- PEMILIK** : **DEWAN BANDARAYA KUALA LUMPUR**
JALAN RAJA LAUT, 50350 KUALA LUMPUR
- PENGARAH PROJEK** : **DEWAN BANDARAYA KUALA LUMPUR**
JABATAN PELAKSANAAN PROJEK DAN
PENYELENGGARAAN BANGUNAN
TINGKAT 17,21-25
MENARA DBKL 3, BANDAR WAWASAN
JALAN RAJA ABDULLAH
50300 KUALA LUMPUR
- WAKIL PENGARAH** : **TETUAN LARAS ARKITEK SDN. BHD.**
PROJEK AR.HAMKA BIN ABU DARDAK
- PENGGUNA** : **DEWAN BANDARAYA KUALA LUMPUR**
PUSAT JABATAN LANSKAP DAN
REKREASI,
KEPONG UTARA KUALA LUMPUR
- KONTRAKTOR** : **KELCARE ENGINEERING SDN. BHD.**
NO 1B, JALAN ANGGERIK VANILLA N31/N,
KOTA KEMUNING, 40460 SHAH ALAM,
SELANGOR DARUL EHSAN
- ARKITEK** : **TETUAN LARAS ARKITEK SDN. BHD.**
NO 69-3, JALAN WANGSA DELIMA 5

PUSAT BANDAR WANGSA MAJU KLSC
53300 KUALA LUMPUR.

JURUTERA MEKANIKAL : TETUAN AYA ENGINEERING SDN. BHD.
DAN ELEKTRIKAL 34-A TINGKAT 4, JALAN PJU 8-9
BANDAR DAMANSARA PERDANA
47820 PETALING JAYA SELANGOR

JURUKUR BAHAN : TETUAN QS FOCUS SDN. BHD.
34-A JALAN BRP ½
BUKIT RAHMAN PUTRA
47000 SUNGAI BULOH, SELANGOR

JURUTERA AWAM & : TETUAN KHS PERUNDING
STRUKTUR NO 45-2-2B JALAN MEDAN PB 2B
SEKSYEN 9, PUSAT BANDAR BANGI
43650 BANDAR BARU BANGI, SELANGOR.

Table 3.2 List of Owner, Contractor and Consultant of Project at Jinjang, Kepong

3.4 Case study

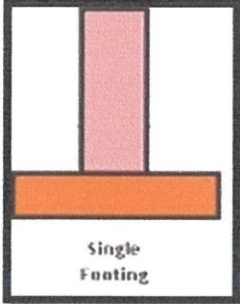
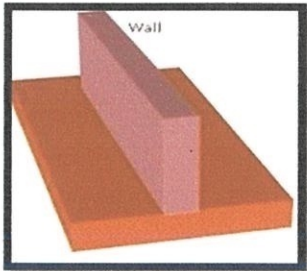
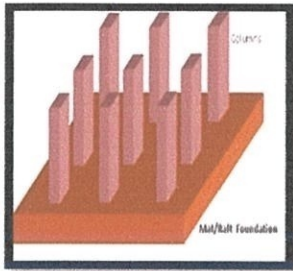
3.4.1 Different between pad, strip and raft foundation if it's used in construction

Item	Pad Foundation	Strip Foundation	Raft Foundation
Definition	The purpose of a foundation is to transmit loads from the structure to the ground making sure that any settlement, either immediately after construction or during the intended life of the structure, is uniform and acceptably small	Strip foundations are continuous foundations carrying continuous loads, (for example walls constructed from brickwork, block work or reinforced concrete)	There are a number of different forms of raft foundation but the common purpose is to spread a system of loads over a large area, thus giving a low linearly-imposed load on to the ground below.
Material	<ul style="list-style-type: none"> i. Cast in-situ concrete (OPC or SRPC) ii. Reinforcement 	<ul style="list-style-type: none"> i. Cast in-situ concrete (OPC or SRPC) 	<ul style="list-style-type: none"> i. Cast in-situ concrete (OPC or SRPC) ii. Pre-cast concrete (OPC or SRPC)

Item	Pad Foundation	Strip Foundation	Raft Foundation
Required for	<ul style="list-style-type: none"> i. External walls ii. Separating (party) walls iii. Chimney breasts iv. Piers v. Fencing, Decks vi. Pergolas vii. Carports viii. Garden Structures 	<ul style="list-style-type: none"> i. External walls ii. Separating walls iii. Chimney breasts iv. Piers v. Internal loadbearing walls vi. Retaining Walls, vii. Masonry Fencing, 	<ul style="list-style-type: none"> i. External walls ii. Separating walls iii. Chimney breasts iv. Piers v. Internal loadbearing walls vi. Sleeper walls
When Required	<p>Ideal foundation for point loads from framed buildings when bearing capacity of ground is suitable a shallow depths</p>	<p>In ground of medium to good bearing stratum, on domestic scale developments, underneath loadbearing walls, separating walls, chimneys, piers and internal loadbearing walls. To carry light loads</p>	<p>Lightweight structures on poor ground with low bearing capacity. Used in areas with mixed bearing capacity usually filled ground</p>

Item	Pad Foundation	Strip Foundation	Raft Foundation
Commonly used	<p>Pad foundations are used to support an individual point load such as that due to a structural column. They may be circular, square or rectangular. They usually consist of a block or slab of uniform thickness, but they may be stepped or hunched if they are required to spread the load from a heavy column. Pad foundations are usually shallow, but deep pad foundations can also be used</p>	<p>Strip foundations are used to support a line of loads, either due to a load-bearing wall, or if a line of columns need supporting where column positions are so close that individual pad foundations would be inappropriate</p>	<p>Raft foundations are used to spread the load from a structure over a large area, normally the entire area of the structure. They are used when column loads or other structural loads are close together and individual pad foundations would interact. A raft foundation normally consists of a concrete slab which extends over the entire loaded area. It may be stiffened by ribs or beams incorporated into the foundation.</p>



Item	Pad Foundation	Strip Foundation	Raft Foundation
Thickness	<p>The thickness is govern by the same consideration as for strip footing and is made not less than the projection of the slab beyond the face of the column or pier, or the edge of the base plate of a steel stanchion</p> <p>In whatever circumstances the thickness should be less than 150mm thick, and should the base become very “wide and thicker”, the reduction in thickness can be effected by introducing reinforcement to the slab</p>	<p>The thickness of a strip foundation should be between 150mm and 500mm. 300mm thickness is used in most small domestic works.</p> <p>Strip foundations are usually at least 600mm wide as this tends to be the width of the digger bucket although on sand, silt or soft clay, it may be necessary to provide foundations as wide as 850mm</p>	<p>It has a ground beam which shuts out from the foundation base and is also attached to the ground floor slab to form a network of concrete embedded round the building space. The ground beam are usually from 600mm to 1200mm for low buildings</p>



Item	Pad Foundation	Strip Foundation	Raft Foundation
Picture	 <p data-bbox="480 701 683 763">Figure 3.1: Pad foundation</p>	 <p data-bbox="810 685 1023 748">Figure 3.2: Strip foundation</p>	 <p data-bbox="1171 685 1383 748">Figure 3.3: Raft foundation</p>
Advantages	<ul style="list-style-type: none"> i. Can be designed to accommodate tight sites. ii. Economic due to control of foundation size. iii. Reinforcement for tension and shear can be added. iv. Concrete mix can use SRPC in place of OPC 	<ul style="list-style-type: none"> i. Adapt to sloping sites ii. Require simple formwork (no edge rebates) iii. Require simple excavation that is exposed for minimal time iv. Do not require internal beams. 	<ul style="list-style-type: none"> i. Raft or mat foundation is economic due to combination of foundation and floor slab. ii. It requires little excavation. iii. It can cope with mixed or poor ground condition. iv. It reduces differential settlement.

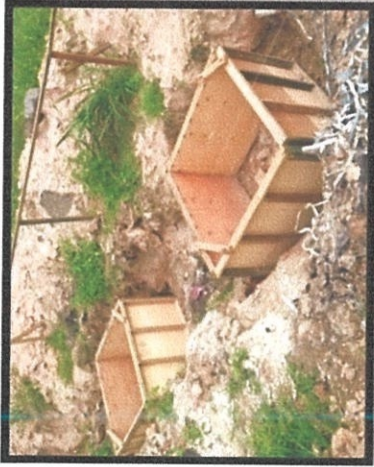

Item	Pad Foundation	Strip Foundation	Raft Foundation
Disadvantages	<ul style="list-style-type: none"> <li data-bbox="464 383 743 562">i. Foundation size can be a very large to cope with high point loads. <li data-bbox="464 600 743 819">ii. Limited foundation suitability to point loads of framed buildings. <li data-bbox="464 857 743 1182">iii. Separate foundations make this design weak against differential settlement that may affect the building. <li data-bbox="464 1261 743 1514">iv. Deep excavations for foundations would require support to prevent caving in. <li data-bbox="464 1552 743 1729">v. Weak against uplift forces, wind forces and earthquake forces 	<ul style="list-style-type: none"> <li data-bbox="775 383 1091 416">i. Settlement <li data-bbox="775 488 1091 577">ii. Limit Capacity (Soil Structure) <li data-bbox="775 656 1091 801">iii. Irregular ground surface (slope, retaining wall) <li data-bbox="775 913 1091 1104">iv. Foundation subjected to pull out, torsion, moment. 	<ul style="list-style-type: none"> <li data-bbox="1123 383 1441 573">i. Raft foundation requires specific treatment for point loads. <li data-bbox="1123 656 1441 801">ii. Edge erosion occurs if not treated properly.

Table 3.3: List of different between pad, strip and raft foundation

3.4.2 Method statement of Pad Foundation

No.	Description	Pictures	Plant	Labour	Equipment
1.	It all starts with pegging the site with correct position of foundation	 <p data-bbox="754 1115 794 1420">Figure 3.4: Setting Out</p>	-	<ul style="list-style-type: none"> i. 2 labour ii. 1 site supervisor iii. 1 chairman 	<ul style="list-style-type: none"> i. String line ii. Theodolite iii. Carpentry tools
2.	Excavation commences down to the desired level. Example soffit of footing with allowance for thickness of lean concrete. The thickness is 750mm	 <p data-bbox="1206 1122 1246 1420">Figure 3.5: Excavation</p>	<ul style="list-style-type: none"> i. 1 backhoe ii. 1 backact 	<ul style="list-style-type: none"> i. 1 site supervisor ii. 1 chairman iii. 1 labour iv. 1 driver 	<ul style="list-style-type: none"> i. Tools ii. Leveling equipment


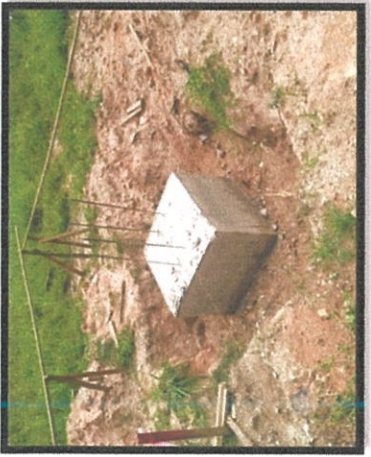
No.	Description	Pictures	Plant	Labour	Equipment
3.	<p>Build the formwork and reinforcement bar for the foundation using a size on contrat. Cut plywood board and wood to make pad foundation mould with measure set. Cut reinforcement bar and bend iron according to correct size. tie every reinforcement by using wire</p>	 <p>Figure 3.6: Reinforcement bar</p>  <p>Figure 3.7: Formwork</p>	-	<ul style="list-style-type: none"> i. 2 labour ii. 1 site supervisor iii. 1 chairman 	<ul style="list-style-type: none"> i. Reinforcement ii. Plywood iii. Wire iv. Tools

No.	Description	Pictures	Plant	Labour	Equipment
4.	<p>Built the formwork at correct position. Spacer blocks are placed before reinforcement been laid. This is meant to provide sufficient concrete cover for the rebars</p>	 <p>Figure 3.8: Formwork at the position</p>	-	<ul style="list-style-type: none"> i. 1 labour ii. 1 site supervisor iii. 1 carpenter 	<ul style="list-style-type: none"> i. Dump level equipment ii. Barbender tools
5.	<p>Stump reinforcement are erected. Length of rebars should be extended beyond stump level and act as staeter bars for column above. Provide addition ties to formwork, if necessary.</p>	 <p>Figure 3.9: Formwork with reinforcement</p>	-	<ul style="list-style-type: none"> i. 2 barbender ii. 1 site supervisor 	<ul style="list-style-type: none"> i. Carpenter tools

No.	Description	Pictures	Plant	Labour	Equipment
6.	Concrete mixture preparation is use grade 35 by using site mix method.		<ul style="list-style-type: none"> i. Concrete mixer 	<ul style="list-style-type: none"> i. 3 labour ii. 1 site supervisor iii. 1 chairman 	<ul style="list-style-type: none"> i. Sand ii. Water iii. Cement iv. Tools
7.	Concreting commences. Don not forget to compact the concrete during the process.		<ul style="list-style-type: none"> i. Wheel barrow ii. Air compressor iii. Vibrator 	<ul style="list-style-type: none"> i. 2 labour ii. 1 site supervisor iii. 1 carpenter 	<ul style="list-style-type: none"> i. Tools

Figure 3.10: Mixing a concrete

Figure 3.11: Concrete commences

No.	Description	Pictures	Plant	Labour	Equipment
8.	When the concrete has gained sufficient strength, formwork can be dismantled.	 <p>Figure 3.12: Open the formwork</p>	-	i. 2 labour ii. 1 site supervisor	i. Tools
9.	Concrete will set and curing shall be performed to avoid excessive loss of water during hardening.	 <p>figure 3.13: Pad foundation will set and curing</p>	-	-	-


No.	Description	Pictures	Plant	Labour	Equipment
10.	After all has been completed pad foundation. Filling or close pad foundation with land for next work.	 <p data-bbox="655 1037 746 1507">Figure 3.14: Fill the foundation with clay</p>	i. Bulldozer	i. 1 labour ii. 1 site supervisor iii. 1 driver	-

Table 3.4: List of method statement for pad foundation

3.4.3 Problem when using pad foundation

i. Fixes for Misplaced Footing

It's hard sometimes to position footings in the trench, so contractors often see walls that are not in the center of the footing. The foundation wall has to be located correctly to support the house, of course, so it has been placed off-center on the footing.

In good bearing soil, I wouldn't get too concerned about this foundation for the loads involved in a simple wood frame house. The full width of the footing isn't needed to support the loads anyway; you could pour the wall right on the edge of the footing and still have enough support. However, if you start to go over the edge and have the wall sticking out past the footing on the side or on the end, then you're starting to apply a rotational force that the footing is not designed to handle. In that case, you should think about getting an engineer involved. (If your soils are relatively soft, the risk is even greater.)

I've been asked to recommend solutions in cases where the footing has been placed so that the wall, when cast, would actually extend beyond it. The suggestions are different in strong soils than in average or below-average soils. In soils with bearing capacity greater than about 4,000 psf, I suggest excavating next to the footing and under it, and placing compacted large gravel into the space. That should be adequate to support the wall. If there's a keyway in the wall, fill it in, and if there's steel projecting from the footing, cut it off. Drill holes and epoxy steel into the footing to tie the wall to the footing, and then form and cast the wall.

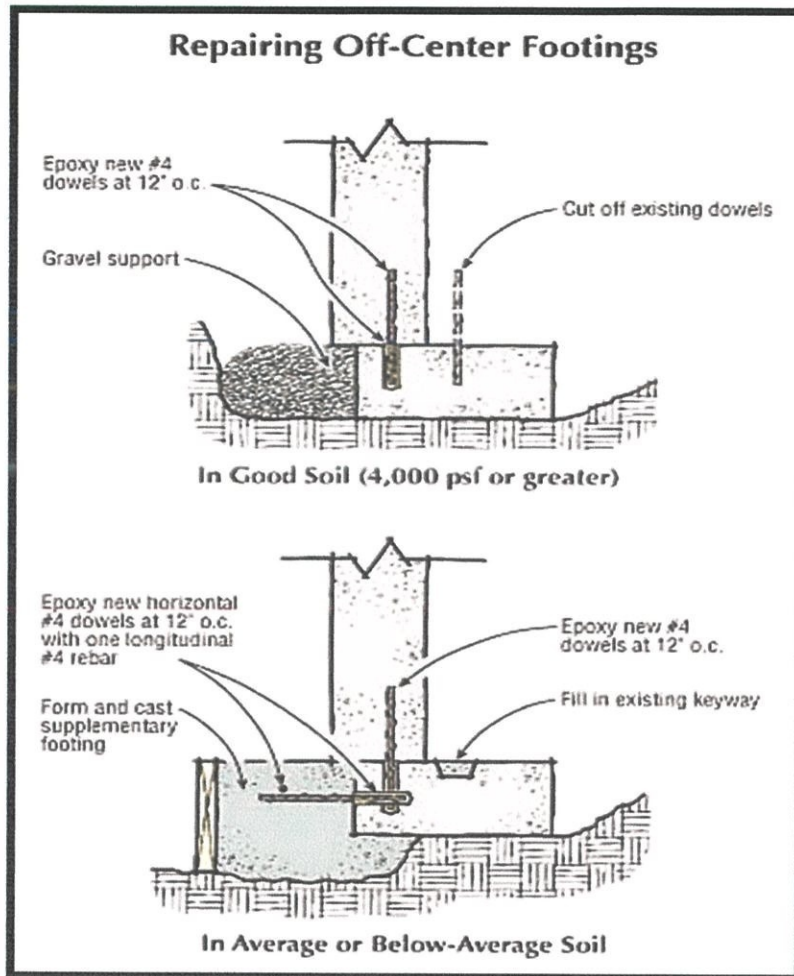


Figure 3.15: problem of Fixes for Misplaced Footing

In strong soils, a mistake in footing layout can be corrected by placing gravel to support the wall (side). In weaker soils, the author recommends casting an augmented footing alongside the existing footing (side), connected by dowels epoxied into the side of the existing footing. Be sure to fill any notches in the footing, and cut off any existing steel dowels that miss the wall.

ii. **Spanning Over a Soft Spot**

Some sites have occasional soft spots in otherwise good soil. You usually discover such spots when you're driving stakes for the footing forms you hit a stake and it just about disappears with one blow. Maybe there's a layer of soft clay that rises from an old lake bottom at an angle and just intersects your trench in one or two places. If a stake sinks in easily under hand pressure, there's cause for concern.

When a footing must be widened to boost bearing ability, it should also be reinforced or deepened. An unreinforced footing that is too wide may crack close to the wall, overloading the soil beneath. Without reinforcement, codes say the thickness of the footing should be at least as great as the distance it projects next to the wall. As an alternative, the author recommends transverse (crosswise) 4 bar at 12 inches o.c.

You may have to excavate down past the soft spot and place a deeper footing, then pour a taller wall. Or you may have to pier down through the soft material to get a bearing on good material. Another option is to excavate out the soft soil and replace it with compacted gravel or low-strength concrete, also called lean fill.

But in many cases, widening the footing is the simplest solution. If you've got a 16-inch footing, increasing that to 32 inches doubles your bearing area, making the footing suitable for soil with half the capacity.

If you increase the footing width, the code requires an increased thickness as well. That's because a footing that's too wide and not thick enough experience a bending force that could crack the concrete. The projection of the footing on either side of the wall is supposed to be no greater than the depth of the footing. So, for example, a 32-inch-wide footing under an 8-inch wall would need to be at least 12 inches thick. Instead, however, you could rein-force the footing with transverse steel (running in the crosswise direction, not along the footing). In most residential situations, 4 rod at 12 inches o.c. will be plenty for 8-inch-thick footings up to 4 feet wide. The steel should be placed about 3 inches up from the bottom of the footing.

Even though a lot of contractors do it, one thing that not helps you span a soft spot in the soil is to add more steel along the long dimension of the footing. Throwing more longitudinal steel into a footing in this situation is just a waste of time and money. If you're going to add lengthwise steel, put it where it will do some good: in the wall, not the footing. Just as a 2x12 on edge is much stronger than a 2x4 on the flat, steel at the top and bottom of an 8-foot or 9-foot wall does much more work than steel placed into a skinny little footing. A wall with two #4 bars at the top and two at the bottom can span over a small soft area with no problem.

Steel in the wall has a greater effect than steel placed in the footing. In the wall, steel bars are almost 8 feet apart, while in a footing, the bars are only a few inches apart; the greater the spacing, the better the effect.

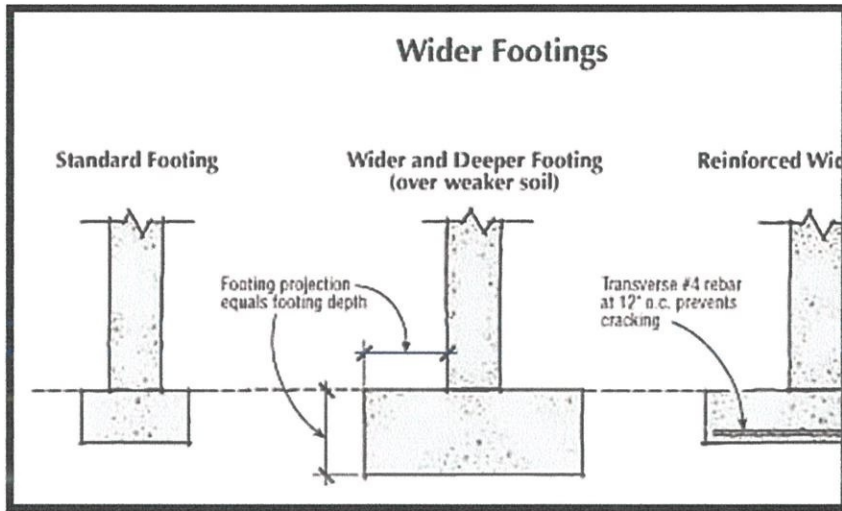


Figure 3.16: Wider footings

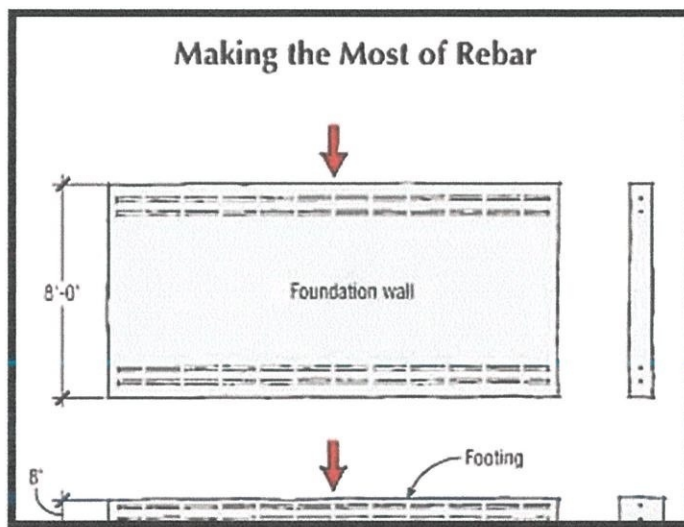


Figure 3.17: Making the most of rebar

iii. **Changes in Concrete Footing Elevations**

It's pretty common for a short wall to tie into a tall wall, especially in the North, where most houses have full basements but garages just have short frost walls. The code calls for continuous footings at all points. But that part of the code dates from the days when foundations were made mostly with concrete block, not poured concrete. Masonry foundation walls have no real spanning capability, so they have to be stepped down when elevations change. Concrete walls, on the other hand, can be reinforced with steel to span openings. That means the footings can be discontinuous, jumping from the 4-foot to the 8-foot or 9-foot elevation. The shorter wall can span the distance.

A short reinforced concrete wall has been formed and cast to span the distance from its footing to the adjoining wall (the trench were backfilled as usual). The concrete has to be appropriately reinforced. A typical house situation, where a 4-foot garage frost wall has to span 4 feet or less and tie into the main foundation, calls for two 4 bars at the top of the wall and two 4 bars at the bottom. The steel has to extend 3 feet into the main wall and 3 feet into the shorter wall beyond the point where the footing starts.

Discontinuous footings work fine for concrete walls, which can be reinforced to take the loads. A typical situation where a garage stem wall abuts a main basement wall can be handled by reinforcing the short section of wall that spans the opening with two 4 bars at the top and bottom, extending 3 feet into each adjoining section of wall above the footing. This solution is limited to a 4-foot maximum span and a 5-foot maximum change in elevation. If the walls are at

right angles, the rebar has to be bent accordingly. For this detail, the footings are formed and cast as usual. When you form the walls, the bottom of the forms must be capped with a piece of wood where the forms pass over empty space. In termite country, that wood must be stripped when the forms come off.

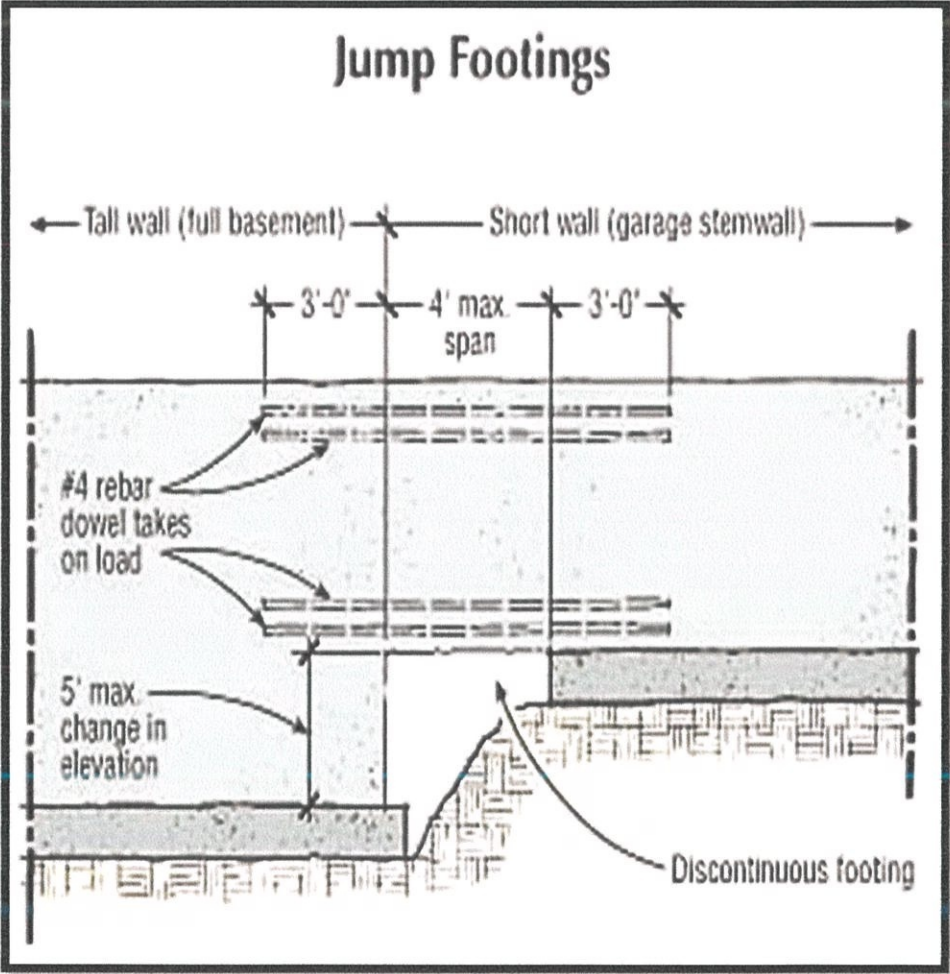


Figure 3.18: Jump Footings

iv. **Water in the Excavation**

When water is pooled in the trench, the author recommends placing large cobbles in the form bottom and compacting them down into the mud. Muck and water may fill the spaces between stones, but contact between the stones will provide bearing. Be sure to use a stiff concrete mix when you cast the footings.

When you're working in an area with a perched water table during the wet season, you sometimes find groundwater moving into your trench. If the flow is slow enough so you can pump the water out without it flowing right back in, then that's the best solution. You can place concrete in up to 1 inch of water—concrete is 2½ times heavier than water, and it will displace the water. You might want to thicken the footings in that case, because the bottom of the concrete may absorb some water and be a little weaker than normal.

But if the soil is loose and porous, and water and soil keep coming back into the trench as you pump the water out, use large aggregate to build up the trench. For this, large stone or cobbles 2-inch- or 3-inch-diameter rock are best.

When water is pooled in the trench, the author recommends placing large cobbles in the form bottom and compacting them down into the mud. Muck and water may fill the spaces between stones, but contact between the stones will provide bearing. Be sure to use a stiff concrete mix when you cast the footings.

When you form the footings, place enough large stone into the wet, mucky zone to get up above the water table. Compact the stone down into the mud, and then pour your footing. The large aggregate allows the muck to fill into the pore space, but as long as all the pieces of stone are in contact with each other, the stone can still transfer the load.

If the stone is piled so high in the forms that your footing becomes too thin (less than 4 inches thick), place transverse rebar to reinforce it, as shown (be sure that the footings are thick enough to cover the steel by at least 3 inches).

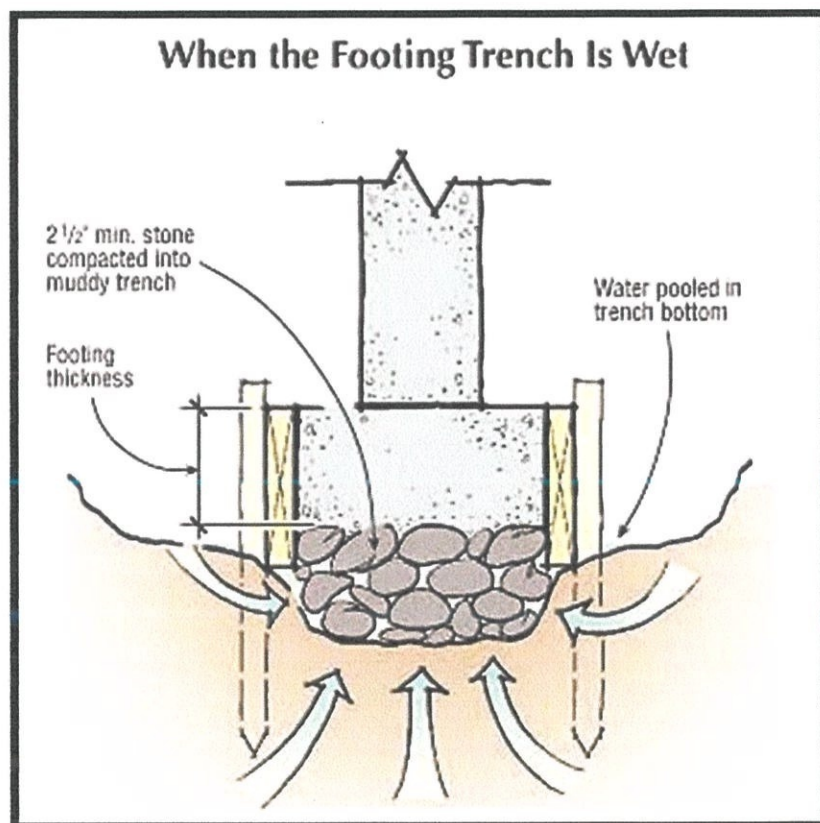


Figure 3.19: Footing trench is wet

CHAPTER 4

CONCLUSION AND RECOMMENDATION

4.1 Conclusion

In conclusion the various foundations and processing strip and pad foundation would not be suitable due to land, size of building and loads the foundations would have to cope with. Strip foundations are suitable on rock, gravel, dense sand or stiff clay on soft clay or soft sandy clay, wider strip foundations are required

While, raft foundation although used mainly for light weight structures could be designed to cope with greater loads. The building design is not known and it would be suggested if this building would be a framed building then it would be best not to use raft foundation as its design is traditionally weak in supporting point loads, the raft would cope with the land and deep bearing stratum issue.

4.2 Recommendation

Mistakes and problem in construction is a common matter. Problems may arise due to the environment, drawing mistakes, and poor planning. For example, reinforcement bar to pad foundation is 6 reinforcement bar but offence done by just putting 4 reinforcement bar to a pad foundation during concreted foundation

Solution for the problem is pad foundation necessary thrown away all and substitute that new follow that were being passed. Supervisor necessary more monitoring this work current environment carried out so that offence that not desired happened in project site.

Machineries seemed to be a minor problem but consumed many effects to the surrounding especially time. The machineries usage should be planned and considered as important in managing the construction.

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APPENDIXES A:
THE LAYOUT PLAN OF THIS PROJECT



DEWAN BANDARAYA KUALA LUMPUR
 JABATAN PERLAKSANAAN PROJEK DAN PEYELNGARAN BANGUNAN
 TINGKAT 17, 21-25, MENARA DBKL 3,
 BANDAR WAWASAN JALAN RAJA ABDULLAH,
 50300, KUALA LUMPUR.

HURUF PETUNJUK	PINDAAN	TARIKH	JANDA TANGAN

HJ. JAAFAR SAHARI
 PENGARAH
 JABATAN PERLAKSANAAN PROJEK DAN PEYELNGARAN BANGUNAN

HJ. MD. ADNAN B. SURATMAN
 TIMBALAN PENGARAH KAWAN
 JABATAN PERLAKSANAAN PROJEK DAN PEYELNGARAN BANGUNAN

EN. JUMINAN B. SAMAD
 TIMBALAN PENGARAH
 UNIT REKABENTUK DAN DOKUMENTASI

PERUNDING CIVIL & STRUKTUR :
PERUNDING KKS
 PERUNDING KHS
 NO. 45-2/28, JALAN MEDAN P3 28,
 BGDYSTEN 8, PUSAT BANDAR BANGI,
 43000 BANDAR BANGI, SELANGOR DARUL EHSAN.

PERAKUAN & COP JURUTERA PROFESIONAL :

I hereby certify that these works have been designed by me in accordance with sound engineering practice and that I take full responsibility for the design and project performance of the same.

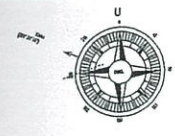
PROJEK :
 CADANGAN PEMBAGUNAN YANG MENGANUNGI :
 A) UBAH DAN TAMBAH SEBUAH BANGUNAN PEJABAT PENGURUSAN 1 TINGKAT SEDIADA SERTA
 B) BANGUNAN BARU YANG MENGANUNGI :
 i) 1 UNIT RUMAH REHAT PEKERJA 1 TINGKAT
 ii) 1 UNIT TEMPAT PENYIMPANAN MEDIA 1 TINGKAT
 iii) 1 UNIT RUMAH TEDUHAN 1 TINGKAT
 iv) 1 UNIT PONDOK PENCAHAL
 SERTA KERJA-KERJA YANG BERKAITAN DI ATAS SEBAHAGIAN LOT 60454, PUSAT JABATAN LANSKAP & REKREASI, DEWAN BANDARAYA KUALA LUMPUR, MUKIM KEPONG UTARA, KUALA LUMPUR

UNTUK TUJUAN :
 JABATAN LANSKAP & REKREASI,
 DEWAN BANDARAYA KUALA LUMPUR

TAJUK LUKISAN :
 LAYOUT PLAN

DIREKABENTUK :	ADIB
DISEMAK :	ALED / HAMDAN
DILUKIS :	ramlinNORMAN
SKALA :	1 : 1250
TARIKH :	OCTOBER 2013

NO. LUKISAN :
 PKHS/DBKL/2013-0150/LP/01



TAPAK BERKENAAN

KEY PLAN
 NOT TO SCALE

TAPAK BERKENAAN

LOCATION PLAN

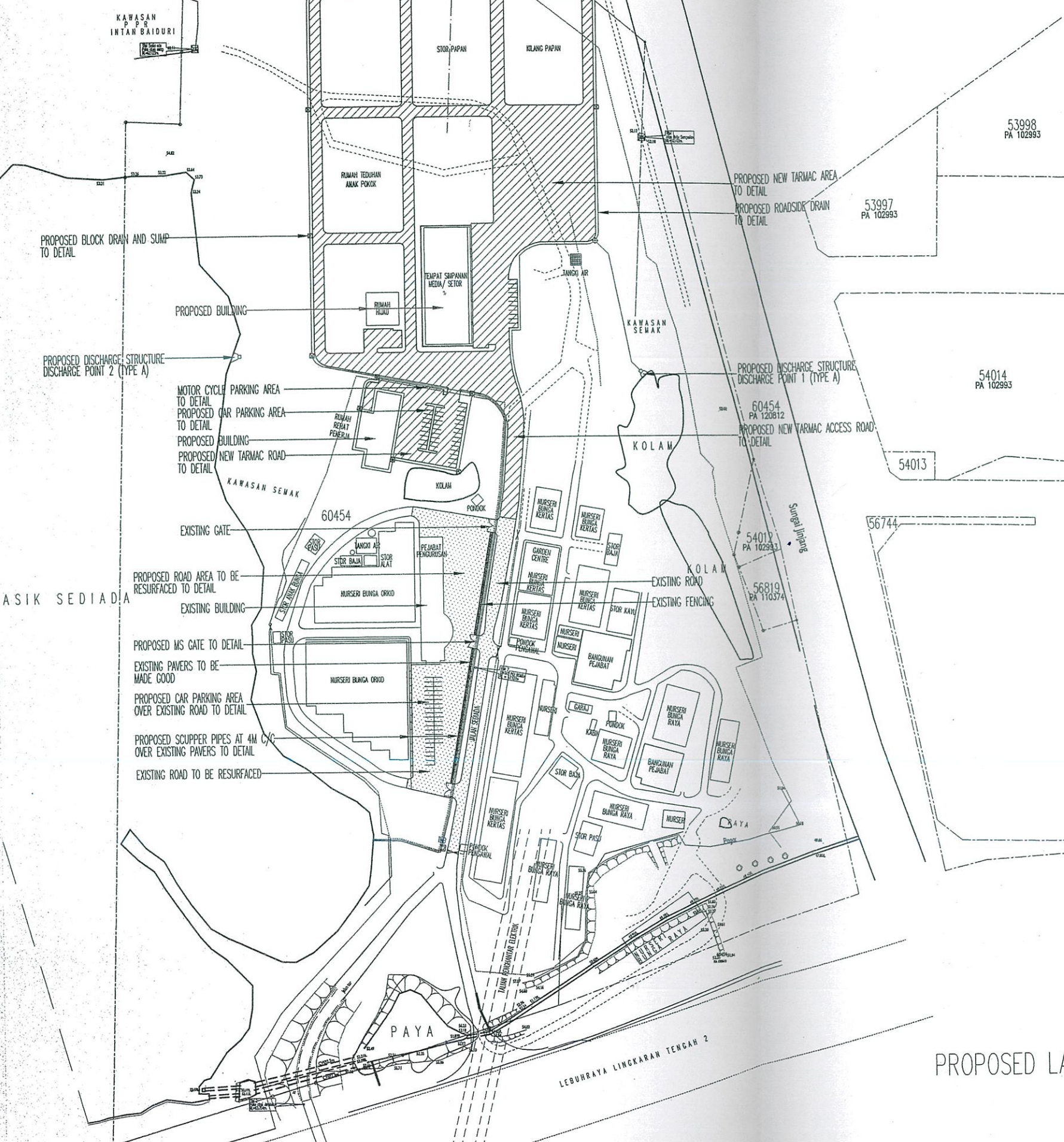
LEGEND:

- BUILDING AREA
- PROPOSED TARMAC AREA
- RESURFACED PREMIX ROAD AREA
- PROPOSED PLATFORM LEVEL
- PROPOSED FINISHED FLOOR LEVEL
- PROPOSED ROAD LEVEL

PROPOSED LAYOUT PLAN

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APPENDIXES B:
THE EARTHWORKS LAYOUT PLAN



DEWAN BANDARAYA KUALA LUMPUR
 JABATAN PERLAKSANAAN PROJEK DAN PEYELNGARAAN BANGUNAN
 TINGKAT 17, 21-25, MENARA DBKL 3,
 BANDAR WAWASAN JALAN RAJA ABDULLAH,
 50300, KUALA LUMPUR.


HURUF PETALUKUK	PINDAAN	TARIKH	JANDA TANGAN

HJ. JAAFAR SAHARI
 PENGARAH
 JABATAN PERLAKSANAAN PROJEK DAN PEYELNGARAAN BANGUNAN

HJ. MD. ADNAN B. SURATMAN
 TIMBALAN PENGARAH KANAN
 JABATAN PERLAKSANAAN PROJEK DAN PEYELNGARAAN BANGUNAN

EN. JUMWAN B. SAMAD
 TIMBALAN PENGARAH
 UNIT REKABENTUK DAN DOKUMENTASI

PERUNDING CIVIL & STRUKTUR :
 PERUNDING KHS
 NO. 45-2-25, JALAN MEDANI PB 25,
 43600 BANDAR BARU BANGI,
 SELANGOR DARUL EHSAN.

PERAKUAN & COP JURUTERA PROFESIONAL :


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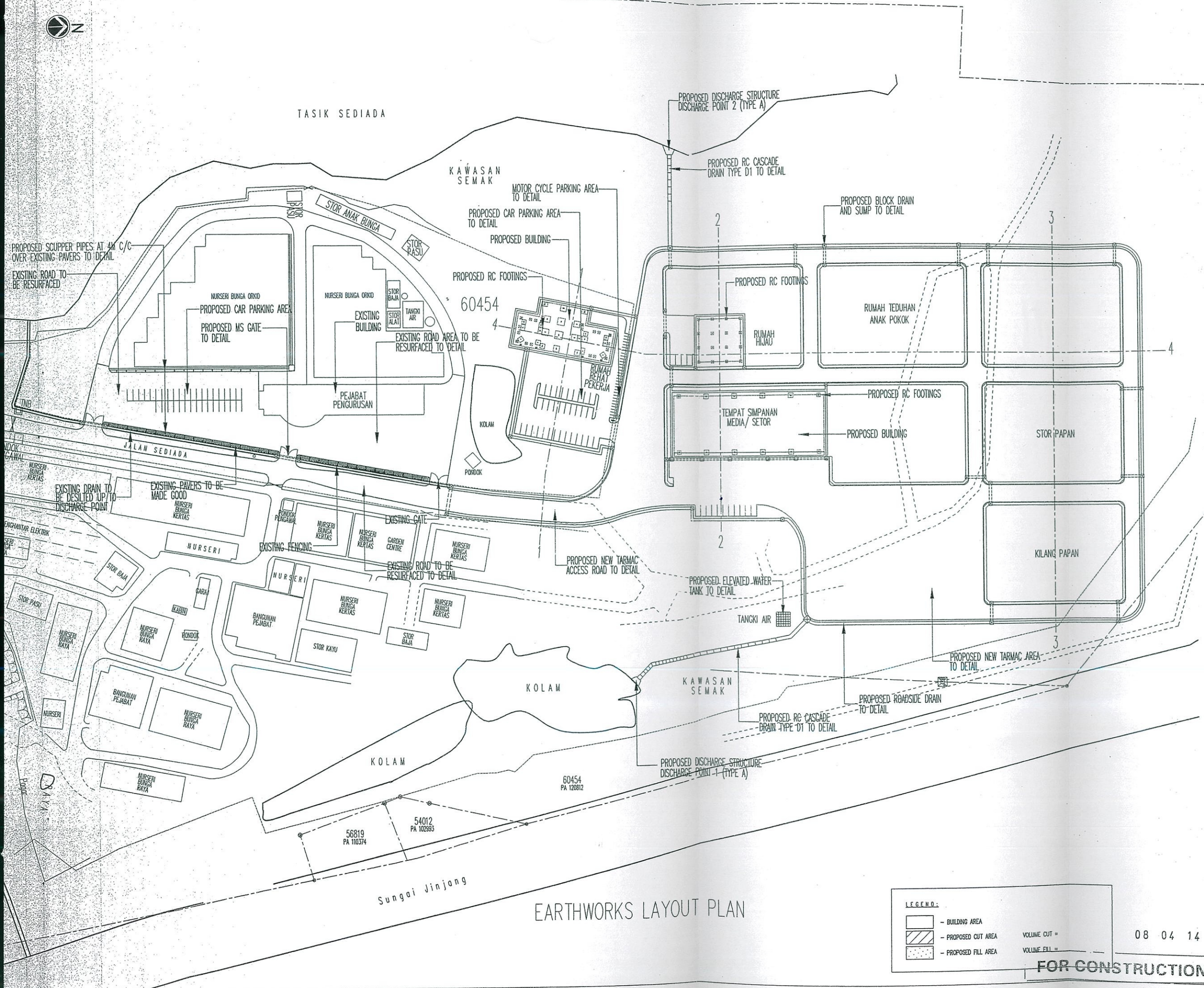
PROJEK :
 CADANGAN PEMBAGUNAN YANG MENGANUNGI :
 A) UBAH DAN TAMBAH SEBUAH BANGUNAN PEJABAT PENGURUSAN 1 TINGKAT SEDIADA SERTA
 B) BANGUNAN BARU YANG MENGANUNGI :
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 ii) 1 UNIT TEMPAT PENYIMPANAN MEDIA 1 TINGKAT
 iii) 1 UNIT RUMAH TEDUHAN 1 TINGKAT
 iv) 1 UNIT PONDOK PENGAWAL
 SERTA KERJA-KERJA YANG BERKAITAN DI ATAS SEBAHAGIAN LOT 60454, PUSAT JABATAN LANSKAP & REKREASI, DEWAN BANDARAYA KUALA LUMPUR, MUKIM KEPONG UTARA, KUALA LUMPUR

UNTUK TUJUAN :
 JABATAN LANSKAP & REKREASI,
 DEWAN BANDARAYA KUALA LUMPUR

TAJUK LUKISAN :
 EARTHWORKS LAYOUT PLAN




DIREKABENTUK :	ADIB
DISEMAK :	ALED / HAMDAN
DILUKIS :	RAMLI NORWAN
SKALA :	1 : 750
TARIKH :	OCTOBER 2013

NO. LUKISAN :
 PKHS/DBKL/2013-0150/EW/01



EARTHWORKS LAYOUT PLAN

LEGEND:

-  - BUILDING AREA
-  - PROPOSED CUT AREA
-  - PROPOSED FILL AREA

VOLUME CUT =
 VOLUME FILL =

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APPENDIXES C:
RUMAH REHAT PEKERJA

**PAD FOOTING & COLUMN LAYOUT PLAN,
TYPICAL PAD FOOTING DETAIL,
PAD FOOTING AND COLUMN SCHEDULE**



DEWAN BANDARAYA KUALA LUMPUR

HURUF PETUNJUK	PINDAAN	TARIKH	JANDA TANGAN

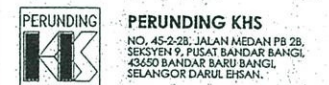
PEMILIK PROJEK :

JABATAN LANDSKAP DAN REKREASI
DEWAN BANDARAYA KUALA LUMPUR
TINGKAT 13, 19 & 20, MENARA DBKL 3, BANDAR WAWASAN,
JALAN RAJA ABDULLAH, 50300 KUALA LUMPUR

PENGARAH PROJEK :

JABATAN PERLAKSANAAN PROJEK DAN
PENYELENGGARAAN BANGUNAN
DEWAN BANDARAYA KUALA LUMPUR
TINGKAT 21-24, MENARA DBKL 3, BANDAR WAWASAN,
JALAN RAJA ABDULLAH, 50300 KUALA LUMPUR

PERUNDING CIVIL & STRUKTUR :



PERAKUAN & COP JURUTERA PROFESIONAL :



I hereby certify that these works have been designed by me in accordance with sound engineering practice and that I take full responsibility for the design and project performance of the same.

PROJEK :

ANDANGAN PEMBAGUNAN YANG MENDUNGI :
A) UBAH DAN TAMBAH SEBUAH BANGUNAN PEJABAT
PENGURUSAN 1 TINGKAT SEDIADA SERTA
B) BANGUNAN BARU YANG MENDUNGI :
i) 1 UNIT RUMAH REHAT-PEKERJA 1 TINGKAT
ii) 1 UNIT TEMPAT PENYIMPANAN MEDIA 1 TINGKAT
iii) 1 UNIT RUMAH TEDUHAN-1 TINGKAT
iv) 1 UNIT PONDOK PENGAWAL
SERTA KERJA-KERJA YANG BERKAITAN DI ATAS
SEBAGIAN LOT 60454, PUSAT JABATAN
LANDSKAP & REKREASI,
DEWAN BANDARAYA KUALA LUMPUR,
MUKIM KEPONG UTARA, KUALA LUMPUR

UNTUK TUJUAN :
JABATAN LANDSKAP & REKREASI,
DEWAN BANDARAYA KUALA LUMPUR

TAJUK LUKISAN :

RUMAH REHAT PEKERJA

PAD FOOTING & COLUMN LAYOUT PLAN
TYPICAL PAD FOOTING DETAIL
PAD FOOTING AND COLUMN SCHEDULE

DIREKABENTUK : PIZAN

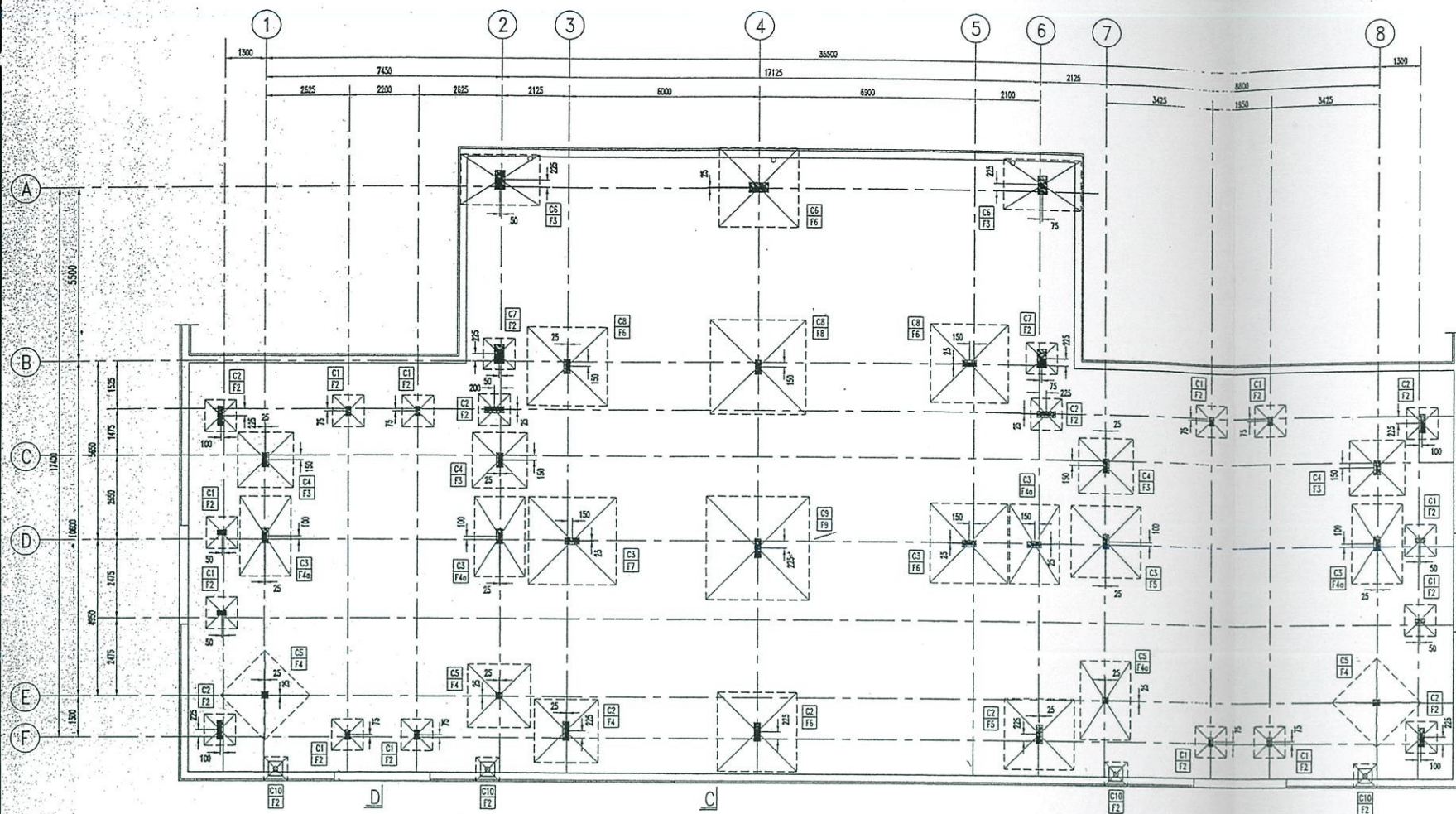
DISEMAK : HS

DILUKIS : ANI

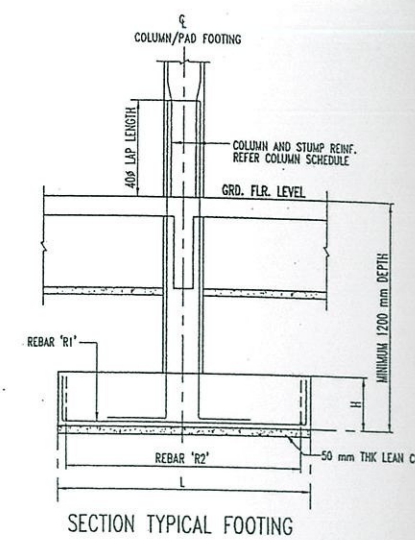
SKALA : 1 : 100, 1 : 30

TARIKH : SEPTEMBER 2013

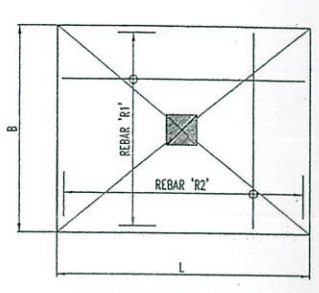
NO. LUKISAN :
PKHS/DBKL/2013-150/RR/01



PAD FOOTING & COLUMN LAYOUT PLAN



SECTION TYPICAL FOOTING



PLAN TYPICAL FOOTING

- NOTES FOR FOUNDATION**
- DESIGN BEARING CAPACITY FOR FOUNDATION IS 75 kpa.
 - AFTER EXCAVATION TO FOUNDATION LEVEL, IT SHOULD BE VERIFIED BY MACKINTOSH PROBE, MINIMUM BLOW COUNT OF 30 IS REQUIRED.
 - IF THE MINIMUM BLOW COUNT CANNOT BE ACHIEVED, IT SHOULD BE EXCAVATED TO A LEVEL WHERE THE BLOW COUNT OF 30 IS ACHIEVED AND MAKE UP TO ORIGINAL LEVEL BY USING GRADE 15 CONCRETE.

TYPE	SIZE FOOTING		THICKNESS	REINFORCEMENT SIZE	
	B (mm)	L (mm)		REBAR 'R1'	REBAR 'R2'
F1	750	750	500	5T12	5T12
F2	1000	1000	150	7T12	7T12
F3	1750	1750	250	11T12	11T12
F4	2000	2000	300	12T12	12T12
F4a	1600	2500	350	10T16	16T12
F5	2250	2250	350	14T12	14T12
F6	2500	2500	400	16T12	16T12
F7	2750	2750	450	18T12	18T12
F8	3000	3000	500	21T12	21T12
F9	3250	3250	550	24T12	24T12

PAD FOOTING SCHEDULE

COLUMN SCHEDULE SCALE 1 : 30											ROOF LEVEL
UPPER ROOF LEVEL											
TO ROOF LEVEL											
SIZE	150 x 600	150 x 600	250 x 150	150 x 250	150 x 250	150 x 250	150 x 250	150 x 250	150 x 250	150 x 250	
REINFORCEMENT	6T12	6T12	4T12	4T12	4T12	4T12	4T12	4T12	4T12	4T12	
LINK	R10-300 c/c	R10-300 c/c	R10-300 c/c	R10-300 c/c	R10-300 c/c	R10-300 c/c	R10-300 c/c	R10-300 c/c	R10-300 c/c	R10-300 c/c	
ROOF LEVEL											
TO GROUND FLOOR											
SIZE	150 x 300	150 x 600	150 x 600	150 x 600	200 x 200	300 x 600	300 x 600	150 x 450	150 x 600	150 x 600	
REINFORCEMENT	6T12	8T12	6T12	6T12	4T20	8T12	8T12	6T16	8T16	8T16	
LINK	R10-300 c/c	2R10-300 c/c	R10-300 c/c	R10-300 c/c	R10-300 c/c	2R10-300 c/c	2R10-300 c/c	R10-300 c/c	2R10-300 c/c	2R10-300 c/c	
GROUND FLOOR											
TO FOUNDATION											
SIZE	150 x 300	200 x 600	200 x 600	200 x 600	200 x 200	300 x 600	300 x 600	200 x 450	200 x 600	450 x 450	
REINFORCEMENT	6T12	8T12	6T16	6T16	4T20	8T12	8T12	6T16	8T16	8T16	
LINK	R10-300 c/c	2R10-300 c/c	R10-300 c/c	R10-300 c/c	R10-300 c/c	2R10-300 c/c	2R10-300 c/c	R10-300 c/c	2R10-300 c/c	2R10-300 c/c	
COLUMN MARK	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	COB.1

FOR CONSTRUCTION

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