



UNIVERSITI TEKNOLOGI MARA

FACULTY OF CIVIL ENGINEERING

INDUSTRIAL TRAINING REPORT

KHATIJA BINTI KAMARUZAMAN
(2016185855)

**JABATAN KERJA RAYA DAERAH SEPANG,
KOMPLEKS PEJABAT-PEJABAT,
KERAJAAN DAERAH SEPANG,
BANDAR BARU SALAK TINGGI,
43900, SEPANG,
SELANGOR.**

JULY 2019

ABSTRACT

Assalamualaikum w.b.t. My name is Khatijah Binti Kamaruzaman, student from the Faculty of Civil Engineering Universiti Teknologi MARA (UiTM) Cawangan Johor Kampus Pasir Gudang. The main reason engineering students need to do Industrial Training (IT) is so they are well prepared for a graduate job in their chosen field. It is a chance for us to put what we have learned at university to work in the kind of real-life situations we will come up against when we start our career.

First of all, this report is about my industrial training that I have been going through for two month, which is 8 weeks from 15 July 2019 until 8 September 2019. I have been placed at **Jabatan Kerja Raya Daerah Sepang**. I choose this place as my location for industrial training is because this I would like to gain knowledge in government sector and for sure it near to my home town as well. The reason I choose to do my internship locally because I believe that I will gain a lot of experiences which I have yet to explore whether it is related my course or anything that related to real life as an engineer. This internship is a great experience for me to learn and improve as well as to develop new sets of skills.

Nevertheless, my experience having an industrial training at the **JKR Sepang** can really teach me about working condition and the working attitude in the organization itself. This report consists of four main chapters. In this report, I will tell about my company background, which is for me is a very basic thing to have in a report. This report also consists of organization chart, vision and mission of the company. All about the company is in the chapter one while in the chapter two consists of weekly summary based on my logbook. In the chapter three, it is about a technical report. In that chapter, I tell about what I learned. Last but not least, in the chapter four is about the conclusion of my report, which is about what do I get from undergo through the industrial training. That is all about my report that I can share about. I hope with this information can really taught me something about working for the government sector.

ACKNOWLEDGEMENT

Alhamdulillah, all praises to Allah for the strengths and His blessing in completing this report exactly within given time. First and foremost, special appreciation goes to my supervisor, Mr. Mohd Firdaus Bin Mohd Akhbar who had taken a lot of efforts to arrange our industrial training between us and our employer. Not forgotten, my appreciation to my industrial district engineer Mrs. Ir Salina Binti Hassan, for his support and knowledge regarding this report.

Secondly, I would like to express my sincerity to Building Department especially Mr Mohd Zahri Bin Seman, Building Engineer J48 as my supervisor. Also to Mr. Mohd Azhar Bin Mohd Khairi, Building Assistant Engineer JA36, Mrs. Irnawati Binti Abd. Malek Building (Project) Assistant Engineer JA29 Also to for their cooperation, knowledge and endless patience. Their; cooperation indeed help me, hence my work became easier and faster.

Besides, I would like to extend my gratitude to the Road and Maintenance Department organization Mrs. Ir Siti Shazwani Binti Mohd Nawawi Road and Maintenance Engineer J41. In addition I would like to present my honour to Mrs. Noor Shalizawani Binti Ahmad Hussaini, Road and Maintenance Assistant Engineer JA29 and Mr. Muhammad Zaki Bin Jusoh Road and Maintenance Assistant Engineer JA29 for their kindness and his trust for giving me the opportunity to practical training there.

My acknowledgement also goes to all the officer and office staffs of JKR Sepang management for their technical knowledge. Last but not least, I would like to express my heartfelt gratitude to my family, friends and also lecturer for their support, constructive suggestion and also helpful criticism.

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CHAPTER 1.0 : INTRODUCTION

1.1 INTRODUCTION

Industrial Training module is a main component in the learning academic for Universiti Teknologi MARA (UiTM) Cawangan Johor Kampus Pasir Gudang. Industrial training is one of the compulsory courses for every UiTM under the Faculty Civil Engineering semester 5. Every student bounds to be involved in industrial training for 8 weeks during the semester break in order to get his or her diploma certificate.

The industrial training was carried out the main purpose of the industrial training is to produce graduates who are ready and capable to face their profession academically or non-academically with a high professionalism appearance.

Other than that, the industrial training exposes the students about the real situation of the working class citizen. The industrial training also helps in developing social skills in the students such as communication skills, presentation skills, management skills and etc. Furthermore, to expose the students to the real life working experience and expanding the knowledge in their specific field. They will also learn what they need to do in order to finish their works. This will prepare the students so that they will easily fit in and fulfill the demands of their profession after they finish their course.

Nowadays, construction in Malaysia has grown rapidly. As far as we can see, highways and buildings are the most obvious development has been done. Nevertheless, many of us had played their role perfectly, because to construct a building it is impossible for one man's job. As example, developers, contractors and consultants are all included in any projects, and behind the organization there must be civil engineers. The company that is going to be introduced is a consultant firm that has been operating since last two years.

1.2 BACKGROUND OF THE COMPANY

1.2.1 Background of the Jabatan Kerja Raya Malaysia

The **Jabatan Kerja Raya Malaysia**, abbreviated **JKR**, is the federal government department in Malaysia under Ministry of Works Malaysia (MOW) which is responsible for construction and maintenance of public infrastructure in West Malaysia and Labuan. In Sabah and Sarawak, a separate entity of Jabatan Kerja Raya exists under respective state government's jurisdiction but both departments are also subordinate to the parent department at the same time. For more than 100 years, the Jabatan Kerja Raya (JKR) Malaysia has touched many aspects of the nation's life by providing necessary infrastructure, such as roads and water supply systems. The Jabatan Kerja Raya (JKR) was born in 1872 with Major J.F.A McNair as the first head of the organization.

The events that lead to the formation of JKR began earlier than 1872 when the British East India Company - trading between England, India, and China - needed a safe station for refitting their ships. They found it in Penang. Penang was well positioned for their purpose. In 1786, they persuaded the Sultan of Kedah to give up the rights of the island to the company. They managed to get Penang in 1791 through a treaty. In 1825, through the Anglo-Dutch Treaty, Malacca reverted to the British in exchange for Bencoolen. Raffles, in 1819, entered into a treaty with Sultan Hussein and Temenggong Abdul Rahman giving the British the rights to establish settlements in Singapore. These three territories (Penang, Malacca, and Singapore) formed the Straits Settlement in 1826.

Another reason that brought the British to settle in the region was because of the tin-rich and fertile cultivation land in many of the Malay States. The so-called Pangkor Treaty (1874) paved the way for the British influence in Malay States. During this year, they managed to make in road into Perak, Selangor, and Negeri Sembilan. They posted their Residents and Subordinate Officers to advise the Malay rulers. Later, Pahang also accepted this residential system of government. By 1896, the system was administered centrally with Kuala Lumpur as the seat of authority. The four states together with Kuala Lumpur was known as the Federated Malay States. (taken from JKR Malaysia website :<http://www.jkr.gov.my/app-jkr/page.php?id=74>)

1.2.2 Background of Jabatan Kerja Raya Sepang

Jabatan Kerja Raya Sepang has been established since 1972; from 2 sub-districts namely Kuala Langat – Mukim Labu & Sepang) dan Hulu Langat (Mukim Dengkil). The Regional Boundary is bounded by the SKVE Highway (E26) to the north, the North-South Highway (E2) to the east and the North-South Central Expressway (E6) to the West. The southern border is bounded by the Negeri Sembilan border.

JKR Sepang led through several units that have specific functions. JKR Sepang responsible in matters of infrastructure development and act as a Technical Consultant (Superintendent Officer) to other departments in Sepang District. JKR Sepang structure is divided into 5 main and fractional units.

Selangor District occupies 58,527 Hectares, along Federal Roads at 202 Kilometers and State Roads at 288 Kilometers. Therefore, the role of the JKR Sepang as implementing the development of the government market as well as maintaining the existing infrastructure assets in terms of usability, user-friendliness and safety is extremely important



Figure 1.1 is the **Jabatan Kerja Raya Malaysian** logo

Jabatan Kerja Raya's logo reflect all areas of work that has been entrusted to the department. Purposes of the objects in the logo of the JKR are as follows:

- Black line at the bottom of the curve represents the waterworks while reflecting the JKR as a dynamic organization.
- Thick black line represents the work of the bridge-shaped sculpture in addition to describing the JKR that basically run all the engineering work.

- Black straight lines on it symbolizing the road works are the responsibility of the JKR to build, maintain and care for it.
- 14 black line represents the building work while reflecting 14 the number of states in Malaysia including the Federal Territory.

The colors of the logo of the JKR may have meanings of their own : -

- Yellow (ICI 456): Represents the maturity for JKR as a reflection of the organization's longest established while showing images of the most mature in achieving its objectives.
- Black (ICI 122): it symbolizes the strength or unity as a feature among the branches in handling projects.
- Gray (ICI 105): Represent humility in service among officer in the JKR.

Jabatan Kerja Raya Daerah Sepang, Bangunan Tun Aziz, Salak Tinggi, Sepang, 43900 Sepang, Selangor Darul Ehsan.



Photo 1.1 : Jabatan Kerja Raya Daerah Sepang

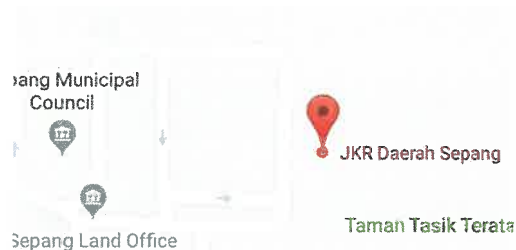


Figure 1.2 : Maps



Figure 1.3 : Satellite image

VISION

We will become a world-class service providers and centers of excellence in the field of asset management, project management and engineering services for infrastructure development of the country based on human capital and iovatif creative and cutting edge technology.

MISSION

1. Helping our customers to realize the basic information and deliver services through cooperation as strategic partners.
2. Standardize of processes and our system to provide consistent outcomes.
3. Provides asset management services and effective and innovative projects.
4. Strengthen existing engineering competence.
5. Developing human capital and new competencies.
6. Stresses integrity in delivering the service.
7. Radiate a harmonious relationship with the public.
8. Preserving the environment in service delivery

1.3 ORGANIZATIONAL STRUCTURE

CARTA ORGANISASI JKR SEPANG

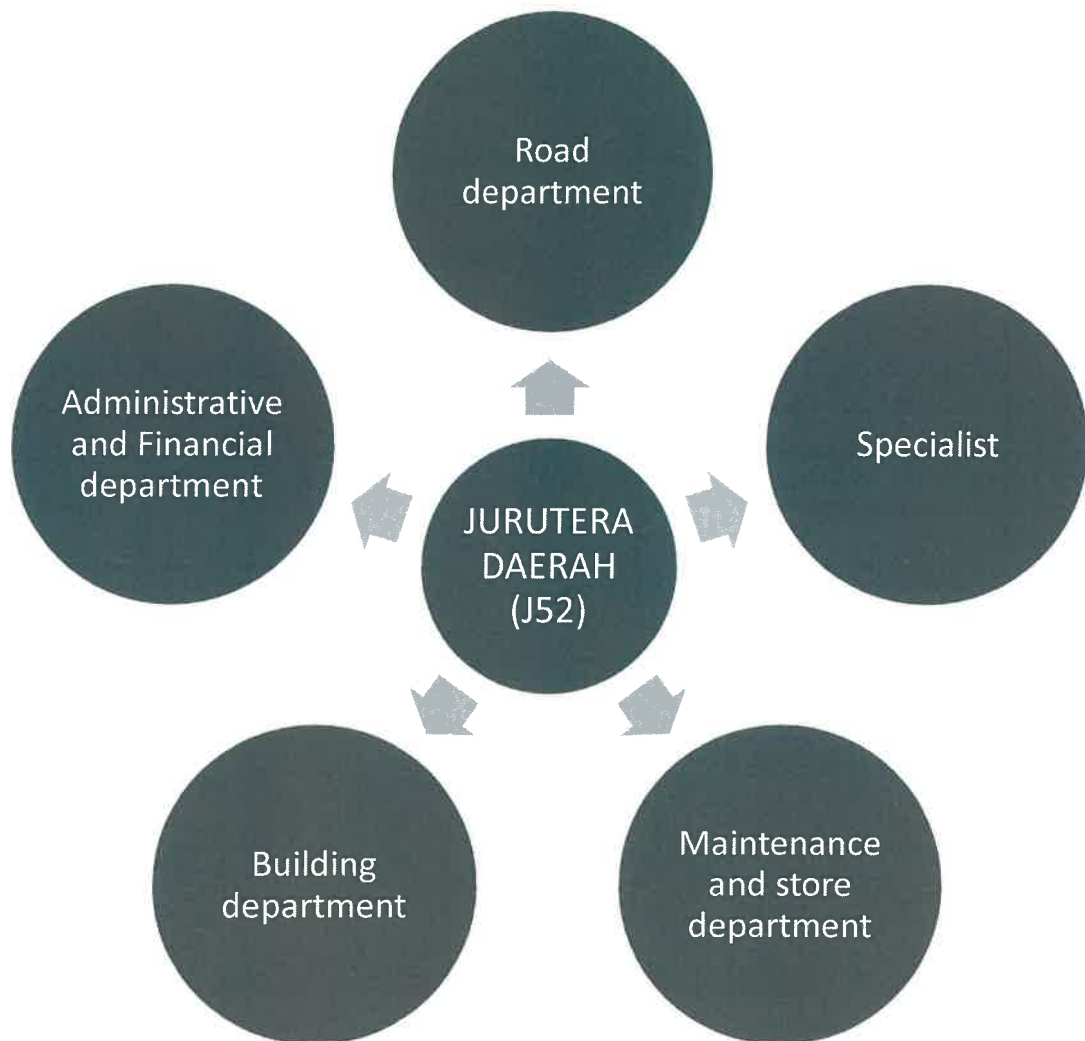


Figure 1.4 JKR Sepang Organization chart

Road Department

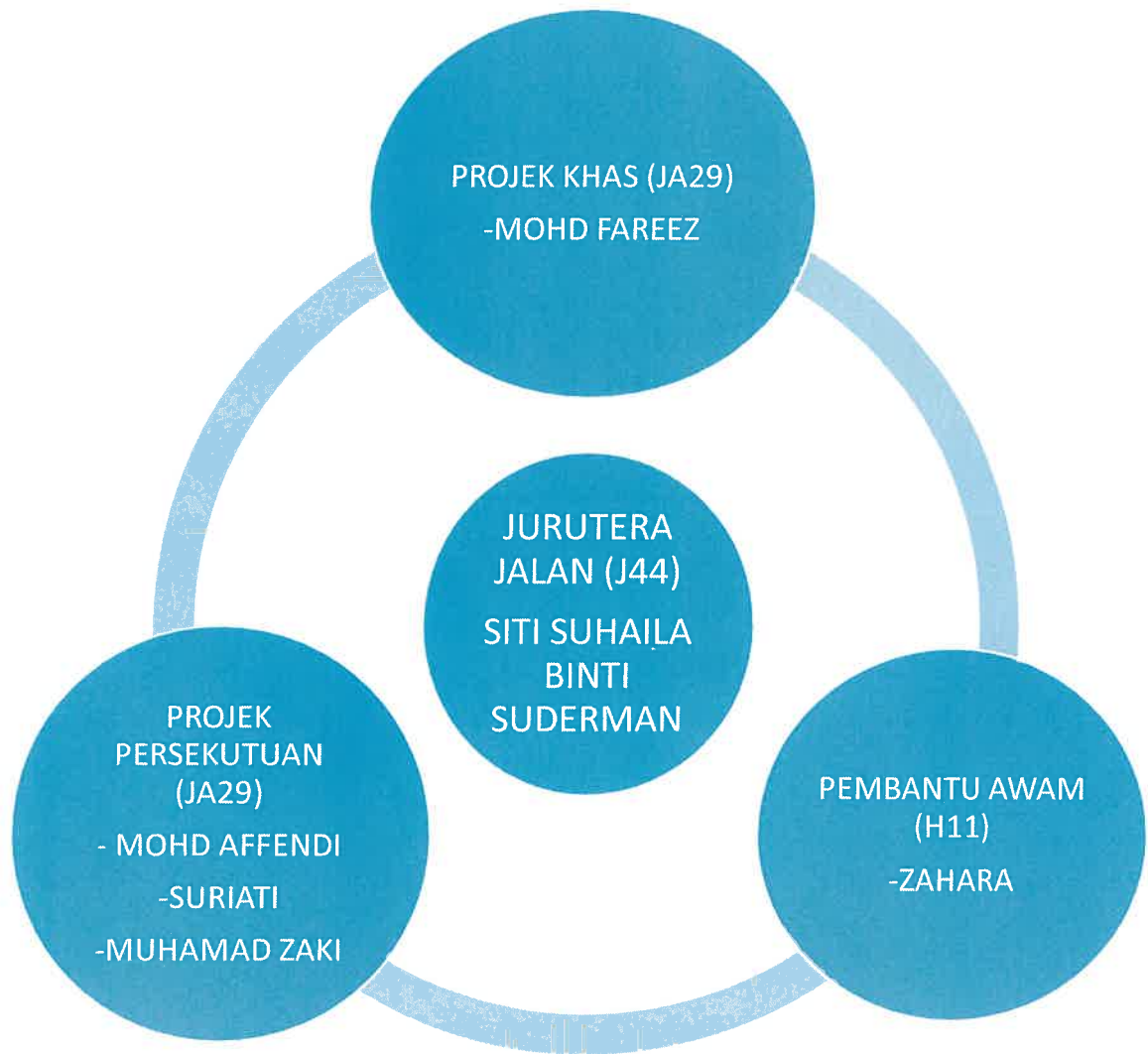


Figure 1.5 : JKR Sepang Road Organizational Structure.

Administrative and Financial Department

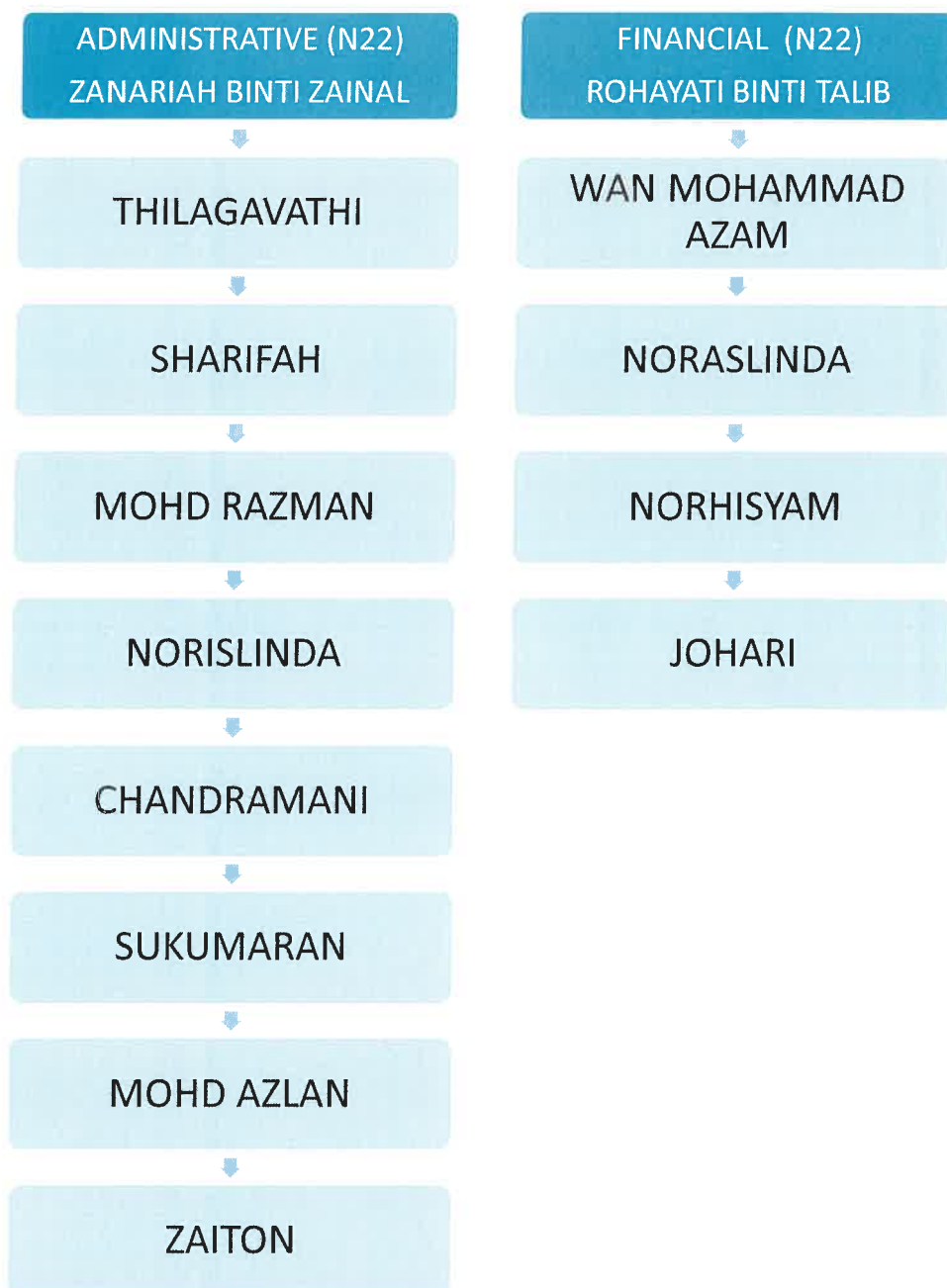


Figure 1.6 : JKR Sepang Administrative and Financial Organizational Structure.

Building Department

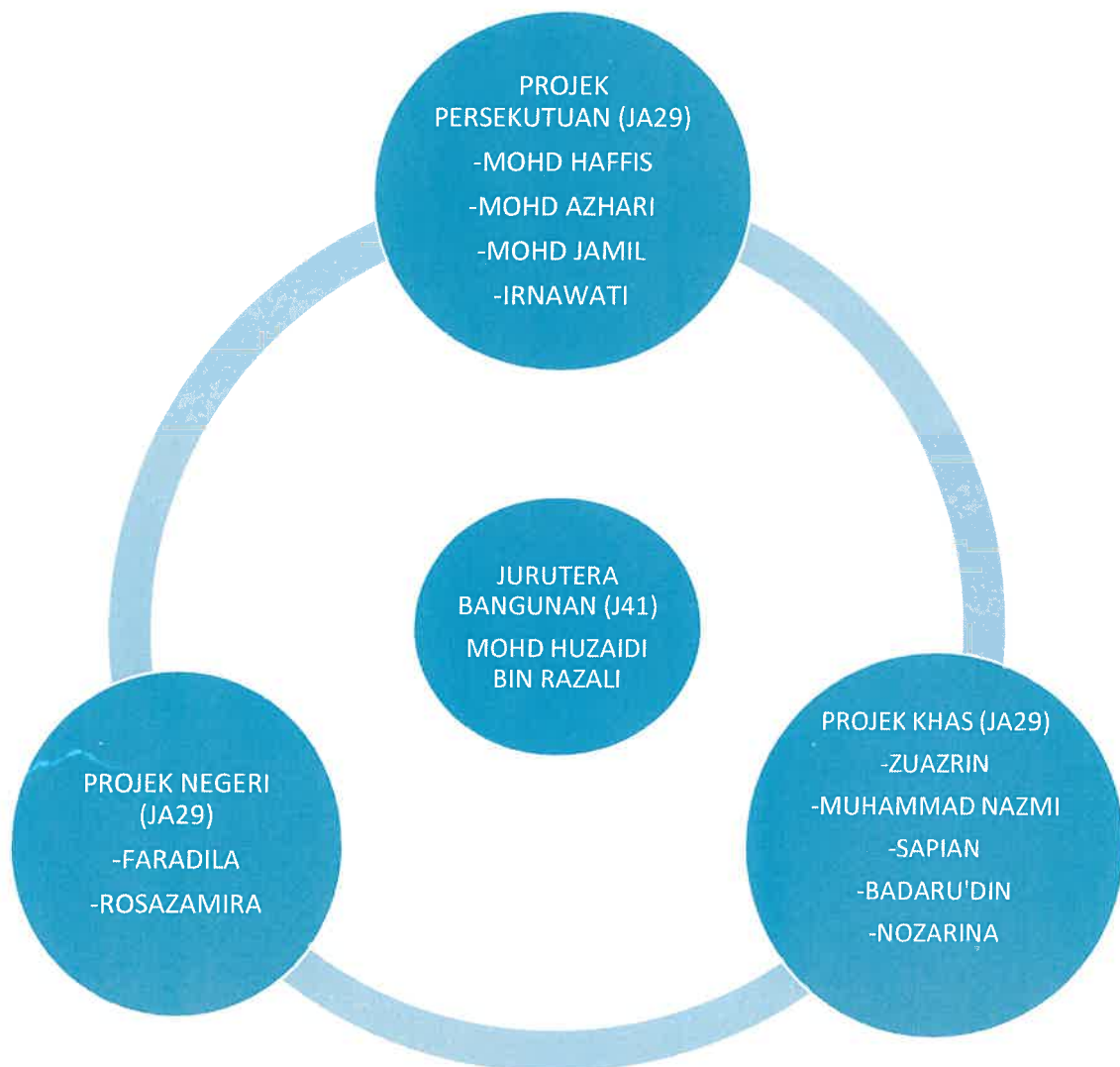


Figure 1.7 : JKR Sepang Building Organizational Structure.

Maintenance and Store Department

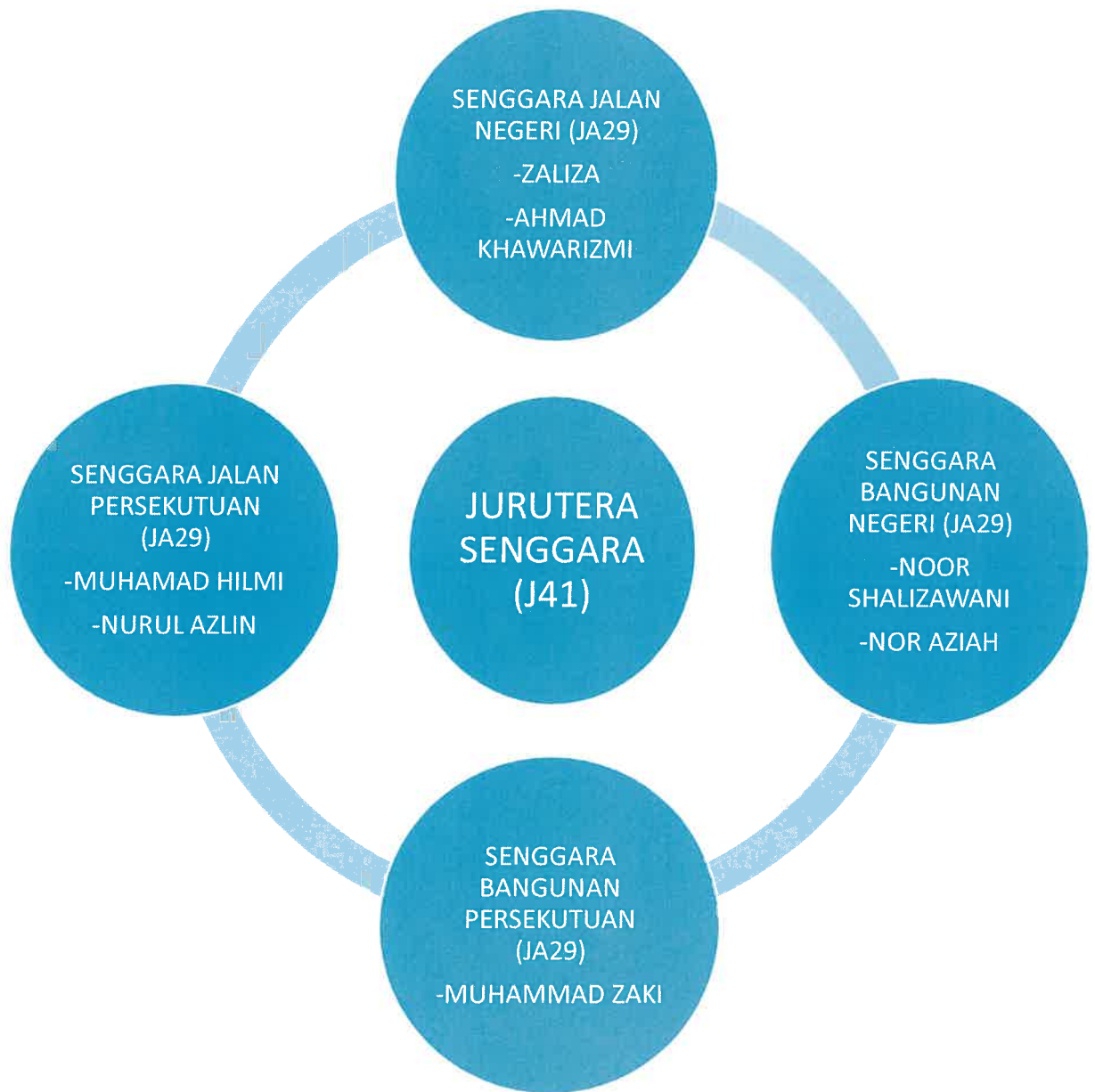


Figure 1.8 : JKR Sepang .Maintenance and store Organizational Structure

1.4 NATURE OF THE BUSINESS

Revealing the function and role of the Department to the public, it also aims to obtain information and feedback to the Department and other agencies easier and faster line with the government's aim to bring the country to the era of World Multimedia Super Corridor (MSC). Hence effort - this Committee in collecting information - information, data - data and pictures department in this Web site may disclose to the general functions and objectives of the JKR Sepang so that the public can find out the Department's role in contributing to national development.

As the government agency concerned with the current development of information technology through the Internet, the department does not want to miss at rival agencies - other governmental agencies to achieve the goal of producing leaders ELECTRONIC GOVERNMENT line with Vision 2020. In this regard I would be grateful if you can provide feedback and comments to us in order to improve the quality of our services.

1.5 PRODUCTS

1.5.1 PROJECT MANAGEMENT

1.5.1.1 Phase Preconstruction

Subject to the conditions no problem sites, the provision of adequate and scope of the projects approved by the Economic Planning Unit (EPU), JPM, pre-construction phase (planning to Letter of Acceptance issued) is within 12 to 15 months.

1.5.1.2 Construction Phase

Project Cost and Construction Period

Project	Cost and Construction Period		
a. Standard Plan: Building, Air force and Maritime	Below RM 500,000 <i>15 months</i>	RM 500,000 RM 5 million <i>24 months</i>	Above RM 5 million <i>36 bulan</i>
b. Standard Plan: Road and Infrastructure	Below RM 500,000 <i>9 months</i>	RM 500,000 - RM 20 million <i>24 months</i>	Above RM20 million <i>36 months</i>
c. Complex Project (Road, Slope, Building, Air force and Maritime ect.)	Completed within the costs agreed with the customer		

Table 1.5.1.2 Construction Project and Period Malaysia JKR Standard

1.5.2 South eastern ASSETS

1.5.2.1 Road

Corrective action while the holes (potholes) will be implemented within 1 day and permanent corrective action will be carried out within 3 days after receiving the complaint.

In the event of circumstances that disrupt traffic or public safety, such as fallen trees or landslides, action will be taken within 24 hours of being identified or complaints.

Each scheduled shutdown will be announced through mass media at least three days before the work is carried out.

1.5.2.2 Building

Complaints critical damage such as leaking water pipes, roof or sewage system will be taken within 1 day. Actions common fault repair within 1 month.

1.5.2.3 Mechanical

Complaint Type Description	Work Period
Early action on the complaint due to mechanical damage	1 day
Major repair work (major overhaul) / vehicle body repairs	3 Months
Small repair work for vehicles	3 Weeks
Replacement of Air Conditioning (chiller)	1 year
Lift Replacement	1 year

Table 1.5.2.3 Mechanical Complaint Type and Work Period

1.5.2.4 Electric

Complaint Type Description	Work Period
Early action due to Complaint and manage investigation from the damage	1 day
Take action regarding to the electrical failure	7 days

Table 1.5.2.4 Electrical Complaint Type and Work Period

1.5.3 TECHNICAL ADVICE

1.5.3.1 Slope Engineering

a) The ruins of the slope with high impact:

Site visits shall did within 1 day from the day of the incident.

The preliminary report prepared within 3 working days and the date of the site visit.

b) The ruins slope small impact:

Recommendation will be provided in the following periods:

The situation requires a site investigation - one month after the site investigation report obtained.

Circumstances which do not require site investigations - 2 weeks from the date of the site visit.

c) Technical Review Report Geotechnical of Local Authorities (PBT) is available within 1 week after the visit was made.

1.5.3.2 Maintenance Engineering

Government asset disposal approval decision is given within 14 days from the date of receipt of complete application recommendations.

Submit comments on the application development side of the road from the local authority within 2 weeks after receiving a complete application documents.

1.5.3.3 Forensic Engineering

a) The work of forensic structural, geotechnical and road:

Initial reports based on site investigation and laboratory testing of high-impact failure is provided within 5 working days and little impact in the last two weeks of the date of the site visit.

The final report is based on site investigation and laboratory tests are available within 2 months after receiving test results and monitoring.

b) For forensic work maritime and airport:

Initial reports based on site investigation and laboratory testing of high impact and low-impact provided within 7 working days from the date of the site visit

Initial reports based on site investigation and laboratory tests are available within 2 months after receiving test results and monitoring.

1.5.4 COMPLAINTS MANAGEMENT

1.5.4.1 Complaints Management Responsibilities under the JKR

Duration of action taken:

Management Complaint Description	Work Operation
Receiving Complaint	1 to 3 days
Respond to the Complaint	7 days
Closing Complaint	45 days

Table 1.5.4.1 Complaints Management Responsibilities

1.5.4.2 Complaints Management Responsibility Not under JKR (No Wrong Door policy)

Duration of action taken:

Management Complaint Description	Work Operation
Receiving Complaint	1 to 3 days
Respond to the Complaint	7 days

Table 1.5.4.2 Complaints Management Responsibilities Not Under JKR

1.5.5 FINANCIAL MANAGEMENT

Ensure the payment of bills and invoices is made within 14 days of receipt of complete documents Mars.

1.6 MARKET STRENGTH

As the government agency concerned with the current development of information technology through the Internet, the department does not want to miss at rival agencies - other governmental agencies to achieve the goal of producing leaders ELECTRONIC GOVERNMENT line with Vision 2020. In this regard I would be grateful if you can provide feedback and comments to us in order to improve the quality of our services.

1.7 CONCLUSION

Many things can be exposed to students when they joined developer, consultants or contractors. A lot we can learn from the company that we have joined for industrial training, we have been exposed to varies type of company that done civil engineering scope, it will lead us to choose the suitable job that we interested to. Thus, it is a must for students to join and understand the scope of their job.

CHAPTER 2.0: TRAINING ATTENDED

2.1 INTRODUCTION

In this period, Industrial Training had shown so many things to me throughout the industrial training activities. Although it only took 8 weeks from 15 July 2019 until 6 September 2018, and it is considered a short period, but overall I have been exposed to so many things compliance, no matter in academics or even soft skills.

2.2 EXPOSURE LEVEL

Week 1 (15th- 19th July)

Orientation session to all JKR Sepang Staff and Officer. Introduced to district engineer Mrs. Ir Salina Binti Hassan. Get to know 5 department which are Administration and Financial Department, Road Department, Maintenance and Store Department, Specialist Department and Building Department. My first task from Building Department was to study about the contract document for Maahan Intergrasi Tahfidz Sains Bagan Lalang, Klinik Cure & Care 1 Malaysia (C&C), Institut Kemajuan Desa (INFRA), Institut Penilaian Negara (INSPEN), and Ibu Pejabat Pertahanan Awam (IPPA) of undergoing project.

Week 2 (22th- 26th July)

This week I had proceed with the site visit, the Assistant Engineer Mr. Mohd Azhar Bin Mohd Khairi, JA 36 told about Site Routine Inspection and Routine Operation essentially. Beginning of the week, I get to attend two meeting which are briefing project Klinik Cure & Care 1 Malaysia (C&C) and project Maahan Intergrasi Tahfidz Sains Bagan Lalang. I learned how meeting held and site visit meeting process. I gained knowledge by identify the working site progress and the important of communication between client and contractor in all aspects. I also take chance to take part with the last stages of project life

cycle which is the official handover ceremony for project “Pembinaan Lapang Sasar Tertutup di Ibu Pejabat Kastam Diraja Malaysia, Dengkil”. This ceremony are very important to make sure the project are finished as in agreement.



Photo 1.2 Handover ceremony

Week 3 (29th July - 2th August)

I grab the opportunity to play role make Bridge Inspection for FT31 Sungai Buah bridge, FT32 Petron bridge and FT31 Plus bridge which all of them are Federal Road maintenance by Road Care. I also can differentiate the list of bridge member, the structural parts of bridge, the rating of crack on bridge and the bridge condition. I also got chance to involve with the inspection for maintenance work at Pusat Pemulihan Penagih Narkotik (PUSPEN), Dengkil. This inspection are to determine the building defect on 8 blocks of hostel, 1 block of clinic and 1 block of canteen.

Week 4 (5th - 9th August)

For this week, I've been involve with pre-submission inspection for project “Pembinaan Ibu Pejabat Pertahanan Awam (IPPA), Sungai Merab, Mukim Dengkil. This inspection are very important to make sure the project are handover with the good condition. All the defects need to be repaired and improved before the handover ceremony to decrease the defect liability period. I also got chance to attend the site evaluation meeting for project Klinik Cure & Care 1 Malaysia (C&C), Dengkil. I learned how meeting held and the

evaluation process. By the end of the week, I had been asked to do the non-conformance product (NCP) for project Maahan Intergrasi Tahfidz Sains Bagan Lalang.

Week 5 (12th - 16th August)

This week I had proceed with Maintenance and Store Department, the Assistant Engineer Mrs. Noor Shalizawani Binti Ahmad Hussaini JA 29 told about new site at kolej Vokasional Daerah Sepang, Selangor had defect on drainage system at the canteen area due to soil settlement. I learned how the contractor being choose for the maintenance project, type of defects on building and how to overcome the defects. I also got chance to do self-learning where I can understand more JKR specification standard by reading and discussing with the supervisor.



Photo 1.3 Cracked drainage

Week 6 (19th - 23th August)

I get opportunity to go for laboratory visit at Institut Kerja Raya Malaysia (IKRAM) where samples of coring along Jalan B13 were collected for testing purpose. I got exposed to the type of test, how the asphalt sample tested and the important of the test to the existing road. I also involve myself with the product briefing by the chairman of NBT Base & Pave Sdn. Bhd. I gained knowledge by understand the need of new green method and materials in construction.

Week 7 (26th - 30th August)

In this week, I grab the opportunity to play role by visiting the piling work at project Institut Penilaian Negara (INSPEN). I streak opportunity to see the step of installation of piling, pile cap, pile plug and stump, and how the load are transfer from super structure into foundation and earth. . I have involve with the last stages of project life cycle which is the official handover ceremony for project “Pembinaan Ibu Pejabat Pertahanan Awam (IPPA), Sungai Merab, Mukim Dengkil”. I learned the need of the final stage of project life cycle.



Photo 1.4 : Piling Installation



Photo 1.5 : Pilecap and Stumb Installation

Week 8 (2th - 6th September)

The last week of industrial training JKR Sepang, I got exposed to pavement road process for five days. The process observed the layering of wearing course at Jalan FT31 along 2 kilometers. My engineer, Mrs. Ir Siti Shazwani Binti Mohd Nawi told me about the process for road premix layering detail. I do some note and bear in mind about the process and the standard operation procedure for premix layer. I also involve with the Maintain load test (MLT) that held at project Institut Penilaian Negara (INSPEN). I gained knowledge by identify method of testing and the important of this test to the piling work.



Photo 1.6 : Layering of wearing course

2.3 CONCLUSION

Many things I being involve in this Industrial Training along 8 weeks from 15 July 2019 until 6 September 2018. It is considered a short period, but overall I have been exposed to so many things compliance, no matter in academics or even soft skills. I get experience in both office and site environment. It is good and help me to identify which environment that I interested more either doing designing jobs in the office or staying at site and being a site engineer. Lastly, I gained knowledge by identify the method, by play role and understanding the need of the work.

CHAPTER 3.0: TECHNICAL REPORT

3.1 INTRODUCTION

Jabatan Kerja Raya Daerah Sepang have doing their best to fulfil their job as Superintendent Officer that responsible for daily scheduling, supervising all activities and tasks and ensuring the safety and compliance of the site. These can be seen when JKR do site inspection and daily report to make sure the site progress are working by follow the schedule as agreed. Site visit are held in the optimum condition by assign the site office to review, observe and inspect the site progress. JKR Sepang have right to disqualified and stop the site operation to the contractor with their terrible performance.

3.2 PROBLEM ENCOUNTERED AND HOW OVERCOME IT

3.3.1 Major problems for contractors, including the following:

There are few major and minor problem during this Routine Operation. During this routine sometime a few error done by the management, consultant or the contractor that responsible due to this project. This problem must be solve. Management cannot be irresponsible with this problem because it is related to the cost and time of the project.. These are few problem can take as analysis :

- **Few drawing need to redraw due to an issues**
- **Project progress are out of schedule**
- **Resident engineer doesn't playing the role**
- **The low quality of material used**
- **The low of quality work done**

3.3.2 The Solutions

Due to several analysis and observation. Management have done to construct the best operation procedure to make the site progress at the optimum point. These can be seen

when Malaysia JKR manage to declare objectives of each routine operation. In addition the management, consultant and contractor must playing their role. To ensure the work done properly these are few solution can be do as guideline:

- ✓ Management ensure the consultant and contractor playing their role by any situation wether routine, anually or emergency case scale.
- ✓ Management check the , consultant and contractor schedule and take an action due to out of date work operation. Hence disqualified any worst contractor.
- ✓ JKR officer do site visit to ensure their concession workers are doing the task properly based on JKR standard operation procedure.
- ✓ Always held a site meeting progress between management, consultant and contractor to identify the problem inside the site.
- ✓ Management, consultant and contractor need to check the quality of material before use it in construction.

3.3 EXPERIENCE GAINED

3.3.1 Site Inspection

Site inspection is part of Building Department task. The objective are to assure all site work are following Malaysia JKR specification standard and the drawing as agreed. Previously it is fully operated by JKR every district. Some of the project are fully observed and inspect by the consultant, hence the JKR will only Recently, government take an action for hand over the routine inspection to the concession to keep maintenance federal trunk and state road.

3.3.2 Job Scope

The Contractor need to provide at his own risk and cost of all materials, scaffolding, tools, plant, labour, transport, water, light and everything else necessary for the construction order to finished the project with the approval of the Superintendent Officer.

Work Procedure :-

1. Oversee operations on day-to-day basis
2. Ensure that work is done safety, on time and within budget and to the right quality standards
3. Responsible for part of a project and report to Superintendent Officer
4. Monitor progress, oversee delivery of materials and carry out safety checks
5. Keep in close contact with site team at all times to ensure the work progress
6. Keep client updated regularly on progress
7. Ensure that client's specifications and requirements are met, reviewing progress and liaising with quantity surveyors to monitor costs
8. Maintaining quality control procedures

3.4 CONCLUSION

Jabatan Kerja Raya Sepang have doing their best to make sure the work is done safety, on time and within budget and using the right quality standards. These can be seen when JKR do inspection to oversee operations on day-to-day basis. Inspection Operations are held in the optimum condition by assign site officer (JKR staff) to review, observe and inspect the site progress. In addition, management have right to disqualified contractor with their terrible performance.

CHAPTER 4.0 CONCLUSION

4.1 INTRODUCTION

This Industrial Training Program is a smart move to produce a skilled and professional workforce in the future. The main purpose of this Industrial Training bring benefits to students to face the real world in the future and know the real scope of engineering world. These goals I have achieved throughout my training at Jabatan Kerja Raya Sepang. During that time, I was exposed to a real work environment and I could see which part I should improve more, and I have learned a lot of things that I don't get in the class, especially soft skills that would help me better adapt to any other industry or company upon graduation.

4.2 LESSONS LEARNED

During working hour in the office, all of the workers are working hard and concentrate on their task; it makes us seldom to communicate with them. Thus, I had improved and practiced my own confidence and communication skill. Moreover, when we are at construction site, we learned how to communicate with the foreign workers and all the terms they used in work that is actually quite different with the terms we learned in the classroom. Besides, when I joined client- consultant meeting or site meeting I learned how to conduct a meeting in the future.

When I starts involve in working environment, I starts to see many side of view such as view as an employer, employee, clients and more. People always complain about this and that but they can never see from another site of view. What I see here is, all of these situations make us to know human better.

4.3 KNOWLEDGE GAINED

Pavement Field & Laboratory Testing

The Laboratory of Pavement Engineering are related to the design-construction, maintenance, reinforcement, and management of road and airport pavements and railway infrastructure materials. Other research activities involve pavement materials and mix design, including the laboratory assessment of their mechanical behavior. The Laboratory gives specific importance to the estimation of the bearing capacity of pavements and mixtures with emphasis assigned to Non Destructive Testing (NDT) methods, as well as quality assurance of materials and pavement mixtures. Materials testing system for dynamic and resilient modulus of soils, aggregate, and asphalt.

1. Core sampling of road pavements is generally undertaken to determine construction and allow further site analysis of unbound material or laboratory analysis of the materials. Generally core samples of nominal 150mm diameter are extracted at positions of known defects and/or at regular spacing.



Photo 1.7 : Coring test

2. Most private laboratories use the Marshall method because it is a proven method and requires relatively light, portable and inexpensive equipment. Like the Hveem and Superpave methods, the Marshall method has been proven to produce quality HMA from which long-lasting pavements can be constructed. This section briefly discusses the Marshall mix design method.



Photo 1.8: Marshall Hammer



Photo 1.9: Marshall Stability



Photo 1.10: Marshall Samples

3. Purpose of Extraction are to quantify asphalt content in mixture, determine aggregate gradation of mixture and volumetric mix design, QA, forensic investigation using Centrifuge Extraction Apparatus. After Asphalt Extraction, asphalt content of final mass of sample and amount of asphalt binder can be determine, extracted used to calculate asphalt content. This testing extracted aggregate are to determine the gradation and consensus properties.



Photo 1.11: Methylene chloride use to separate the bitumen and aggregate

4.4 SUITABILITY OF ORGANIZATION

Nowadays, we heard many post-graduates were unemployed. It might be because of inadequate experience or they are being too choosy. That's why it is important for diploma students to have industrial training so that they could prove their ability and in the future they might be offered for a position in the organization, and this organization is really suitable for practical students to have their industrial training.

In addition, this organization is good in many aspects, such as they gave suitable tasks for students to finish, they even considered the results that we have done and corrected them patiently. Besides, the senior engineers are willing to share their knowledge and never feel tired to answer the questions.

Nonetheless, they provide a suitable rate of allowance for industrial training's students.

In this organization, students get experience in both office and site environments. It is good and helps the student to identify which environment they are interested in either doing designing jobs in the office or staying at site and being a site engineer.

Nevertheless, working in this organization can train us to apply all the knowledge we had learned in the class before, means all scope of designing works we have to do, no matter substructure or superstructure. If we work in a big company, we might have to stay at a specific department and only apply some of the knowledge.

Thus, it is suitable for students to come back to work with this company. After all, students that have been offered to come back should take that opportunity. Last but not least, work hard than you think you did yesterday.

4.5 LIMITATIONS AND RECOMMENDATIONS

For my opinion, the industrial training should have brought benefit for the students. We really hope that each student gains knowledge and experience throughout this 8 weeks of industrial training. It is such a waste if students themselves don't know how to appreciate it. However, there are still many aspects that can be improved.

REFERENCE

- Standard specifications for Building Works 2014 (JKR 20800-0183-14).
- Jalan Oh Jalan. Kenapa Engkau Rosak (JKR 21601-0016-13)
- Anda Tak Perlu Tahu, Bahagian Jalan dan Penyelenggaraan Jalan Persekutuan dan Jalan Negeri Semenanjung Edisi Kedua Jabatan Kerja Raya, 2010.
- <http://pavnet.civil.ntua.gr>
- <http://www.onasphalt.org>

APPENDIX



UiTM.FKA.LI-01

INDUSTRIAL TRAINING PLACEMENT INFORMATION FORM

(Borang Matlumat Penempatan Latihan Industri)

A) STUDENT INFORMATION *(Matlumat Pelajar)*

Name *(Nama)* : **KHATIJAH BINTI KAMARUZAMAN** : **2016185855**
Programme *(program)* : **DIPLOMA KEJURUTERAAN AWAM** : **961121-12-5612**
Session *(sesi)* : : **LIMA (5)**
Address *(alamat)* :
Phone *(Telefon)* : - Mobile No. *(No. h/p)* : **013-2536137**
Email *(emel)* : **khatijahkz@gmail.com**

B) HEIRS *(Waris)*

Name *(Nama)* : **FATIMAH BINTI KAMARUZAMAN**
Address *(alamat)* : **NO 14, JALAN MURNI 6/12, TAMAN LANGAT MURNI, 42700, BANTING SELANGOR**
Phone *(Telefon)* : - Mobile No. *(No. h/p)* : **014-5550611**

C) PLACEMENT OPTIONS *(Pilihan penempatan)*

No. (Bil.)	State (Negeri)	City (Bandar)
1.	SELANGOR DARUL EHSAN	SEPANG
2.		

C) ORGANIZATION INFORMATION *(Matlumat organisasi)*

Name *(Nama)* : **JABATAN KERJA RAYA DAERAH SEPANG**
Address *(alamat)* : **JKR DAERAH SEPANG, KOMPLEKS PEJABAT-PEJABAT, KERAJAAN DAERAH SEPANG,
BANDAR BARU SALAK TINGGI, 43900 SEPANG, SELANGOR.**

Contact Person *(Pegawai yang boleh dihubungi)* : **SHAHIRAH BINTI AHMAD NORDIN**
Designation *(Jawatan)* : **URUSETIA LATIHAN INDUSTRI**
Phone *(Telefon)* : **03-5545 9800 samb. 3236** Mobile No. *(No. h/p)* :
Fax No. *(No. Fax)* : Email *(emel)* : **shahirahnordin95@gmail.com**

shahirah

1 JULY 2019

Office use:	Checked by:	Approved by:
-------------	-------------	--------------

Signature *(Tandatangan)*

Date *(tarikh)*

UITM.FKA.LI-02

Surat Kami : 100-UITMKPG(FKA14/3/4)
Tarikh : 5 April 2019

**Jabatan Kerja Raya Daerah Sepang,
Kompleks Pejabat-Pejabat,
Kerajaan Daerah Sepang,
Bandar Baru Salak Tinggi,
43900 Sepang,
Selangor Darul Ehsan.**

Tuan,

**PERMOHONAN PENEMPATAN LATIHAN INDUSTRI BAGI PROGRAM DIPLOMA
KEJURUTERAAN AWAM (EC110)**

Nama: : Khatijah Binti Kamaruzaman
No. Kad Pengenalan: : 961121-12-5612
No. Pelajar UiTM : 2016185855
Program : Kejuruteraan Awam
Semester : 5

2. Saya dengan ini mengesahkan bahawa butir-butir peribadi dan akademik di atas adalah seorang pelajar di Fakulti Kejuruteraan Awam, UiTM , Pasir Gudang.

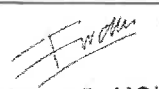
3. Sukacitanya jika pihak Tuan dapat menerima pelajar tersebut untuk menjalani Latihan Industri untuk tempoh **LAPAN (8)** minggu bermula pada **8 Julai 2019** sehingga **1 September 2019** sebagai pra-syarat untuk lulus. Sebagai makluman, pelajar dilindungi oleh insurans sepanjang tempoh latihan.

4. Jika Tuan bersetuju untuk penempatan pelajar ini, saya memohon jasa baik pihak Tuan untuk memaklumkan kepada pihak saya dengan melengkapkan "Borang Pengesahan Penerimaan" (lampiran UITM.FKA.LI-04) dalam tempoh **DUA (2)** minggu daripada tarikh surat ini. Jika tidak ada sebarang maklum balas daripada pihak Tuan, permohonan ini dianggap **TIDAK BERJAYA**.

5. Latihan industri yang akan dijalankan selama 8 minggu adalah sangat pendek, tetapi ia sangat bermakna untuk membantu Universiti dalam menghasilkan bakal jurutera yang berdedikasi, cekap dan berdaya saing selepas tamat pengajian.

6. Fakulti Kejuruteraan Awam UiTM Kampus Pasir Gudang amat menghargai kerjasama pihak Tuan dalam semua hal yang berkaitan dengan latihan industri pelajar Fakulti Kejuruteraan Awam UiTM Kampus Pasir Gudang.
Terima kasih.

Yang benar,



MOHD FIRDAUS B. MOHD AKBAR
KOORDINATOR LATIHAN INDUSTRI
FAKULTI KEJURUTERAAN AWAM
KAMPUS PASIR GUDANG
UITM JOHOR

KOOR. LI FKA UITM PG

s.k 1) Ketua Pusat Pengajian Kejuruteraan Awam, UiTM Pasir Gudang

RESUME



PERSONAL DETAILS

Name : Khatijah Binti Kamaruzaman
 Identification No. : 961121-12-5612
 Date of Birth : 21 November 1996
 Place of Birth : Hospital Queen Elizabeth, Kota Kinabalu
 Age : 23 Years Old
 Sex : Female
 Marital Status : Single
 Race : Malay
 Religion : Islam
 Citizenship : Malaysian
 Postal Address : No 14, Jalan Murni 6/12, Taman Langat Murni, 42700 Banting, Selangor.
 Mobile Phone No. : 013-2536137
 E-mail : khatijahkz@gmail.com

EDUCATIONAL BACKGROUND

Year / Period	Institution	Level	Achievement / Award
2019	UiTM Pasir Gudang	Diploma in Civil Engineering	2.90
2016	UiTM Jengka	Pra Diploma Sains	3.43
2013	SMK Danau Kota	SPM	2A

EXTRA-CURRICULAR ACTIVITIES

Year / Period	Programme / Activity	Location	Participation
2018	Volleyball tournament	UiTM	Player
2018	Netball tournament	UiTM	Player
2017	Kursus Kepimpinan Profesional	D'Village Resort, Melaka	Participants

WORKING EXPERIENCE

Year / Period	Organisation	Designation	Responsibilities
2018	Dunkin' Donuts	Barista	Served the best donut & drinks to customers
2016	Kenny Rogers Roasters	F&B Staff	Do all position which are cashier, server, frontline, and utility.
2014	The Maths Clinic Tuition Centre	Administrator	Administrative work

SKILLS

Language skills :

Language	Written	Speaking
English	Good	Good
Malay	Excellent	Excellent

Computer Literacy: Programming C++, Microsoft Office, AutoCAD**Other skills** : Basic skills in Civil Engineering**HOBBIES**

No.	Description
1.	Online Business
2.	Multimedia (editing)

ACADEMIC REFEREES

- | | |
|--|---|
| <p>1. Name : Nur Muizzah Bt Nawi
 Designation : Lecturer
 Organisation : Fakulti Kejuruteraan Awam, UiTM Cawangan Johor Kampus Pasir Gudang</p> <p>Tel. No. : 0176240627
 Email : nmuizzah@uitm.edu.my</p> | <p>2. Name : Noraini Binti Sulaiman
 Designation : Manager of Dunkin' Donuts
 Organisation : Dunkin' Donuts Malaysia</p> <p>Tel. No. : 0173821584</p> |
|--|---|

UiTM.FKA.LI-04

Rujukan Kami : 100-UiTMKPG(FKA14/3/4)
Tarikh : 5 April 2019

Koordinator Latihan Industri
Fakulti Kejuruteraan Awam
UiTM Johor Kampus Pasir Gudang,
Jalan Purnama 81750 Masai Johor.
(u/p: **MOHD FIRDAUS B. MOHD AKHBAR**, firdausakhbar@gmail.com)
Fax: 07-3818141

PENGESAHAN PENERIMAAN PELAJAR EC110 UNTUK LATIHAN INDUSTRI TAHUN 2019

Merujuk kepada surat/faks Tuan yang bertarikh 5 April 2019 adalah disahkan pihak kami ***menerima / tidak menerima** pelajar Tuan bernama **Khatijah Binti Kamaruzaman** dan nombor pelajar **2016185855** untuk menjalani latihan industri mulai **8 Julai 2019** hingga **1 September 2019 (8 minggu)** di organisasi /syarikat kami.

Butiran Latihan:

Tarikh melaporkan : **8/3/19**
Masa melaporkan : **9-00 pagi**
Alamat melaporkan / : **JKR SEPANG**
ditempaikan

Kami juga bersedia untuk menyediakan kemudahan berikut**:

1. Penginapan
2. Pengangkutan
3. Makanan dan minuman
4. Elaun bulanan
5. Kemudahan lain (sila nyatakan jika ada):

Ada	Tiada
	<input checked="" type="checkbox"/>
	<input checked="" type="checkbox"/>
	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	

Sekian, terima kasih.

Yang benar,


AZHAR B. HJ. ABU BAKAR
Penolong Jurutera
Bah. Pengurusan Korporat

..... Cawangan Perancangan Aset Bersepadu

(NAMA DAN COPO ORGANISASI/SYARIKAT)

Sila faks / emailkan kembali surat ini kepada Fakulti Kejuruteraan Awam, UiTM Pasir Gudang selewat-lewatnya 2 minggu dari tarikh surat permohonan ini.

* Potong mana tidak berkenaan.

**sila tandakan (✓) bagi yang berkaitan

CURRENT LOCATION INFORMATION FORM
(*Borang Matlumat Penempatan Semasa*)


A) STUDENT INFORMATION (*Matlumat Pelajar*)

Name (*Nama*) : KHATIJAH BINTI KAMARUZAMAN **UiTM No.** (*No. UiTM*) : 2016185855
Programme (*program*) : DIPLOMA KEJURUTERAAN AWAM **ID No.** (*No. k/p*) : 961121-12-5612
Session (*sesi*) : SESI 2 2018/2019 **Semester** (*Semester*) : ENAM (6)
Address (*alamat*) : _____
Phone (*Telefon*) : _____ **Mobile No.** (*No. h/p*) : 013-2536137
Email (*emel*) : khatijahkz@gmail.com

B) ORGANIZATION INFORMATION (*Matlumat organisasi*)

Name (*Nama*) : JABATAN KERJA RAYA DAERAH SEPANG
Address (*alamat*) : JKR DAERAH SEPANG, KOMPLEKS PEJABAT-PEJABAT, KERAJAAN DAERAH SEPANG,
BANDAR BARU SALAK TINGGI, 43900 SEPANG, SELANGOR.

Contact Person (*Pegawai yang boleh dihubungi*) : ENCIK MOHD ZAHRI BIN SEMAN
Designation (*Jawatan*) : JURUTERA BANGUNAN
Phone (*Telefon*) : 03 8706 1040 **Mobile No.** (*No. h/p*) : _____
Fax No. (*No. Fax*) : 03 8706 1666 **Email** (*emel*) : sepang.jkr@1govuc.gov.my


MOHD ZAHRI BIN SEMAN
Jurutera Awam (Bangunan)
JKR SEPANG
Signature (*Tandatangan*)

18 JULY 2019
Date (*tarikh*)

* **Kindly mail this form to the Faculty of Civil Engineering, UiTM Pasir Gudang via fax/post/email within a week to:**
Industry Training Coordinator,
Faculty of Civil Engineering
Universiti Teknologi MARA
Cawangan Johor Kampus Pasir Gudang
Jalan Purnama 81750 Masai Johor

Office use:	Checked by:		Approved by:	
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(u/p: MOHD FIRDAUS B. MOHD AKHBAR, firdausakhbar@gmail.com)

UiTM.FKA.LI-05

Our Reference: 100-UiTMKPG(FKA14/3/4)

Date: 17 July 2019

To: MOHD FIRDAUS B. MOHD AKHBAR
Industry Training Coordinator,
Faculty of Civil Engineering
Universiti Teknologi MARA
Cawangan Johor Kampus Pasir Gudang
Jalan Purnama 81750 Masai Johor

Dear Sir / Madam

**INDUSTRIAL TRAINING REPORT DUTY VERIFICATION
SESSION 2 2018/2019**

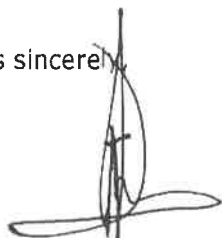
The above matter is referred.

Please be informed that the following students has reported for Industrial Training to our company / organization on **JABATAN KERJA RAYA DAERAH SEPANG** (completed by the company/ organization) as stated.

STUDENT NAME	: KHATIJAH BINTI KAMARUZAMAN
STUDENT NO.	: 2016185855
ID NO.	: 961121-12-5612
PROGRAMME	: DIPLOMA IN CIVIL ENGINEERING
SEMESTER	: SIX (6)
REPORT DATE	: 15 JULY 2019
INDUSTRIAL TRAINING ADDRESS	: JKR DAERAH SEPANG, KOMPLEKS PEJABAT-PEJABAT, KERAJAAN DAERAH SEPANG, BANDAR BARU SALAK TINGGI, 43900 SEPANG, SELANGOR.
DURATION / PERIOD	: 8 WEEKS

Thank you.

Yours sincerely,



.....
(Signature and Company / Organization Stamp)
Mohd Zahri bin Selman
Fakulti Kejuruteraan Awam (Bangunan)
JKR SEPANG

PROGRESS REPORT FOR INDUSTRIAL TRAINING
(Industrial Supervisors Evaluation Form)

A) Student Information

Name : _____ UiTM No. : _____
 Programme : _____ ID No. : _____
 Session : _____ Semester : _____
 Date of Commencement : _____ Date of Completion : _____

B) Organization Information

Organization : _____
 Name of Supervisor: _____
 Designation : _____

C) Faculty Supervisor Information

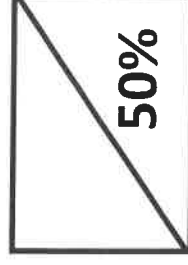
Name : _____

D) Marks

No.	Criteria	CO1-PO5	CO2-PO8	CO3-PO4	CO4-PO2	TOTAL MARKS
1.	Attendance verification	/5				
2.	Punctuality and Attitude	/5				
3.	Quality of work	/5				
4.	Learning capability		/5			
5.	Application of knowledge		/5			
6.	Co-operation			/5		
7.	Discussion with supervisor/co-workers				/5	
8.	Communication Ability				/5	
9.	Oral and written presentation skills			/5		
10.	Organization skills				/5	
11.	Scope of work and relate to theoretical knowledge	/5				
12.	Safety	/5				
CO-PO MARKS		/25	/10	/10	/15	/60

Signature & Official Stamp

Date



No.	Criteria	5 (Excellent)	4 (Good)	3 (Satisfactory)	2 (Average)	1 (Weak)
1.	Attendance verification (CO1 – PO5)	<input type="checkbox"/> Constantly verified by supervisor.	<input type="checkbox"/> Satisfactory verified by supervisor.	<input type="checkbox"/> Moderately verified by supervisor.	<input type="checkbox"/> Fairly verified by supervisor.	<input type="checkbox"/> No verification by supervisor.
2.	Punctuality and Attitude. (CO1-PO5)	<input type="checkbox"/> Punctual with outstanding adherence to rules and regulations	<input type="checkbox"/> Punctual with good adherence to rules and regulations	<input type="checkbox"/> Punctual with satisfactory adherence to rules and regulations	<input type="checkbox"/> Moderate punctuality with minimal adherence to rules and regulations	<input type="checkbox"/> Poor punctuality and unable to adhere to rules and regulations
3.	Quality of work (task assigned). (CO1-PO5)	<input type="checkbox"/> Accomplish the tasks before the deadline with no correction	<input type="checkbox"/> Accomplish the tasks on time with no correction	<input type="checkbox"/> Accomplish the task on time with minimum correction	<input type="checkbox"/> Able to accomplish part of the tasks with delay	<input type="checkbox"/> Fail to accomplish tasks assigned
4.	Learning capability. (CO2-PO8)	<input type="checkbox"/> Demonstrate outstanding measures and proactive learning capability	<input type="checkbox"/> Able to act and learn with minimum supervisions	<input type="checkbox"/> Able to learn with supervisions	<input type="checkbox"/> Able to learn with substantial supervision	<input type="checkbox"/> Unable to learn despite with supervision
5.	Application of knowledge. (CO2-PO8)	<input type="checkbox"/> Excellent demonstration of theoretical knowledge application at work place	<input type="checkbox"/> Able to apply substantial amount of theoretical knowledge at work place	<input type="checkbox"/> Able to apply acceptable amount of theoretical knowledge at work place	<input type="checkbox"/> Able to apply minimal theoretical knowledge at work place	<input type="checkbox"/> Unable to apply theoretical knowledge at work place
6.	Co-operation . (CO3-PO4)	<input type="checkbox"/> Very proactive in giving co-operation	<input type="checkbox"/> Always give full co-operation when required	<input type="checkbox"/> Always give satisfied co-operation	<input type="checkbox"/> Give less co-operation	<input type="checkbox"/> Fail to show any cooperation at all
7.	Frequency of discussion with supervisor/co-workers. (CO4-PO2)	<input type="checkbox"/> At least 8 times	<input type="checkbox"/> At least 6 times	<input type="checkbox"/> At least 4 times	<input type="checkbox"/> At least twice	<input type="checkbox"/> Never have any discussion
8.	Communication Ability. (CO4-PO2)	<input type="checkbox"/> Able to communicate effectively with co-workers	<input type="checkbox"/> Able to communicate with co-workers	<input type="checkbox"/> Able to communicate satisfactorily with co-workers	<input type="checkbox"/> Poor communication with co-workers	<input type="checkbox"/> Unable to communicate with co-workers

No.	Criteria	5 (Excellent)	4 (Good)	3 (Satisfactory)	2 (Average)	1 (Weak)
9.	Oral and written presentation skills. (CO3 – PO4)	<input type="checkbox"/> Able to express and present very fluently and very convincing.	<input type="checkbox"/> Able to express and present fluently and convincing.	<input type="checkbox"/> Able to express and present quite fluently and quite convincing.	<input type="checkbox"/> Able to express and present clearly but with minimum fluently.	<input type="checkbox"/> Unable to express and present clearly and lack of fluency.
10.	Organization skills in individual and group effectiveness and its activity. (CO4-PO2)	<input type="checkbox"/> Well-explained on background and workplace activity	<input type="checkbox"/> Substantial explanation on background and workplace activity	<input type="checkbox"/> Acceptable explanation on background and workplace activity	<input type="checkbox"/> Able to explain background and workplace activity with minimal clarity	<input type="checkbox"/> Unable to explain background and workplace activity
11.	Ability to explain scope of work and relate to theoretical knowledge. (CO1-PO5)	<input type="checkbox"/> Well-explained the scope of work and able to relate to theoretical knowledge	<input type="checkbox"/> Substantial explanation on the scope of work and able to relate to theoretical knowledge	<input type="checkbox"/> Acceptable explanation on the scope of work with minimal relationship to theoretical knowledge	<input type="checkbox"/> Minimal explanation on the scope of work with minimal relationship to theoretical knowledge	<input type="checkbox"/> Unable to explain the scope of work and fail to relate to theoretical knowledge
12.	Safety. (CO1-PO5)	<input type="checkbox"/> Always adhere to safety requirements	<input type="checkbox"/> Adhere to safety requirements most of the time	<input type="checkbox"/> Adhere to safety requirements satisfactorily	<input type="checkbox"/> Minimal adherence to safety requirements	<input type="checkbox"/> Unable to adhere To safety requirements

*Please tick (✓) at appropriate scale

Percentage from Progress Report = Total Marks Earned From Progress Report X 50%

60

= %

PROGRESS REPORT FOR INDUSTRIAL TRAINING
(Faculty Supervisors Evaluation Form)

A) Student Information

Name : _____ UTM No. : _____
 Programme : _____ ID No. : _____
 Session : _____ Semester : _____
 Date of Commencement : _____ Date of Completion : _____

B) Organization Information

Organization : _____
 Name of Supervisor: _____
 Designation : _____

C) Faculty Supervisor Information

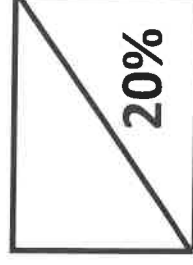
Name : _____

D) Marks

No.	Criteria	CO1-PO5	CO2-PO8	CO3-PO4	CO4-PO2	TOTAL MARKS
1.	Attendance verification	/5				
2.	Punctuality and Attitude	/5				
3.	Quality of work	/5				
4.	Learning capability		/5			
5.	Application of knowledge		/5			
6.	Co-operation			/5		
7.	Discussion with supervisor/co-workers				/5	
8.	Communication Ability				/5	
9.	Oral and written presentation skills			/5		
10.	Organization skills				/5	
11.	Scope of work and relate to theoretical knowledge	/5				
12.	Safety	/5				
CO-PO MARKS		/25	/10	/10	/15	/60

Signature & Official Stamp
(Faculty Supervisors)

Date



No.	Criteria	5 (Excellent)	4 (Good)	3 (Satisfactory)	2 (Average)	1 (Weak)
1.	Attendance verification (CO1 – PO5)	<input type="checkbox"/> Constantly verified by supervisor.	<input type="checkbox"/> Satisfactory verified by supervisor.	<input type="checkbox"/> Moderately verified by supervisor.	<input type="checkbox"/> Fairly verified by supervisor.	<input type="checkbox"/> No verification by supervisor.
2.	Punctuality and Attitude. (CO1-PO5)	<input type="checkbox"/> Punctual with outstanding adherence to rules and regulations	<input type="checkbox"/> Punctual with good adherence to rules and regulations	<input type="checkbox"/> Punctual with satisfactory adherence to rules and regulations	<input type="checkbox"/> Moderate punctuality with minimal adherence to rules and regulations	<input type="checkbox"/> Poor punctuality and unable to adhere to rules and regulations
3.	Quality of work (task assigned). (CO1-PO5)	<input type="checkbox"/> Accomplish the tasks before the deadline with no correction	<input type="checkbox"/> Accomplish the tasks on time with no correction	<input type="checkbox"/> Accomplish the task on time with minimum correction	<input type="checkbox"/> Able to accomplish part of the tasks with delay	<input type="checkbox"/> Fail to accomplish tasks assigned
4.	Learning capability. (CO2-PO8)	<input type="checkbox"/> Demonstrate outstanding measures and proactive learning capability	<input type="checkbox"/> Able to act and learn with minimum supervisions	<input type="checkbox"/> Able to learn with supervisions	<input type="checkbox"/> Able to learn with substantial supervision	<input type="checkbox"/> Unable to learn despite with supervision
5.	Application of knowledge. (CO2-PO8)	<input type="checkbox"/> Excellent demonstration of theoretical knowledge application at work place	<input type="checkbox"/> Able to apply substantial amount of theoretical knowledge at work place	<input type="checkbox"/> Able to apply acceptable amount of theoretical knowledge at work place	<input type="checkbox"/> Able to apply minimal theoretical knowledge at work place	<input type="checkbox"/> Unable to apply theoretical knowledge at work place
6.	Co-operation . (CO3-PO4)	<input type="checkbox"/> Very proactive in giving co-operation	<input type="checkbox"/> Always give full co-operation when required	<input type="checkbox"/> Always give satisfied co-operation	<input type="checkbox"/> Give less co-operation	<input type="checkbox"/> Fail to show any cooperation at all
7.	Frequency of discussion with supervisor/co-workers. (CO4-PO2)	<input type="checkbox"/> At least 8 times	<input type="checkbox"/> At least 6 times	<input type="checkbox"/> At least 4 times	<input type="checkbox"/> At least twice	<input type="checkbox"/> Never have any discussion
8.	Communication Ability. (CO4-PO2)	<input type="checkbox"/> Able to communicate effectively with co-workers	<input type="checkbox"/> Able to communicate with co-workers	<input type="checkbox"/> Able to communicate satisfactorily with co-workers	<input type="checkbox"/> Poor communication with co-workers	<input type="checkbox"/> Unable to communicate with co-workers

No.	Criteria	5 (Excellent)	4 (Good)	3 (Satisfactory)	2 (Average)	1 (Weak)
9.	Oral and written presentation skills. (CO3 – PO4)	<input type="checkbox"/> Able to express and present very fluently and very convincing.	<input type="checkbox"/> Able to express and present fluently and convincing.	<input type="checkbox"/> Able to express and present quite fluently and quite convincing.	<input type="checkbox"/> Able to express and present clearly but with minimum fluently.	<input type="checkbox"/> Unable to express and present clearly and lack of fluency.
10.	Organization skills in individual and group effectiveness and its activity. (CO4-PO2)	<input type="checkbox"/> Well-explained on background and workplace activity	<input type="checkbox"/> Substantial explanation on background and workplace activity	<input type="checkbox"/> Acceptable explanation on background and workplace activity	<input type="checkbox"/> Able to explain background and workplace activity with minimal clarity	<input type="checkbox"/> Unable to explain background and workplace activity
11.	Ability to explain scope of work and relate to theoretical knowledge. (CO1-PO5)	<input type="checkbox"/> Well-explained the scope of work and able to relate to theoretical knowledge	<input type="checkbox"/> Substantial explanation on the scope of work and able to relate to theoretical knowledge	<input type="checkbox"/> Acceptable explanation on the scope of work with minimal relationship to theoretical knowledge	<input type="checkbox"/> Minimal explanation on the scope of work with minimal relationship to theoretical knowledge	<input type="checkbox"/> Unable to explain the scope of work and fail to relate to theoretical knowledge
12.	Safety. (CO1-PO5)	<input type="checkbox"/> Always adhere to safety requirements	<input type="checkbox"/> Adhere to safety requirements most of the time	<input type="checkbox"/> Adhere to safety requirements satisfactorily	<input type="checkbox"/> Minimal adherence to safety requirements	<input type="checkbox"/> Unable to adhere To safety requirements

*Please tick (✓) at appropriate scale

Percentage from Progress Report = Total Marks Earned From Progress Report X 20%

60

= %