## UNIVERSITI TEKNOLOGI MARA PERAK BRANCH

# OPEN YARD MOBILE RACKING SYSTEM FOR PRECAST LIGHTWEIGHT PANEL STORAGE

## MUHAMMAD HAFIIZHUDDIN NAIM BIN CHE MOHD SALEH

Innovation project report submitted in partial fulfillment of the requirement for the degree of **Bachelor of Science (Hons.) Construction Technology** 

Department of Built Environment and Technology Studies, FSPU

**AUTHOR'S DECLARATION** 

I in the name of MUHAMMAD HAFIIZHUDDIN NAIM BIN CHE MOHD SALEH,

declaring that the work that being completed in this innovation project report was

carried out in accordance with the regulation of Universiti Teknologi MARA. This

innovation project is the original and is the results of my own work, unless otherwise

indicated or acknowledge as referenced work. I can ensure that this topic has not been

submitted to any other academic institution or non-academic institution for any degree

or qualification.

In case or in the event that my innovation report, be found to violate the conditions

mentioned above, I voluntarily waive the right of conferment of my degree and agree

be subjected to the disciplinary rules and regulations of Universiti Teknologi MARA.

Name of student : MUHAMMAD HAFIIZHUDDIN NAIM BIN CHE

MOHD SALEH

Student's I.D. No : 2020453122

Programmed : Bachelor of Science(Hons.) Construction Technology

Faculty : Department of Built Environment and Technology

**Studies** 

Innovation Project Tittle : Open Yard Mobile Racking System for Precast

Lightweight Panel Storage

Signature Student : .....

Date : August 2022

i

#### **ABSTRACT**

The demand for precast lightweight is increasing the need for a storage system that is more effective than a conventional method. To fulfill the need, a better innovation is required to create. The mobile racking system is one of the suggested ideas that can solve a problem regarding the increasing demand, safety, and quality of the precast lightweight product. The Proposed innovation is research by collecting data from literature review and simulation method. The duration of time given is used wisely to collect the data through previous research and create a simulation of the product when it is operating. From the finding, there are two main problems: the safety and quality of the product while stored in an open yard or storage area. From the finding, a prototype of a model mobile racking system is created through 3d software. In conclusion, product innovation will solve the problem, but more detailed research needs to be discussed in the future.

#### AKNOWLEDGEMENT

In preparation for my case study, I had to take the help and guidance of some respected persons, who deserve my deepest gratitude. As the completion of this assignment gave me much pleasure, I would like to show my gratitude to Assoc. Prof Dr. Siti Akhtar binti Mahayuddin and Dr. Asmat binti Ismail for giving me a good guideline for assignments throughout through entire semester. Not to forget my supervisor for this research, which is Ts, Hamdan Bin Othman.

I would also like to expand my gratitude to all those who have directly and indirectly guided me in writing this assignment. Many people, especially my classmates, have made valuable comment suggestions on my paper which gave me the inspiration to improve the quality of the assignment.

### TABLE OF CONTAIN

AUTHOR'S DECLARATION	i
ABSTRACT	ii
AKNOWLEDGEMENT	iii
TABLE OF CONTAIN	iv
LIST OF FIGURES	vii
LIST OF TABLES	ix
LIST OF ABBREVIATION	X
CHAPTER 1	1
INTRODUCTION	1
1.1 Background of Study	1
1.2 Problem Statement	4
1.3 Research Question	5
1.4 Research Aim and Objectives	6
1.5 Scope of The Study	6
1.6 Limitation of The Study	6
1.7 Significant of Research	7
CHAPTER 2	8
LITERATURE REVIEW	8
2.1 Introduction.	8
2.2 Proposed project	8
2.3 Type of Industrial Building System	10
2.4 Previous Research on Related Topic	12
2.4.1 Quality Issue at Open yard Storage Area	12
2.4.2 Safety Issue at the Open yard Storage Area	13
2.5 Review the Previous and Current Innovation Project	14