COLLEGE OF BUILT ENVIRONMENT
UNIVERSITI TEKNOLOGI MARA

PREDICTIVE BUILDING MAINTENANCE COST

FOR HIGH RISE RESIDENTIAL BUILDING

IN SHAH ALAM

Academic Project Submitted in Partial Fullfillment of the Requirements
For the award of the Degree
Bachelor of Estate Management (Hons)

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2022602434
SEMESTER MARCH 2024 – AUGUST 2024

STUDENT'S DECLARATION

Title of Academic Project:

PREDICTIVE BUILDING MAINTENANCE COST

FOR HIGH RISE RESIDENTIAL BUILDING

IN SHAH ALAM

I hereby declare that this academic project is the result of my own research

except for the quotation and summary which have been acknowledged

Signature   :

Name of Student   :   MOHD FAKHRUDDIN BIN ZAKARIA

Date   :   08/07/2024

SUPERVISOR'S DECLARATION

Title of Academic Project:

PREDICTIVE BUILDING MAINTENANCE COST

FOR HIGH RISE RESIDENTIAL BUILDING

IN SHAH ALAM

I hereby declare that I have read this academic project and in my opinion

It is sufficient for the award of Bachelor of Estate Management (Hons)

Signature   :

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ACKNOWLEDGEMENT

Alhamdulillah, thanks to the Grace of God, I was able to receive the idea, strength, and time needed to complete this research. Without His guidance, I would not have been able to finish the dissertation within the designated time frame.

I would like to express my deep gratitude to all those who supported and guided me throughout the process of completing this dissertation on "Predictive Building Maintenance Cost for High Rise Residential Building In Shah Alam".

I am extremely thankful to my supervisor, Dr. Suwaibatul Islamiah Abdullah Sani, for their constant support, valuable feedback, and helpful guidance. Their expertise and motivation have played a key role in developing this research.

In conclusion, I am forever thankful to my family and friends for their constant love, patience, and support. Their faith in me helped me stay determined.

Thank you to everyone for your essential contributions to this accomplishment.

ABSTRACT

This research aims to explore and determine the factors that affect predictive building maintenance costs in strata housing, specifically in the context of Shah Alam. The study addresses a significant issue faced by property managers: managing long-term maintenance costs effectively. This problem is critical as maintenance costs can significantly impact the financial sustainability and operational efficiency of property management. The research employs a qualitative methodology, utilizing in-depth interviews with three experts in the field of property management. These semi-structured interviews allow for comprehensive data collection on the factors influencing maintenance costs. The primary data gathered from these interviews are complemented by secondary data from government reports, academic journals, and industry publications to provide a robust analysis. The methodology involves a systematic approach starting with the identification of the research problem, followed by a detailed literature review, and the establishment of research objectives. Data collection methods include interviews with property management professionals and a thematic analysis of the interview transcripts to identify recurring themes and significant factors affecting maintenance costs. These factors include the age, condition, height, and size of the building, as well as the quality of materials used and the complexity of the building design. For instance, older buildings often require more maintenance due to wear and tear, and buildings with more complex designs can incur higher maintenance costs due to their intricate structures. Effective management practices also play a crucial role in controlling maintenance costs. The study found that the use of high-quality materials and proactive maintenance strategies, such as predictive maintenance, can significantly reduce long-term costs. Predictive maintenance involves analyzing past maintenance reports and predicting potential failures, allowing property managers to allocate budgets more efficiently and make timely interventions to prevent more expensive repairs or replacements. Budget considerations are another critical factor. Inadequate funding and poor budget management can impede successful maintenance efforts. The study emphasizes the need for sufficient and well-managed budgets to ensure essential maintenance tasks are completed and to prepare for upcoming expenses. Political and policy factors also impact maintenance costs. Changes in regulations or the implementation of new safety standards can lead to increased maintenance tasks or enhancements to existing infrastructure. The significant findings of this research provide valuable insights for property managers. By focusing on the identified factors, implementing proactive maintenance strategies, and ensuring effective budget management, property managers can achieve more sustainable and cost-effective maintenance results. In conclusion, this research successfully identifies the critical factors affecting predictive building maintenance costs in strata housing and provides practical recommendations for managing these costs.