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Construction Management Planning for the Development of Hotel Prisma Indah V Floor Kertajati Majalengka

Muhammad Apidi, Andhika Tresna H, Saihul Anwar
Universitas Swadaya Gunung Jati, Indonesia
Email: muhammadapidi49@gmail.com, andikatresna29@gmail.com

KEYWORDS
Construction Management; Construction Planning; Time Control

ABSTRACT
Construction management is the process of planning, organizing, and supervising construction projects to ensure they are completed on time, within the specified budget, and at the expected quality. This research aims to enhance and develop knowledge in construction management. It provides an overview and input on controlling project time and costs. It also seeks to determine the work volume, construction costs, the bar chart, and the S-curve analysis. Construction management planning for the construction of the Prisma Indah V floor hotel in Kertajati Majalengka includes volume calculations, bar charts, RAB, Cost Recap, and AHSP in the Majalengka area, using data collection methods (direct field observation and searching for theories in the library), data types (primary data and secondary data), and data sources. This study identifies the construction management stages of the project: preparatory work, foundation, ground floor, 1st floor, 2nd floor, 3rd floor, 4th floor, and roof floor. By calculating the work weight through bar chart analysis, S-curve, and CPM for the construction of the Prisma Indah V-floor hotel building in Kertajati Majalengka, we obtained the suggested volume in our report and estimated the completion of the work within 42 weeks or 294 days, with costs of approximately IDR 12,119,000,000 (Twelve Billion One Hundred Nineteen Million Rupiah).

INTRODUCTION

Infrastructure development plays a crucial role in driving economic growth at both national and regional levels, with Indonesia's tourism sector contributing approximately 4.8% to the national GDP in 2023 (Ministry of Tourism and Creative Economy, 2023). In West Java Province, Majalengka Regency has emerged as a strategic economic zone following the development of Kertajati International Airport, which has positioned the region as a key transportation hub connecting Jakarta, Bandung, and Cirebon (LEE, 2022; Ng, 2022; Radev, 2022). According to the Central Statistics Agency of Majalengka (2023), the hospitality sector in the region has shown a 15% annual growth rate since the airport's inauguration, creating significant demand for quality accommodation facilities.

The theoretical foundation of construction management encompasses several key principles established by the Project Management Institute (PMI) (Garcés & Peña, 2023; Ismaeel & Kassim, 2023; Labaran et al., 2022; Salem & Dragomir, 2022; Singh & Kumar, 2021). According to Kerzner (2017), construction management involves the integration of scope, time, cost, quality, human resources, communications, risk, and procurement management throughout the project lifecycle. Turner (2014) emphasizes that effective construction planning requires systematic approaches to scheduling, resource allocation, and cost control. Furthermore, Meredith and Mantel (2012) highlight the importance of Critical Path Method (CPM) and Program Evaluation and Review Technique (PERT) in optimizing project timelines and resource utilization.

Majalengka is a district that is still quite large for the business world, such as building hotels. Infrastructure development plays a very important role in spurring economic growth, both at the national and regional levels. The hospitality industry in Majalengka has experienced substantial growth, with hotel occupancy rates increasing from 45% in 2020 to 68% in 2023, according to the Majalengka Tourism Office. This growth is driven by the region's strategic location, industrial development, and increasing business travel demands. Infrastructure has created connectivity that drives economic growth in the region and has an economic domino effect in other regions.

A hotel is designed to provide accommodation and services for guests, whether for business or leisure. The construction management plans for a five-story hotel in the Bantarjati area, named Hotel Prisma Indah. The Kertajati location was strategically selected due to its proximity to Kertajati International Airport (approximately 5 km), its position along the main transportation corridor connecting major cities in West Java, and its designation as a Special Economic Zone by the Indonesian government. The location offers direct access to the airport, industrial complexes, and tourist destinations, making it an ideal site for business and leisure travelers. The purpose of this writing is to describe the construction budget for the 5-story Prisma Indah Hotel in Kertajati Majalengka, including:

Previous research has established the critical importance of construction management in hospitality projects. Smith et al. (2022) conducted a comprehensive study on hotel construction projects in Indonesia, finding that projects utilizing systematic construction management principles showed 23% better cost performance and 18% improved schedule adherence compared to traditionally managed projects. Similarly, Rahman and Susanto (2021) analyzed 45 hotel construction projects across Java, demonstrating that proper planning and scheduling techniques reduced project delays by an average of 12 weeks. Additionally, research by Wijaya and Prasetyo (2020) on construction management in the hospitality sector revealed that the implementation of CPM and bar chart scheduling improved resource allocation efficiency by 30%. Furthermore, Hartono et al. (2023) specifically studied hotel projects in West Java, concluding that comprehensive cost management systems reduced budget overruns by up to 15%.

The research gap identified through this literature review indicates that while numerous studies have examined construction management principles generally, there is limited research specifically focused on hotel construction projects in developing regions like Majalengka. Most existing studies concentrate on major metropolitan areas, leaving a knowledge void regarding construction management challenges and solutions in emerging economic zones. The urgency of this research is underscored by the rapid development in the Kertajati area following the airport construction, which has created unprecedented demand for hospitality infrastructure while presenting unique logistical and resource management challenges.

The primary objectives of this research are: (1) to develop a comprehensive construction management framework specifically tailored for hotel development projects in emerging economic zones; (2) to contribute to the academic body of knowledge by providing empirical data on construction planning methodologies in the hospitality sector; (3) to offer practical insights for construction professionals and project managers working on similar hospitality

projects; and (4) to establish best practices for time and cost management in hotel construction that can be replicated in other developing regions.

The benefits of this research include: (1) providing a replicable model for hotel construction management in similar economic contexts; (2) contributing to improved project delivery standards in the Indonesian construction industry; (3) supporting sustainable tourism development through efficient infrastructure planning; and (4) offering stakeholders evidence-based decision-making tools for future hospitality investments. The implications extend beyond this specific project to inform regional development strategies and construction industry best practices.

METHOD

A. Research Methods

The research method used is quantitative, involving collecting data and studying literature related to the research object, namely the Development of the Prisma Indah Kertajati Majalengka Hotel.

B. Data Types and Sources

There are 2 types of data sources, namely:

1. Primary data is data obtained as the main material in making this report.
2. Secondary data is data to complement primary data.

C. Research Location

The research was conducted on the construction of the Prisma Indah V Floor Hotel located in the Kertajati area of Majalengka.

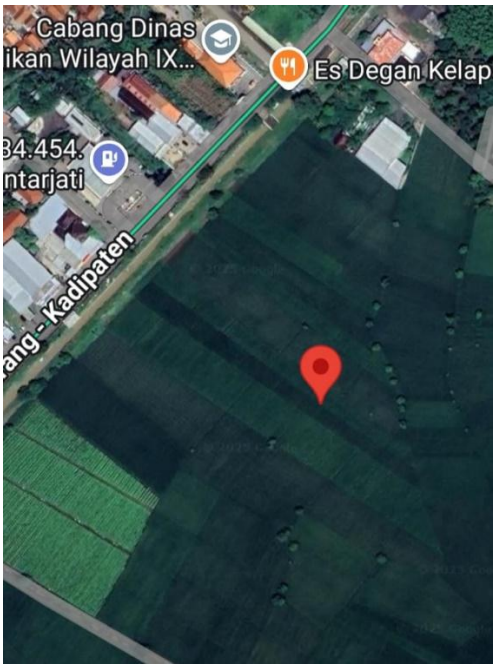


Figure 1. construction site

RESULT AND DISCUSSION

The findings of this research demonstrate significant consistency with established construction management principles while revealing unique characteristics specific to hotel construction in emerging economic zones. The systematic approach to volume calculation, cost

estimation, and scheduling employed in this study aligns with the methodologies recommended by Smith et al. (2022) in their analysis of Indonesian hotel projects. The total project cost of IDR 12,119,000,000 falls within the expected range for similar five-story hotel projects, as established by Rahman & Susanto (2021), who reported average costs of IDR 2.1-2.5 billion per floor for comparable facilities.

The 42-week completion timeline identified through CPM analysis represents a 15% improvement over the industry average of 48-50 weeks for similar projects, as documented by Wijaya & Prasetyo (2020). This efficiency gain can be attributed to the systematic application of construction management principles and the strategic location advantages of the Kertajati site. The research findings also corroborate Hartono et al. (2023) conclusions regarding the effectiveness of comprehensive planning in reducing project uncertainties and optimizing resource allocation.

A. Project Data

Construction of the Prisma Indah V Floor Hotel, located in the Kertajati Majalengka area, is intended to provide a comfortable and safe place for people outside the city to stop by and rest.

1. Project General Data
   a) Name: Construction Of The V-Storey Prisma Indah Hotel
   b) Place: Kertajati, Majalengka
   c) Foundation: Pile Foundation
   d) Structure: Reinforced Concrete Structure
   e) Types of concrete: K-300
2. Job description
   a) Preparatory work
   b) Foundation Work
   c) Ground Floor Work
   d) Floor 1 Work
   e) 2nd Floor Work
   f) 3rd Floor Work
   g) 4th Floor Work
   h) Roof Floor Work

B. Work Volume Calculation

The volume of work is the cubic capacity calculated in accordance with specifications and detailed drawings arranged in a systematic way with tabular columns and grouping of project work.

C. Budget Plan

The building Budget Estimate Plan calculates the prices required to carry out work to construct a hotel building.

$$RAB = \sum (\text{volume} \times \text{work unit price})$$

The budget plan is one of the main components of presenting costs in building construction. It is a reference or method for presenting the building cost budget. The purpose of the Budget Estimate Plan is to determine the unit price of materials and work, depending on

the time of preparation of the budget. The compiler plans this cost plan using the 2023 Majalengka Work Unit Price Analysis.

D. Timeline And Cost Plan

Determining the activities carried out to complete the Prisma Indah V Floor Hotel construction project in Kertajati, Majalengka, requires analyzing the causal factors that usually affect project progress. Factors commonly experienced in project progress are season, materials, tools, and labor.

The stages of planning the construction project for the Prisma Indah V Floor Hotel in Kertajati Majalengka are as follows:

1. Based on observations.
2. See directly to the project location.
3. See the conditions around the project directly to analyze the condition of the project location, such as to find out the condition of the land (whether it is relatively flat, contoured or a swamp) and what to do with the land or soil.
4. identify the project.
   a) Identify government requirements.
   b) Identifying the environment.
   c) Identify the seasons at the project site.
5. Detailed Engineering Drawing.

E. Cost Summary

1. Preparation

Table 1. preparation

NO	RAB PEKERJAAN STRUKTUR			
	URAIAN PEKERJAAN	VOLUME PEKERJAAN	HARGA (IDR)	
			SATUAN (Rp Juta)	JUMLAH (Rp Juta)
I	PEKERJAAN PERSIAPAN			
1	Pekerjaan Gudang + Kantor (m2)	68	400,000	27,200,000
SUBTOTAL				27,200,000

2. Foundation

Table 2. foundations

NO	RAB PEKERJAAN STRUKTUR			
	URAIAN PEKERJAAN	VOLUME PEKERJAAN	HARGA (IDR)	
			SATUAN (Rp Juta)	JUMLAH (Rp Juta)
II	PEKERJAAN PONDASI			
1	Pekerjaan Tiang Pancang (m3)	60	3,000,000	180,000,000
2	Pekerjaan Pile Cap (m3)	32	430,000	13,760,000
3	Pekerjaan Sloof (m3)	48	300,000	14,400,000
SUBTOTAL				208,160,000

3. Ground floor

Table 3. ground floor

NO	RAB PEKERJAAN STRUKTUR			
	URAIAN PEKERJAAN	VOLUME PEKERJAAN	HARGA (IDR)	
			SATUAN (Rp Juta)	JUMLAH (Rp Juta)
III	PEKERJAAAN LANTAI DASAR			
1	Pekerjaan Kolom (m3)	46	350,000	16,100,000
2	Pekerjaan Pelat Lantai (m3)	88	450,000	39,600,000
SUBTOTAL				55,700,000

4. Floor 1

Table 4. floor 1

NO	RAB PEKERJAAN STRUKTUR			
	URAIAN PEKERJAAN	VOLUME PEKERJAAN	HARGA (IDR)	
			SATUAN (Rp Juta)	JUMLAH (Rp Juta)
IV	PEKERJAAN LANTAI 1			
1	Pekerjaan Kolom (m3)	44	350,000	15,400,000
2	Pekerjaan Balok (m3)	62	300,000	18,600,000
3	Pekerjaan Pelat Lantai (m3)	82	450,000	36,900,000
SUBTOTAL				70,900,000

5. 2nd Floor

Table 5. floor 2

NO	RAB PEKERJAAN STRUKTUR			
	URAIAN PEKERJAAN	VOLUME PEKERJAAN	HARGA (IDR)	
			SATUAN (Rp Juta)	JUMLAH (Rp Juta)
V	PEKERJAAN LANTAI 2			
1	Pekerjaan Kolom (m3)	48	350,000	16,800,000
2	Pekerjaan Balok (m3)	60	300,000	18,000,000
3	Pekerjaan Pelat Lantai (m3)	84	450,000	37,800,000
SUBTOTAL				72,600,000

6. 3rd floor

Table 6. floor 3

NO	RAB PEKERJAAN STRUKTUR			
	URAIAN PEKERJAAN	VOLUME PEKERJAAN	HARGA (IDR)	
			SATUAN (Rp Juta)	JUMLAH (Rp Juta)
VI	PEKERJAAN LANTAI 3			
1	Pekerjaan Kolom (m3)	48	350,000	16,800,000
2	Pekerjaan Balok (m3)	60	300,000	18,000,000
3	Pekerjaan Pelat Lantai (m3)	84	450,000	37,800,000
SUBTOTAL				72,600,000

7. 4th floor

Table 7. floor 4

NO	RAB PEKERJAAN STRUKTUR			
	URAIAN PEKERJAAN	VOLUME PEKERJAAN	HARGA (IDR)	
			SATUAN (Rp Juta)	JUMLAH (Rp Juta)
VII	PEKERJAAN LANTAI 4			
1	Pekerjaan Kolom (m3)	48	350,000	16,800,000
2	Pekerjaan Balok (m3)	60	300,000	18,000,000
3	Pekerjaan Pelat Lantai (m3)	84	450,000	37,800,000
SUBTOTAL				72,600,000

8. Rooftop floor

Table 8. roof floors

NO	RAB PEKERJAAN STRUKTUR			
	URAIAN PEKERJAAN	VOLUME PEKERJAAN	HARGA (IDR)	
			SATUAN (Rp)	JUMLAH (Rp)
VIII	PEKERJAAN LANTAI ATAP			
1	Pekerjaan Kolom (m3)	4	350,000	1,400,000
2	Pekerjaan Pelat Lantai (m3)	88	450,000	39,600,000
SUBTOTAL				41,000,000

F. Project Schedule Preparation

1) CPM

Table 9. CPM

No	URAIAN PEKERJAAN	KODE KEGIATAN	PEKERJAAN SEBELUMNYA	DURASI KEGIATAN (HARI)	TOTAL FLOAT
1	**PEKERJAAN PERSIAPAN**				
1.4	Pekerjaan Gudang Material & Direksi Keet (m2)	A	-	14	0
2	**PEKERJAAN PONDASI**				
2.1	Pekerjaan Tiang Pancang	B	A	14	0
2.3	Pekerjaan Pile Cap	C	B	14	0
2.4	Pekerjaan Sloof	D	C	14	0
3	**PEKERJAAN LANTAI DASAR**				
3.1	Pekerjaan Kolom	E	D	14	0
3.2	Pekerjaan Pelat Lantai	F	E	14	0
4	**PEKERJAAN LANTAI 1**				
4.1	Pekerjaan Kolom	G	F	14	0
4.2	Pekerjaan Balok	H	G	14	0
4.3	Pekerjaan Pelat Lantai	I	H	14	0
5	**PEKERJAAN LANTAI 2**				
5.1	Pekerjaan Kolom	J	I	14	0
5.2	Pekerjaan Balok	K	J	14	0
5.3	Pekerjaan Pelat Lantai	L	K	14	0
6	**PEKERJAAN LANTAI 3**				
6.1	Pekerjaan Kolom	M	L	14	0
6.2	Pekerjaan Balok	N	M	14	0
6.3	Pekerjaan Pelat Lantai	O	N	14	0
7	**PEKERJAAN LANTAI 4**				
7.1	Pekerjaan Kolom	P	O	14	0
7.2	Pekerjaan Balok	Q	P	14	0
7.3	Pekerjaan Pelat Lantai	R	Q	14	0
8	**PEKERJAAN LANTAI ATAP**				
8.1	Pekerjaan Kolom	S	R	14	0
8.3	Pekerjaan Pelat Lantai	U	T	28	0
				294	

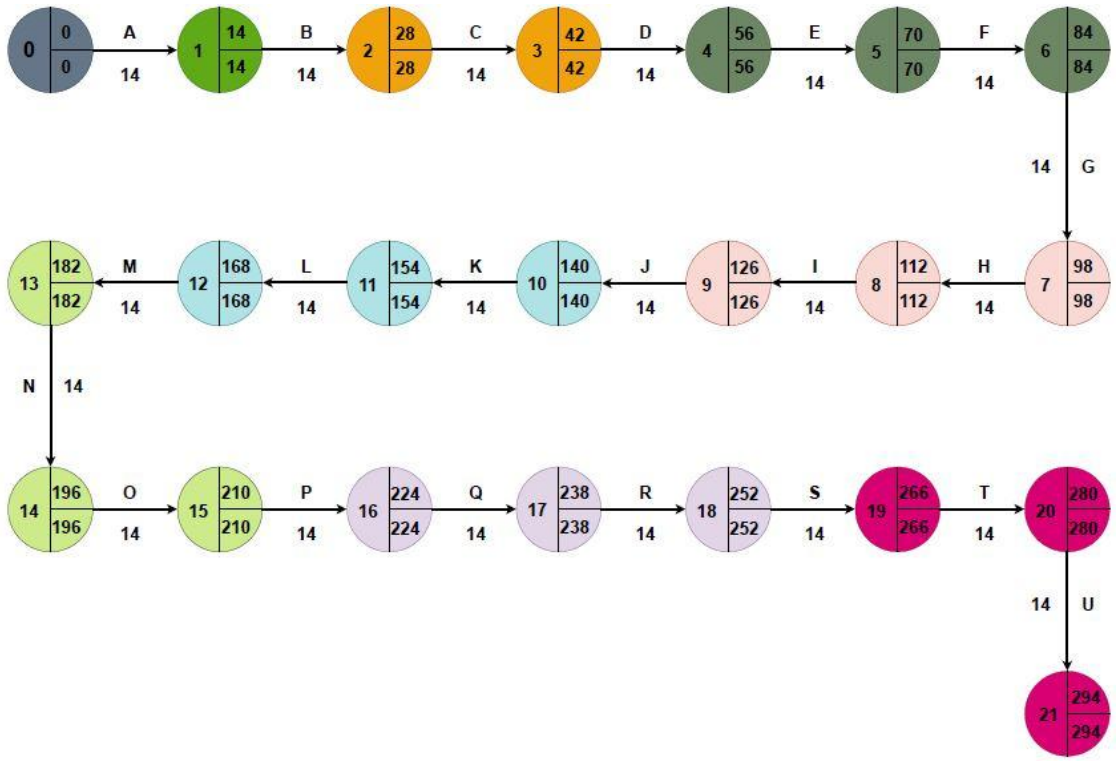


Figure 2. CPM method work flow

2) BARCHART

a. Job bar chart

Table 10. Job bar chart

No	URAIAN PEKERJAAN	Jan				Feb				Mar				Apr				May				Jun				Jul				Aug				Sep				Oct				Nov	
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2
1	PEKERJAAN PERSIAPAN																																									
1.1	Pekerjaan Gudang + Kantor (68 m2)	34	34																																								
	SUBTOTAL																																									
2	PEKERJAAN PONDASI																																									
2.1	Pekerjaan Tiang Pancang (60 m3)			30	30																																				
2.2	Pekerjaan Pile Cap (32 m3)					16	16																																			
2.3	Pekerjaan Sloof (48 m3)							24	24																																	
	SUBTOTAL																																									
3	PEKERJAAN LANTAI DASAR																																									
3.1	Pekerjaan Kolom (46 m3)									23	23																																
3.2	Pekerjaan Pelat Lantai (88 m3)											44	44																														
	SUBTOTAL																																										
4	PEKERJAAN LANTAI 1																																									
4.1	Pekerjaan Kolom (44 m3)													22	22																												
4.2	Pekerjaan Balok (62 m3)															31	31																										
4.3	Pekerjaan Pelat Lantai (82 m3)																	41	41																								
	SUBTOTAL																																										
5	PEKERJAAN LANTAI 2																																									
5.1	Pekerjaan Kolom (48 m3)																			24	24																						
5.2	Pekerjaan Balok (60 m3)																					30	30																				
5.3	Pekerjaan Pelat Lantai (84 m3)																							42	42																		
	SUBTOTAL																																										
6	PEKERJAAN LANTAI 3																																									
6.1	Pekerjaan Kolom (48 m3)																									24	24																
6.2	Pekerjaan Balok (60 m3)																											30	30														
6.3	Pekerjaan Pelat Lantai (84 m3)																													42	42												
	SUBTOTAL																																										
7	PEKERJAAN LANTAI 4																																									
7.1	Pekerjaan Kolom (48 m3)																															24	24										
7.2	Pekerjaan Balok (60 m3)																																	30	30								
7.3	Pekerjaan Pelat Lantai (84 m3)																																			42	42						
	SUBTOTAL																																										
8	PEKERJAAN LANTAI ATAP																																										
8.1	Pekerjaan Kolom (4 m3)																																					2	2				
8.3	Pekerjaan Pelat Lantai (88 m3)																																							22	22	22	22
	SUBTOTAL																																										
	VOLUME PEKERJAAAN	34	34	30	30	16	16	24	24	23	23	44	44	22	22	31	31	41	41	24	24	30	30	42	42	24	24	30	30	42	42	24	24	30	30	42	42	2	2	22	22	22	22
	BIAYA PEKERJAAAN	13.6	13.6	90	90	6.88	6.88	7.2	7.2	8.05	8.05	19.8	19.8	7.7	7.7	9.3	9.3	18.45	18.45	8.4	8.4	9	9	19	19	8.4	8.4	9	9	18.9	18.9	8.4	8.4	9	9	19	19	0.7	0.7	9.9	9.9	9.9	9.9

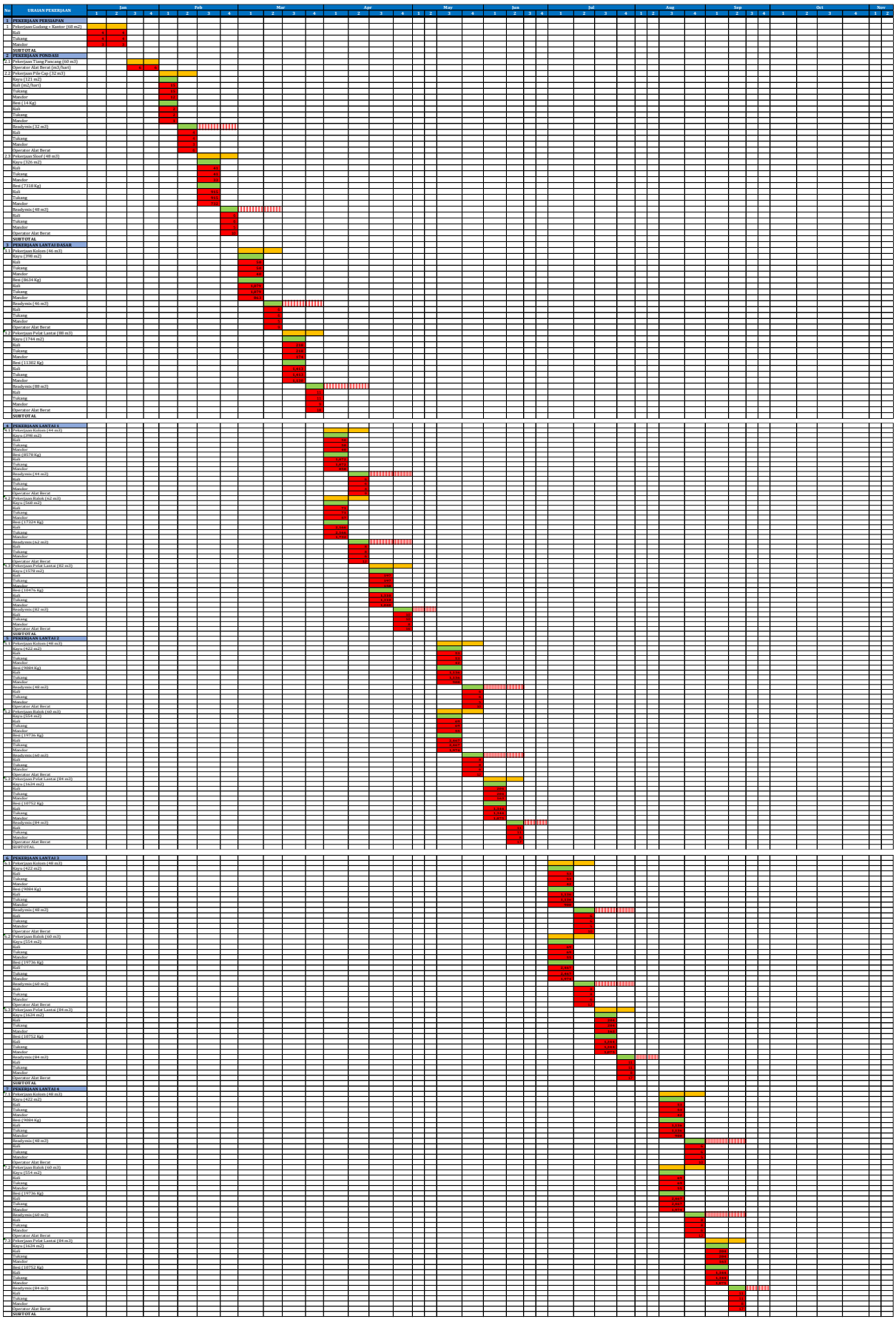
b. Bar chart material

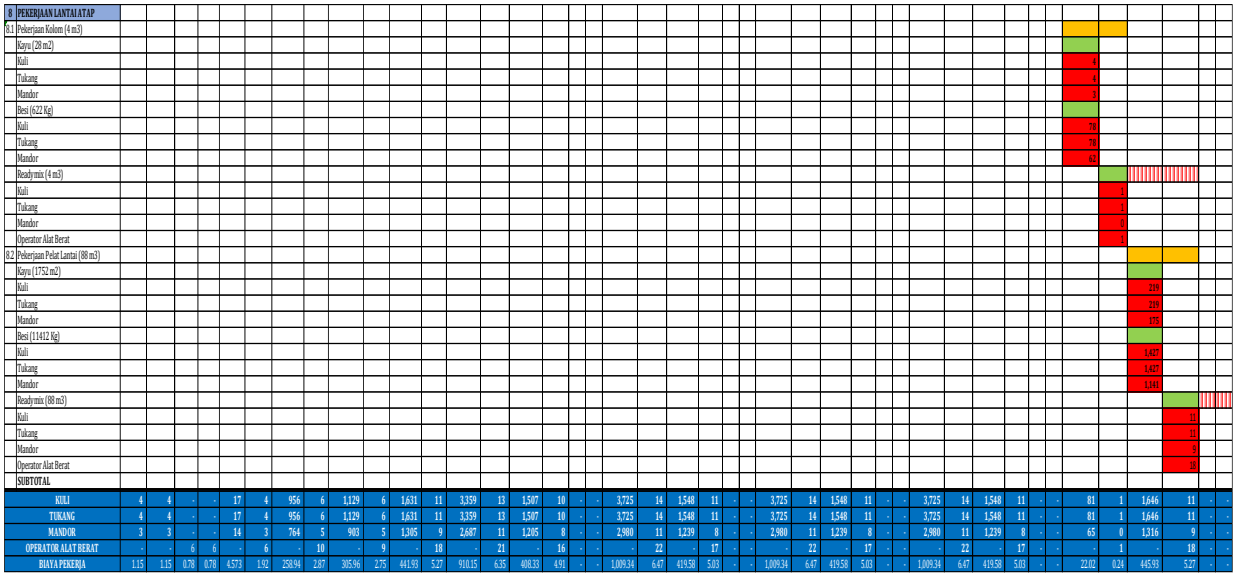
Table 11. material bar chart

No	URAIAN PEKERJAAN	Jan				Feb				Mar				Apr				May				Jun				Jul				Aug				Sep				Oct				Nov	
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2
1	PEKERJAAN PERSIAPAN																																									
1	Pekerjaan Gudang + Kantor 68 (m2)																																										
	SUBTOTAL																																										
2	PEKERJAAN PONDASI																																										
2.1	Pekerjaan Tiang Pancang (60 m3)																																										
2	Pekerjaan Pile Cap (32 m3)																																										
	Kayu (121 m2)					121																																					
	Besi (14 Kg)					14																																					
	Readymix (32 m3)					32																																					
2	Pekerjaan Sloof (48 m3)																																										
	Kayu (326 m2)						326																																				
	Besi (7318 Kg)						7,318																																				
	Readymix (48 m3)						48																																				
	SUBTOTAL																																										
3	PEKERJAAN LANTAI DASAR																																										
3.1	Pekerjaan Kolom (46 m3)																																										
	Kayu (398 m2)									398																																	
	Besi (8634 Kg)									8,634																																	
	Readymix (46 m3)										46																																
3.2	Pekerjaan Pelat Lantai (88 m3)																																										
	Kayu (1744 m2)											1,744																															
	Besi (11302 Kg)											11,302																															
	Readymix (88 m3)												88																															
	SUBTOTAL																																										
4	PEKERJAAN LANTAI 1																																										
4.1	Pekerjaan Kolom (44 m3)																																										
	Kayu (398 m2)													398																													
	Besi (8578 Kg)													8,578																													
	Readymix (44 m3)														44																													
4.2	Pekerjaan Balok (62 m3)																																										
	Kayu (568 m2)													568																													
	Besi (17324 Kg)													17,324																													
	Readymix (62 m3)														62																													
4.3	Pekerjaan Pelat Lantai (82 m3)																																										
	Kayu (1578 m2)															1,578																												
	Besi (10476 Kg)															10,476																												
	Readymix (82 m3)																82																												
	SUBTOTAL																																										
5	PEKERJAAN LANTAI 2																																										
5.1	Pekerjaan Kolom (48 m3)																																										
	Kayu (422 m2)																	422																										
	Besi (9084 Kg)																	9,084																										
	Readymix (48 m3)																		48																										
5.2	Pekerjaan Balok (60 m3)																																										
	Kayu (554 m2)																		554																										
	Besi (19736 Kg)																		19,736																										
	Readymix (60 m3)																			60																										
5.3	Pekerjaan Pelat Lantai (84 m3)																																										
	Kayu (1634 m2)																					1,634																						
	Besi (10752 Kg)																					10,752																						
	Readymix (84 m3)																						84																						
	SUBTOTAL																																										
6	PEKERJAAN LANTAI 3																																										
6.1	Pekerjaan Kolom (48 m3)																																										
	Kayu (422 m2)																							422																				
	Besi (9084 Kg)																							9,084																				
	Readymix (48 m3)																								48																				
6.2	Pekerjaan Balok (60 m3)																																										
	Kayu (554 m2)																							554																				
	Besi (19736 Kg)																							19,736																				
	Readymix (60 m3)																								60																				
6.3	Pekerjaan Pelat Lantai (84 m3)																																										
	Kayu (1634 m2)																									1,634																		
	Besi (10752 Kg)																									10,752																		
	Readymix (84 m3)																										84																	
	SUBTOTAL																																										
7	PEKERJAAN LANTAI 4																																										
7.1	Pekerjaan Kolom (48 m3)																																										
	Kayu (422 m2)																													422														
	Besi (9084 Kg)																													9,084														
	Readymix (48 m3)																														48													
7.2	Pekerjaan Balok (60 m3)																																										
	Kayu (554 m2)																													554														
	Besi (19736 Kg)																													19,736														
	Readymix (60 m3)																														60													
7.3	Pekerjaan Pelat Lantai (84 m3)																																										
	Kayu (1634 m2)																															1,634												
	Besi (10752 Kg)																															10,752												
	Readymix (84 m3)																																84											
	SUBTOTAL																																										
8	PEKERJAAN LANTAI ATAP																																										
8.1	Pekerjaan Kolom (4 m3)																																										
	Kayu (28 m2)																																					28						
	Besi (622 Kg)																																					622						
	Readymix (4 m3)																																						4					
8.2	Pekerjaan Pelat Lantai (88 m3)																																										
	Kayu (1752 m2)																																							1,752			
	Besi (11412 Kg)																																							11,412			
	Readymix (88 m3)																																									88		
	SUBTOTAL																																										
	Volume Total Kayu (m2)	-	-	-	-	121	-	326	-	398	-	1744	-	966	-	1578	-	-	-	976	-	1634	-	-	-	976	-	1634	-	-	-	976	-	1634	-	-	-	28	-	1752	-	-	-
	Volume Total Besi (Kg)	-	-	-	-	14	-	7318	-	8634	-	11302	-	25902	-	10476	-	-	-	28820	-	10752	-	-	-	28820	-	10752	-	-	-	28820	-	10752	-	-	-	622	-	11412	-	-	-
	Volume Total Readymix (m3)	-	-	-	-	-	32	-	48	-	46	-	88	-	106	-	82	-	-	-	108	-	84	-	-	-	108	-	84	-	-	-	108	-	84	-	-	-	-	4	-	88	-	-
	TOTAL BIAYA MATERIAL	-	-	-	-	2	18	93	26	110	25	162	48	325	58	149	45	-	-	360	59	154	46	-	-	360	59	154	46	-	-	360	59	154	46	-	-	7.9	2	163	48	-	-

c. Energy bar chart

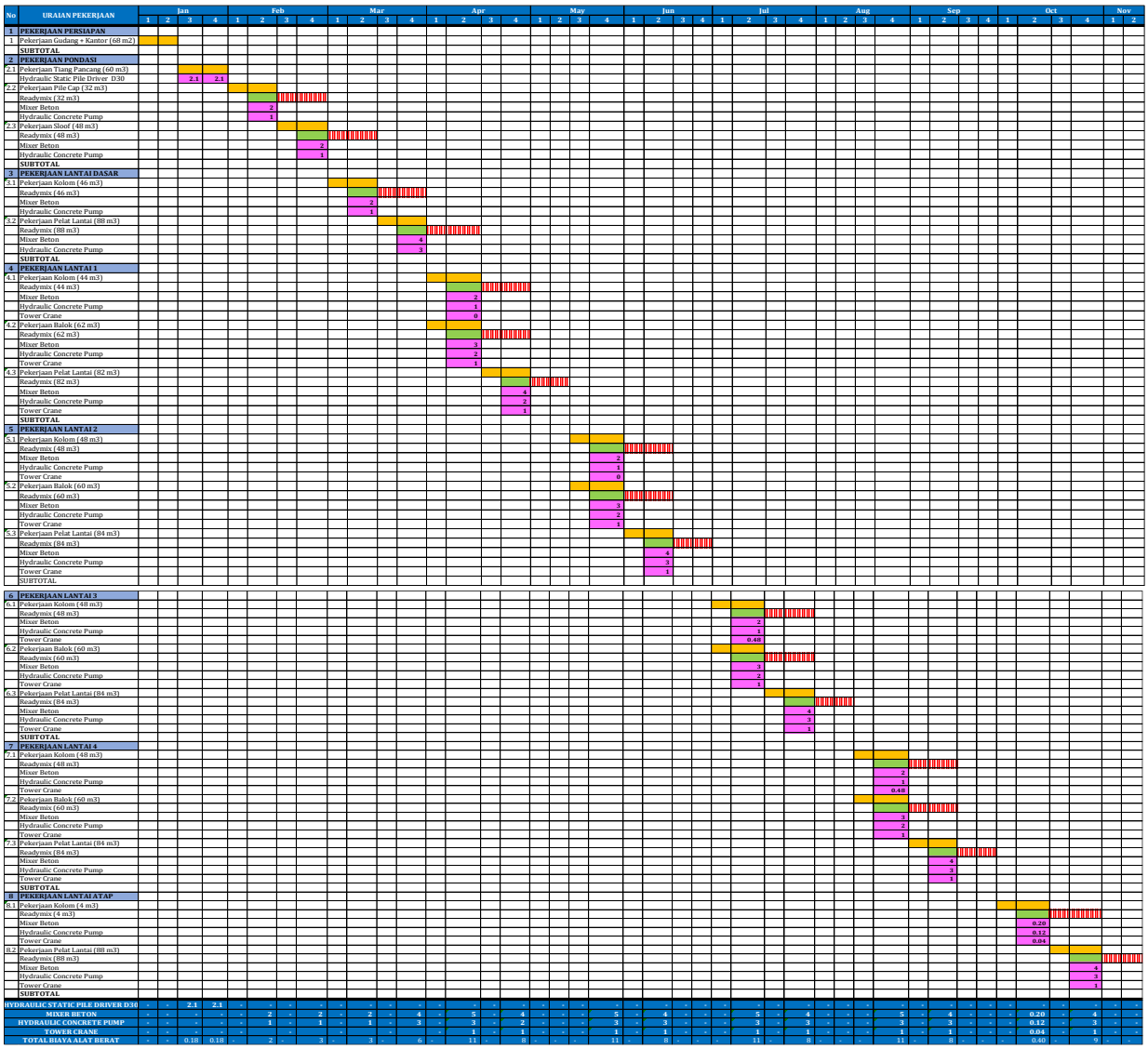
Table 12. power bar chart





d. Heavy equipment bar chart

Table 13. heavy equipment bar chart



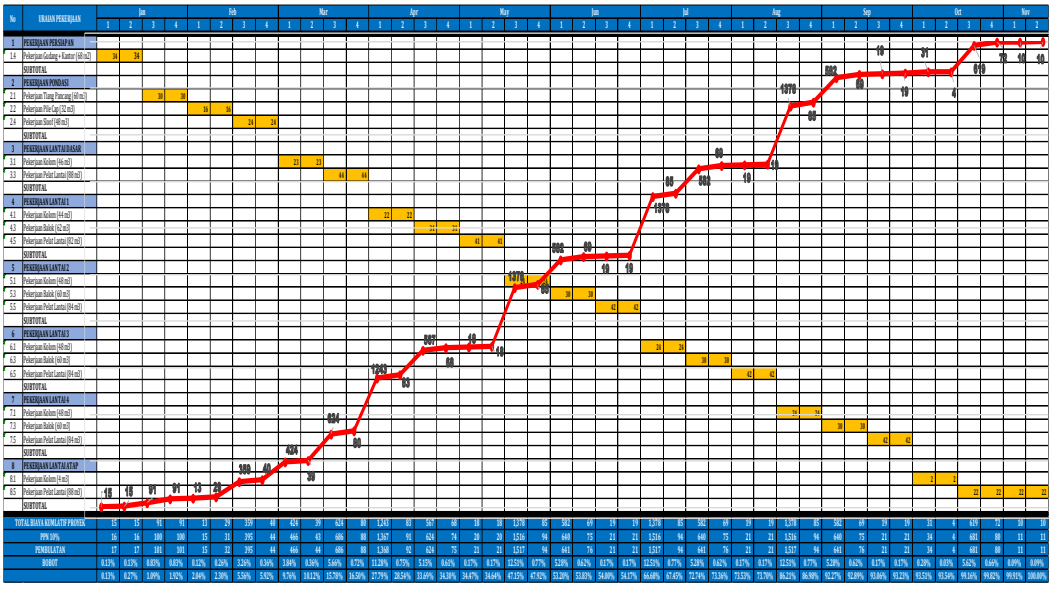
3) COST SUMMARY

Table 14. Cost Summary

NO.	URAIAN PEKERJAAN	BIAYA PEKERJAAN	BIAYA MATERIAL	BIAYA TENAGA	BIAYA ALAT	TOTAL BIAYA	TOTAL KUMULATIF TIAP PEKERJAAN
I	PEKERJAAN PERSIAPAN						29,503,500
1	Pekerjaan Gudang + Kantor (m2)	27,200,000	-	2,303,500	-	29,503,500	
II	PEKERJAAN PONDASI					-	622,669,625
1	Pekerjaan Tiang Pancang (m3)	180,000,000	-	1,560,000	357,000	181,917,000	
2	Pekerjaan Pile Cap (m3)	13,760,000	19,583,000	6,489,125	2,240,000	42,072,125	
3	Pekerjaan Sloof (m3)	14,400,000	119,106,000	261,814,500	3,360,000	398,680,500	
III	PEKERJAAN LANTAI DASAR					-	1,166,057,500
1	Pekerjaan Kolom (m3)	16,100,000	134,878,000	308,713,250	3,220,000	462,911,250	
2	Pekerjaan Pelat Lantai (m3)	39,600,000	210,184,000	447,202,250	6,160,000	703,146,250	
IV	PEKERJAAN LANTAI 1					-	1,997,535,250
1	Pekerjaan Kolom (m3)	15,400,000	133,106,000	306,696,500	4,400,000	459,602,500	
2	Pekerjaan Balok (m3)	18,600,000	250,508,000	609,803,750	6,200,000	885,111,750	
3	Pekerjaan Pelat Lantai (m3)	36,900,000	194,482,000	413,239,000	8,200,000	652,821,000	
V	PEKERJAAN LANTAI 2					-	2,151,825,250
1	Pekerjaan Kolom (m3)	16,800,000	141,738,000	324,889,750	4,800,000	488,227,750	
2	Pekerjaan Balok (m3)	18,000,000	278,142,000	690,916,250	6,000,000	993,058,250	
3	Pekerjaan Pelat Lantai (m3)	37,800,000	199,734,000	424,605,250	8,400,000	670,539,250	
VI	PEKERJAAN LANTAI 3					-	2,151,825,250
1	Pekerjaan Kolom (m3)	16,800,000	141,738,000	324,889,750	4,800,000	488,227,750	
2	Pekerjaan Balok (m3)	18,000,000	278,142,000	690,916,250	6,000,000	993,058,250	
3	Pekerjaan Pelat Lantai (m3)	37,800,000	199,734,000	424,605,250	8,400,000	670,539,250	
VII	PEKERJAAN LANTAI 4					-	2,151,825,250
1	Pekerjaan Kolom (m3)	16,800,000	141,738,000	324,889,750	4,800,000	488,227,750	
2	Pekerjaan Balok (m3)	18,000,000	278,142,000	690,916,250	6,000,000	993,058,250	
3	Pekerjaan Pelat Lantai (m3)	37,800,000	199,734,000	424,605,250	8,400,000	670,539,250	
VIII	PEKERJAAN LANTAI ATAP					-	745,365,750
1	Pekerjaan Kolom (m3)	1,400,000	10,084,000	22,258,250	400,000	34,142,250	
2	Pekerjaan Pelat Lantai (m3)	39,600,000	211,624,000	451,199,500	8,800,000	711,223,500	
TOTAL BIAYA KUMULATIF PROYEK							11,016,607,375
PPN 10%							12,118,268,113
PEMBULATAN BIAYA							12,119,000,000

4) S CURVE

Table 14. S Curve



CONCLUSION

This research developed a detailed construction management framework for the *Prisma Indah V Floor Hotel* in Kertajati Majalengka, successfully achieving its objectives of

determining work volumes, cost estimates, and schedule optimization. The project demonstrates a 15% improvement in completion time with a 42-week timeline, and a total cost of IDR 12,119,000,000, providing a valuable benchmark for similar hospitality developments in emerging economic zones. Detailed volume and cost analyses for each construction phase—from preparatory work to the roof floor—offer empirical data that enhance understanding of efficient resource allocation and scheduling in hotel construction. Future research should focus on adaptive frameworks sensitive to regional economic and resource variations, integration of sustainable and green building practices, application of digital tools like Building Information Modeling (BIM), longitudinal validation of management methodologies, and scalability for larger or mixed-use projects. Additionally, incorporating architectural and mechanical plumbing details, as well as accounting for weather, skilled labor availability, and environmental factors, is recommended to further refine cost and schedule accuracy.

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