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# Analysis of Material Inventory Control Management for Structural Works using Economic Order Quantity, Reorder Point, and Safety Stock Methods in a 2.5-Storey Boarding House Construction Project

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**Abstract:** This study presents a comprehensive computational analysis of material inventory control management for structural works in a 2.5-storey boarding house construction project located in Jelambar, West Jakarta. The research utilizes the integrated Economic Order Quantity (EOQ), Safety Stock (SS), and Reorder Point (ROP) methods to determine optimal order quantities, safety buffers, and ordering trigger points for key structural materials. The study adopts a quantitative descriptive approach with a case study method. Data was collected through interviews, site observation, and analysis of secondary documents, including the Bill of Quantities (BoQ) and the time schedule (S-curve). The analysis focused on seven major materials, including cement, reinforcing steel (D13 and Ø8), and Class III timber. The calculated EOQ values, which minimize the sum of ordering and holding costs, showed that the project should order, for example, 271 sacks of cement, 85 bars of D13 steel, and 586 pieces of Class III timber. Corresponding Safety Stock levels were calculated using a 95% service level , resulting in a required buffer of 95 sacks of cement and 113 bars of D13 steel. The Reorder Point (ROP) values indicate when a new order should be placed, such as 313 sacks of cement and 400 bars of D13 steel.
A cost comparison demonstrated that the project's initial total inventory cost was IDR 20,005,302. Applying the EOQ-only policy resulted in a cost efficiency of 34.88%. Crucially, the combined implementation of the EOQ, Safety Stock, and Reorder Point policy led to a significant reduction in total inventory costs to IDR 9,750,733, achieving a cost efficiency of 51.26% compared to the initial condition. This confirms that the integrated quantitative approach is highly effective for optimizing material ordering, mitigating stock-out risk, and substantially reducing inventory costs in small-to-medium scale urban construction projects with site constraints.

**Keywords**: EOQ, SS, ROP, Inventory Control, Construction Project Management, Structural Materials

## INTRODUCTION

Materials represent the largest cost component in construction projects, accounting for approximately 50–70% of total project expenditure (Mahyuddin et al., 2023; Choi & O'Brien, 2025). Given this substantial cost proportion, any inaccuracies in procurement whether due to excess or shortage of inventory—can lead to waste, declining quality, and disruption of project schedules (Abkar et al., 2023; Suhardi, 2024). Hence, material inventory control management plays a crucial role in ensuring that the right materials are available in the correct quantity, quality, time, and location (Yıldız et al., 2024; Abdelalim et al., 2025; Donyavi et al., 2024).

This issue becomes even more critical for projects located in dense urban areas, such as the 2.5-storey boarding house construction project in Jelambar, West Jakarta, which faces challenges such as limited storage space, narrow road access, heavy traffic, and restricted delivery times (Graciella et al., 2024; Nurlaelah & Rahmattullah, 2025a). These constraints demand efficient material management to prevent schedule delays and cost overruns. Structural materials such as cement, rebar, sand, and gravel have fluctuating demand patterns (Ammar et al., 2022), which makes the absence of systematic control result in overstocking leading to higher storage costs—or stockouts that hinder construction progress.

Quantitative approaches in inventory control, such as the Economic Order Quantity (EOQ) model, have proven effective in optimizing procurement decisions by balancing ordering and holding costs (Kumaat et al., 2025; Sutejo et al., 2023). Studies show that EOQ application reduces total inventory cost and purchase frequency compared to conventional methods used in the construction sector (Alnahhal et al., 2024; Kohar et al., 2022; Adzaky et al., 2024; Dewi, 2024; Lutfia & Pangestuti, 2023; Ramadhani et al., 2022; Jaharia et al., 2023). Furthermore, integrating EOQ with the Reorder Point (ROP) and Safety Stock (SS) models helps mitigate risks of late delivery and demand uncertainty (Azzi et al., 2014; Gurtu, 2021; Klosterhalfen et al., 2023; Barros et al., 2021).

However, most prior studies have focused on manufacturing industries or large-scale construction projects with ample storage and stable demand. Research explicitly combining EOQ, ROP, and SS models in small to medium-scale urban building projects such as this 2.5-storey boarding house is still limited (Setiawan et al., 2024; Tauhid & Amelia, 2024; Choi et al., 2023). The unique characteristics of such projects, including space constraints and high variability in material demand, require an adaptive and structured material control model. Therefore, this study aims to analyze the management of structural material control in the 2.5-storey boarding house project using EOQ, ROP, and Safety Stock methods to determine optimal order quantities, reorder points, and safety stock levels. The results are expected to contribute both practically by improving inventory efficiency for contractors—and academically by expanding the application of quantitative inventory models in small-scale construction projects.

**Table 1.** Previous Research

| Author(s) | Year | Context / Sector | Method(s) | Key Findings | Research Gap / Contribution |
|---|---|---|---|---|---|
| Azzi et al. | 2014 | Manufacturing logistics | EOQ + Safety Stock | Integration reduces uncertainty impact and cost fluctuation. | Limited application in construction sector. |
| Gurtu | 2021 | Supply chain management | EOQ, ROP | Improved order planning and reduced delivery delay risk. | Did not consider limited-site storage constraints. |
| Alnahhal et al. | 2024 | Construction projects | EOQ | EOQ reduced procurement cost by 8–12%. | Focused only on cost optimization, not on supply reliability. |
| Sutejo et al. | 2023 | Building materials | EOQ + SS | Reduced inventory cost by 15%. | No analysis of reorder point for fluctuating demand. |
| Klosterhalfen et al. | 2023 | Logistics optimization | EOQ + ROP | Model effective under demand uncertainty. | Assumes stable lead time; not suitable for small contractors. |
| Setiawan et al. | 2024 | Housing construction | EOQ, ROP, SS | Enhanced synchronization between material supply and project schedule. | Application still on medium-scale projects. |
| Tauhid & Amelia | 2024 | Small-scale building | EOQ + SS | Provided ordering efficiency for local contractors. | Did not assess dynamic demand fluctuation. |
| This Study | 2025 | 2.5-storey boarding house construction | EOQ, ROP, SS | Develops integrated model for limited urban project site. | Provides adaptive inventory control for small-scale structural works. |

## RESEARCH METHOD

### Research Design

This study adopts a quantitative descriptive approach with a case study method on a 2.5-storey boarding house construction project in Jelambar, West Jakarta. This approach is chosen to:

1. Describe systematically the actual conditions of structural material inventory control on site.
2. Perform numerical calculations to determine the Economic Order Quantity (EOQ), Safety Stock (SS), and Reorder Point (ROP).
3. Compare the results of the EOQ–SS–ROP method with the conventional inventory control system currently implemented in the project.

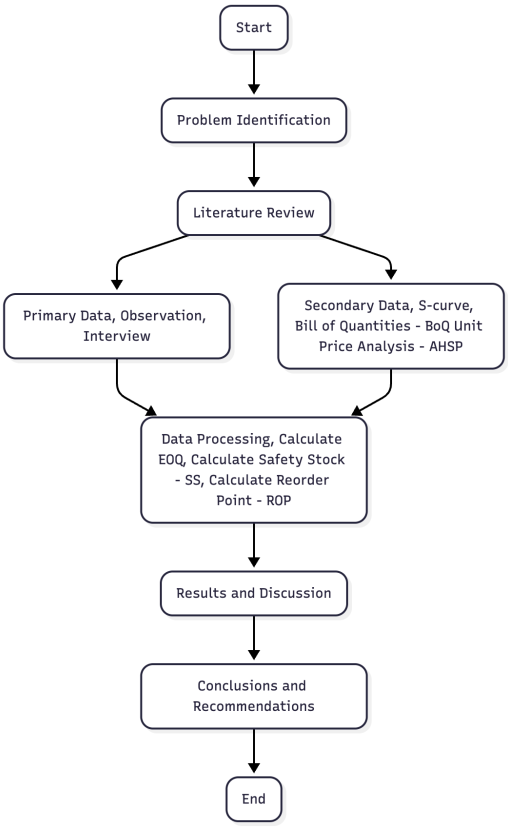


**Figure 1.** Scheme research

The unit of analysis in this study is the main structural materials (e.g., cement, reinforcing steel, sand, and gravel) that significantly contribute to project cost and work progress.

## Research Location and Object

The research is conducted on a construction project with the following general data:

1. Project name : Construction of a 2.5-Storey Boarding House
2. Location : Jl. Hemat 3 No. 12, Jelambar, Grogol, West Jakarta
3. Owner : (anonymized)
4. Contractor : PT GJA
5. Contract value : IDR 2,216,711,000.00
6. Construction duration : 20 weeks (July–December 2025)

The research object is the material inventory control system for structural works in this project, particularly related to ordering policy, storage, and material utilization.

## Types and Sources of Data

This study uses a combination of primary and secondary data, summarized in Table 2.

**Table 2.** Types and sources of data

| Type of Data | Main Content | Source |
|---|---|---|
| Primary data | Ordering procedures, stock policies, patterns of cooperation with suppliers, procurement constraints | Interviews with project manager, logistics/procurement staff, site supervisor |
| Primary data | Actual storage conditions, patterns of material utilization, potential damage/loss | Direct observation on site |
| Secondary data | Work volume and value, material quantities per structural work item | Bill of Quantities (BoQ) |
| Secondary data | Work sequence and duration, material needs per period | Time schedule/S-curve |
| Secondary data | Coefficients of material, labor, and equipment usage | Unit Price Analysis (AHSP) |
| Secondary data | Historical data on orders and deliveries | Procurement documents, purchase orders, invoices, receiving reports |

In this study, data collection is positioned as a critical stage that links the conceptual framework with the actual conditions of the project. The entire analysis of EOQ, safety stock, and reorder point depends on the accuracy and completeness of the data obtained at this step. Therefore, the procedure is designed to be systematic and traceable so that the results can be justified academically and practically.

The process begins with a preliminary mapping of required data based on the research objectives. The researcher first identifies which variables need to be quantified such as total material demand, ordering costs, holding costs, and lead time and then determines from which documents or informants these data can be obtained. Only after this mapping is completed does the researcher enter the field to collect primary and secondary data.

For **secondary data**, the researcher collects and examines the Bill of Quantities (BoQ)**,** structural drawings, the time schedule (S-curve)**,** and the Unit Price Analysis (AHSP)**.** The BoQ and drawings are used to calculate the total volume of structural works and to convert them into material quantities, for example, total bags of cement, kilograms of reinforcing steel, or cubic meters of sand and gravel required for foundations, beams, and columns. The time schedule is then used to distribute these total quantities over the project duration, usually in weekly or monthly intervals, so that demand per period can be estimated rather than only total demand at the end of the project. AHSP supports this process by providing the standard coefficients of material usage per unit of work, ensuring that calculated quantities are consistent with technical norms and local market conditions.

In parallel, **primary data** are obtained through semi-structured interviews and direct site observation. Interviews are conducted with the project manager, logistics or procurement staff, and site supervisor. The interview guide does not only ask about formal procedures written in company documents, but also explores habitual practices, such as how orders are actually placed when stock is low, how urgent orders are handled, and what types of delays most frequently occur in the supply chain. This allows the researcher to capture discrepancies between "official" procedures and actual practices on site.

Direct **observation** complements interview data by providing a factual picture of how materials are handled in the field. The researcher visits the material storage area, observes the layout of the stockyard or warehouse, the way materials are stacked, the presence or absence of labeling systems, and the physical condition of stored materials. The researcher also notes how often materials are moved, how deliveries arrive on site, and whether there are visible signs of damage or loss. These observations are important to interpret later whether the calculated EOQ and safety stock are realistic in light of spatial constraints, handling practices, and the physical environment of the project.

Overall, the data collection procedure not only answers the question of "how much" material is required and "how often" it is ordered, but also provides contextual information about "how" the system operates in reality. This combination of documentary, interview, and observational data strengthens the internal validity of the study and ensures that the subsequent quantitative analysis reflects actual project conditions.

## EOQ, Safety Stock, and Reorder Point Analysis

Once the required data have been collected and verified, the next stage is a structured analysis to obtain the economic order quantity, safety stock, and reorder point for each key material. This analysis transforms raw data initially in the form of volumes, prices, and time durations into operational decision parameters that can be directly used by the project team.

### Economic Order Quantity (EOQ) Calculation

EOQ is calculated using the classical formula:

$$Q^* = \sqrt{\frac{2DS}{H}} \qquad (1)$$

where:

- $Q^*$= economic order quantity (units),
- $D$= total annual demand (units/year),
- $S$= ordering cost per order (IDR/order),
- $H$= holding cost per unit per year (IDR/unit/year).

This formula yields the order size that minimizes the sum of ordering and holding costs.

**Determination of Lead Time and Demand Pattern**

1. Lead time (L) is obtained from historical delivery data or interviews with the procurement team and supplier.
2. From material usage data per period (e.g., per week), the following are determined:
   - Average demand per period ($\bar{x}$),
   - Standard deviation of demand per period (σ), calculated as:

$$\sigma = \sqrt{\frac{\sum_{i=1}^{n}(x_i - \bar{x})^2}{n-1}} \qquad (2)$$

where $x_i$is the actual demand in period i and n is the number of observed periods.

3. If lead time is expressed in number of periods (L), the standard deviation of demand during lead time ($\sigma_L$) can be calculated as:

$$\sigma_L = \sigma\sqrt{L} \qquad (3)$$

**Safety Stock (SS) Calculation**

Safety stock is calculated to anticipate demand variability and lead time uncertainty. SS is computed using:

$$SS = z \cdot \sigma_L \qquad (4)$$

where:

- $SS$= safety stock (units),
- $z$= z-value corresponding to the desired service level,
- $\sigma_L$= standard deviation of demand during lead time (units).

The choice of service level (e.g., 90%, 95%, 99%) is aligned with the project management policy and the cost consequences of stock-out.

**Reorder Point (ROP) Calculation**

The reorder point indicates the inventory level at which a new order should be placed so that materials arrive just before stock runs out. ROP is calculated as:

$$ROP = d_L + SS \qquad (5)$$

where:

- $d_L = d \times L$is the average demand during lead time (units),
- $d$= average demand per period (units/period),
- $L$= lead time in periods,
- $SS$= safety stock (units).

When the stock on hand reaches the ROP level, a new order should immediately be placed with order size $Q^*$.

**Comparison of Conventional System and EOQ–SS–ROP Method**

After obtaining $Q^*$, SS, and ROP for each main material, a comparison is made between:

1. **Total inventory cost** before and after implementing the EOQ–SS–ROP method;
2. **Order frequency** and order quantity per order;
3. **Risk of stock-out and overstock** under both scenarios;
4. **Impact on the continuity of structural works** and potential delays.

The comparison results are used to assess the effectiveness of the EOQ–SS–ROP method as an alternative material inventory control approach for the 2.5-storey boarding house project.

## RESULT AND DISCUSSION

### Overview of Collected Data

Primary data were obtained through field observations and interviews with the project manager, warehouse/logistics staff, foremen, and suppliers involved in the construction of a 2.5-storey boarding house in Grogol, West Jakarta. The observations documented real practices of material receiving, storage layout, stock recording, and daily/weekly material usage on site. Interviews complemented these findings by clarifying ordering policies, cost components, and experienced delays in material delivery.

Secondary data consist of the time schedule (S-curve), Bill of Quantities (BoQ), and Unit Price Analysis (AHSP). These documents were used to determine total demand for each structural material, the timing of peak demand, and unit prices needed to compute ordering and holding costs. The analysis focuses on seven major structural materials: cement, reinforcing steel D13, reinforcing steel Ø8, Class III timber, plywood (multiplek), crushed stone (split), and sand.

Lead time data were compiled from purchase orders and delivery notes. The calculated average lead time varies between approximately 2.4 and 6.4 days, indicating that the project is exposed to non-negligible supply risk, especially when ordering is not planned systematically.

**Material Demand and EOQ Results**

Based on the BoQ and observed usage, total demand $D$and unit costs $C$were established for each material. Cement demand reaches 2,000 sacks, reinforcing steel D13 about 410 bars, reinforcing steel Ø8 about 180 bars, Class III timber 3,328 pieces, plywood 100 sheets, crushed stone 62 m³, and sand 251 m³. Using these demand values, ordering cost $S =$IDR 200,000 per order, and holding cost $H$derived from capital cost (10%) plus warehouse, handling, insurance and deterioration charges, the Economic Order Quantity (EOQ) for each material was calculated.

**Table 3.** Summarises the key inventory-control parameters obtained in this study.

| Material | Total demand D | EOQ (Q*) | Safety Stock (SS) | Reorder Point (ROP) | Unit |
|---|---|---|---|---|---|
| Cement | 2,000 | 271 | 95 | 313 | sack |
| Steel D13 | 410 | 85 | 113 | 400 | bar |
| Steel Ø8 | 180 | 104 | 39 | 139 | bar |
| Class III timber | 3,328 | 586 | 53 | 130 | pc |
| Plywood | 100 | 36 | 18 | 58 | sheet |
| Crushed stone | 62 | 20 | 7 | 32 | m³ |
| Sand | 251 | 35 | 5 | 26 | m³ |

The EOQ values indicate that, under the current cost structure, the project should place orders of 271 sacks of cement, 85 bars of steel D13, 104 bars of steel Ø8, 586 pieces of Class III timber, 36 sheets of plywood, 20 m³ of crushed stone, and 35 m³ of sand to minimise the sum of ordering and holding costs. Compared to the existing practice where order quantities are smaller and more frequent these EOQ-based quantities reduce order frequency and increase average order size, which is consistent with classical EOQ theory.

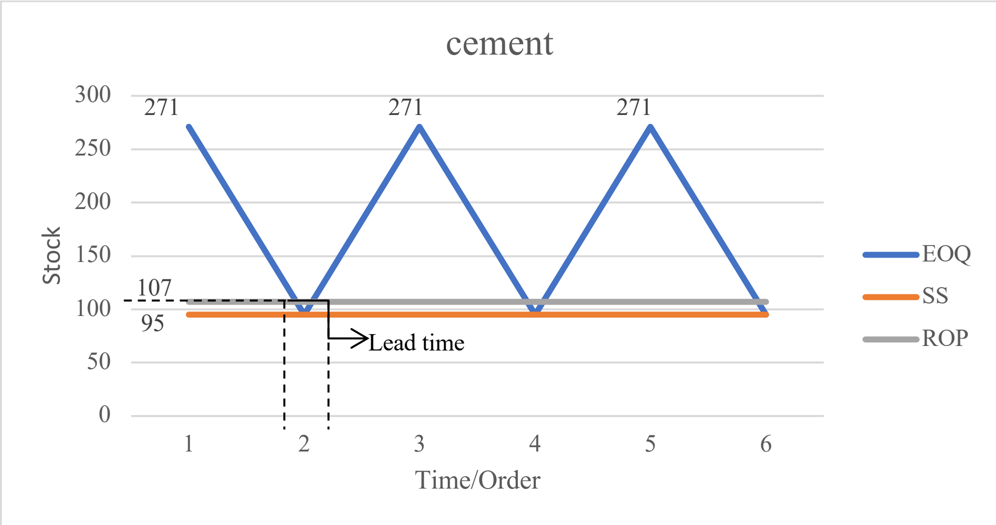


**Figure 2.** EOQ, SS, and ROP Graphs of Cement Materials

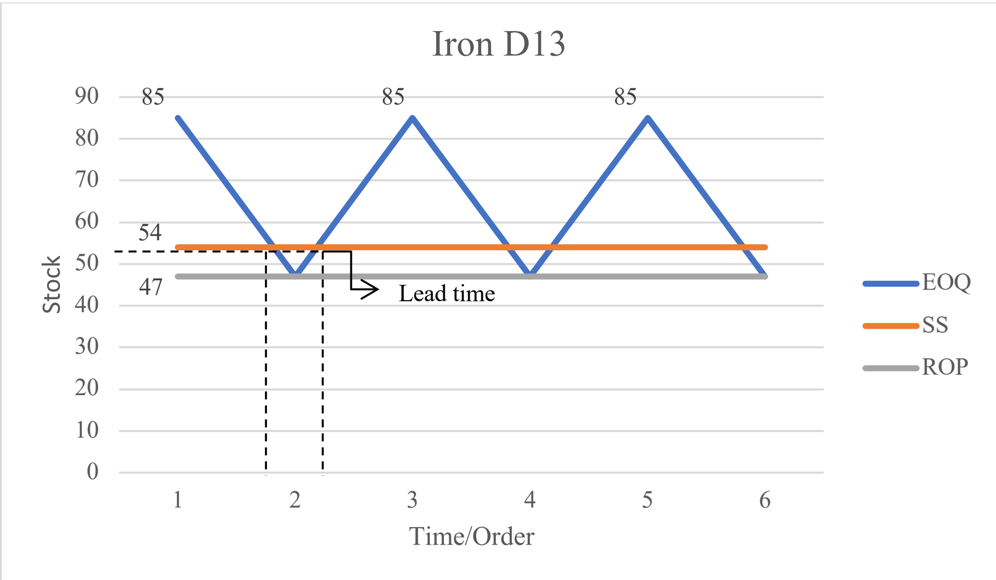


**Figure 3.** EOQ, SS, and ROP graph for D13 Iron Material

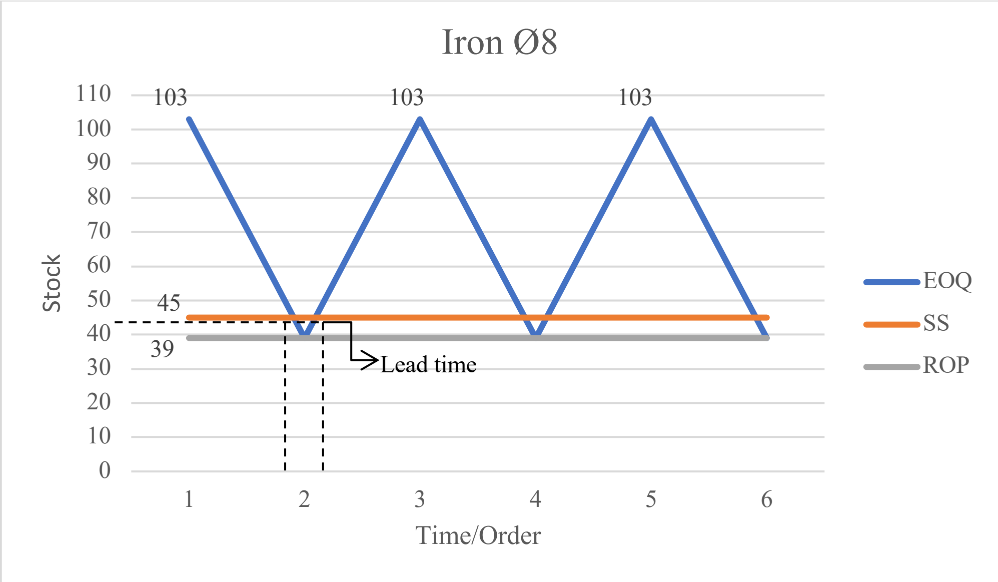


**Figure 4.** EOQ, SS, and ROP Graphs for Ø8 Iron Material

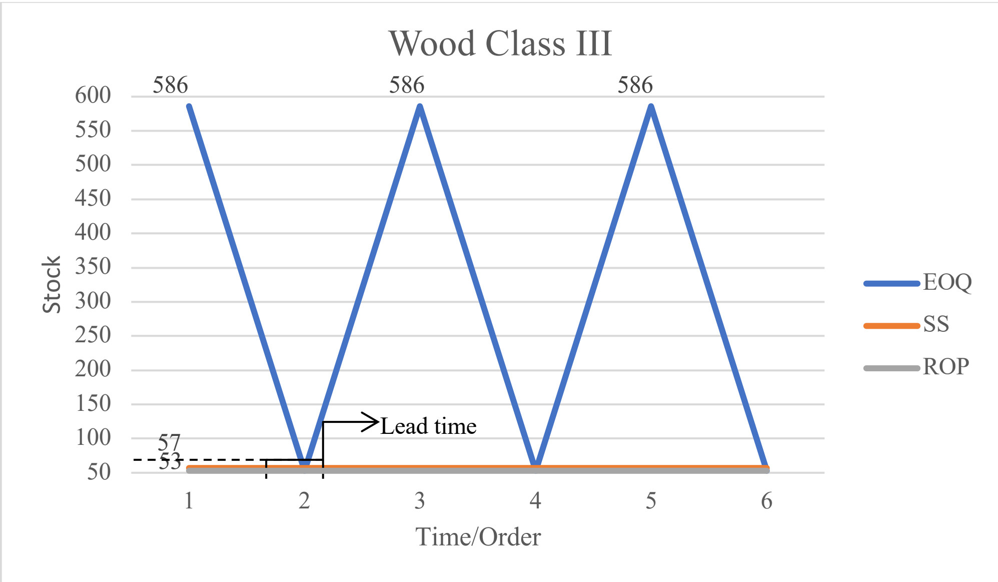


**Figure 5.** EOQ, SS, and ROP Graphs for Class III Wood Material

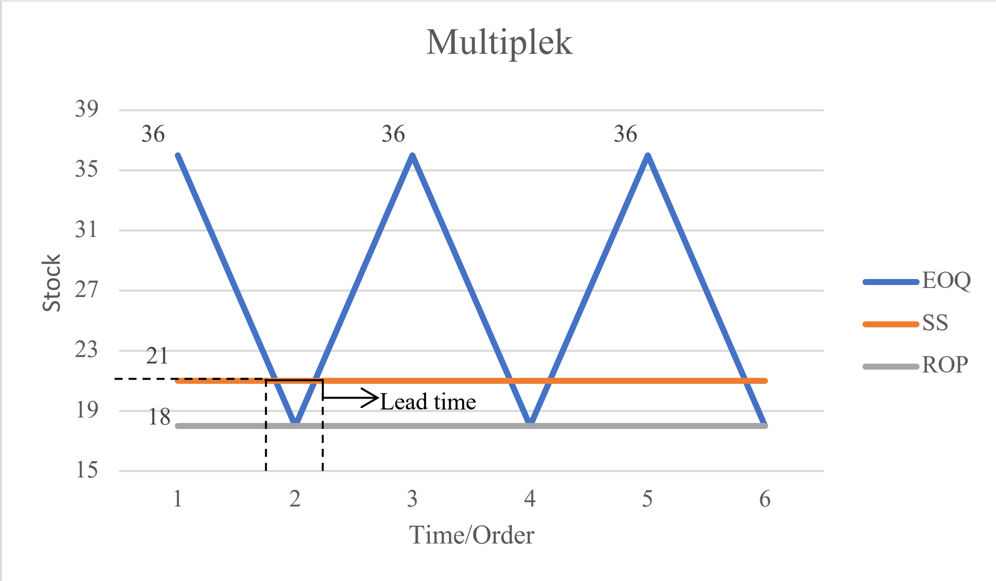


**Figure 6**. EOQ, SS, and ROP Graphs for Multiplex Material


**Figure 7.** EOQ, SS, and ROP Graphs for Split Stone Material

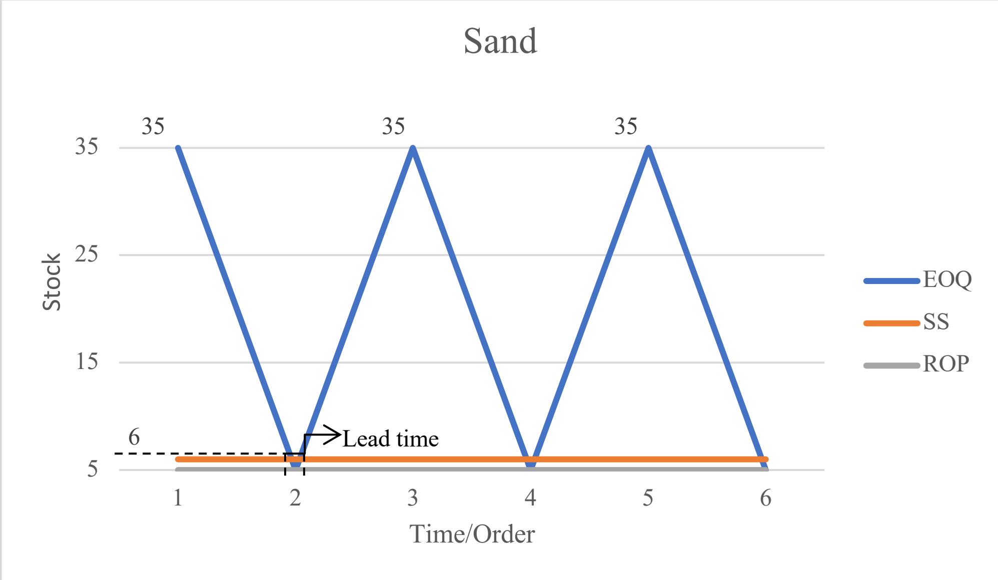


**Figure 9.** EOQ, SS, and ROP Graphs for Sand Material

**Cost Efficiency Formula**

Cost efficiency is defined as the percentage reduction of the ordering cost after applying the inventory-control method, compared to the initial (normal) condition:

$$\text{Cost Efficiency (\%)} = \frac{C_{\text{normal}} - C_{\text{after}}}{C_{\text{normal}}} \times 100\%$$

where:

- $C_{\text{normal}}$= initial (normal) ordering cost,
- $C_{\text{after}}$= ordering cost after EOQ or ROP is applied.

Cost Efficiency of the EOQ Policy

Given:

- Normal ordering cost $C_{\text{normal}}$ =20,005,302 IDR
- Ordering cost with EOQ $C_{\text{EOQ}}$ =13,026,930 IDR

$$\begin{aligned}\text{Cost Efficiency}_{\text{EOQ}} &= \frac{20{,}005{,}302 - 13{,}026{,}930}{20{,}005{,}302} \times 100\% \\ &= \frac{6{,}978{,}372}{20{,}005{,}302} \times 100\% \\ &\approx 34.88\%.\end{aligned}$$

So, the EOQ-based ordering policy **reduces the ordering cost by 34.88%**. The remaining cost incurred after implementing EOQ is:

$$100\% - 34.88\% = 65.12\%.$$

That means the project still spends 65.12% of the original ordering cost, but with a **34.88% saving**.

Cost Efficiency of the ROP (EOQ + ROP + Safety Stock) Policy

Given:

- Normal ordering cost $C_{\text{normal}}$ =20,005,302 IDR
- Ordering cost with EOQ + ROP $C_{\text{ROP}}$ =9,750,733 IDR

$$\begin{aligned}\text{Cost Efficiency}_{\text{ROP}} &= \frac{20{,}005{,}302 - 9{,}750{,}733}{20{,}005{,}302} \times 100\% \\ &= \frac{10{,}254{,}569}{20{,}005{,}302} \times 100\% \\ &\approx 51.26\%.\end{aligned}$$

Thus, after integrating EOQ with safety stock and reorder point, the project achieves a **51.26% reduction in ordering cost**.

The remaining cost is:

$$100\% - 51.26\% = 48.74\%.$$

So under the EOQ–ROP policy, the project only spends **48.74% of the original ordering cost**, meaning that **more than half of the ordering cost is saved**.

**Table 4.** Cost efficiency of EOQ and EOQ–ROP policies

| Scenario | Ordering cost (IDR) | Cost saving (IDR) | Cost efficiency (%) | Remaining cost (%) |
|---|---|---|---|---|
| Normal condition | 20,005,302 | – | – | 100.00 |
| EOQ only | 13,026,930 | 6,978,372 | 34.88 | 65.12 |
| EOQ + Safety Stock + Reorder Point | 9,750,733 | 10,254,569 | 51.26 | 48.74 |

## CONCLUSION

Based on the analysis of project material inventory control using the Economic Order Quantity (EOQ), Safety Stock (SS), and Reorder Point (ROP) methods, the following conclusions can be drawn:

1. **The EOQ method determines the most economical order quantity for each material.**

The EOQ calculations produce optimal order quantities for each material, namely: 271 sacks of cement, 85 bars of D13 steel, 104 bars of Ø8 steel, 586 pieces of Class III timber, 36 sheets of plywood, 20 $m^3$ of crushed stone, and 35 $m^3$ of sand. These EOQ values indicate that the project can reduce the frequency of orders and lower inventory-related costs if these optimal order quantities are applied.

2. **The Safety Stock (SS) calculation provides the minimum buffer required to prevent stock-out.**
   Based on the standard deviation of demand and a 95% service level (z = 1.64), the SS values obtained are: 95 sacks of cement, 113 bars of D13 steel, 39 bars of Ø8 steel, 53 pieces of Class III timber, 18 sheets of plywood, 7 $m^3$ of crushed stone, and 5 $m^3$ of sand. These SS levels represent the minimum buffer that must be available so that project activities can continue even when demand spikes or deliveries are delayed.
3. **The Reorder Point (ROP) determines when a new order must be placed.** Using the SS values and a lead time (L) of 2–7 days, the ROP values are: 313 sacks of cement, 400 bars of D13 steel, 139 bars of Ø8 steel, 130 pieces of Class III timber, 58 sheets of plywood, 32 $m^3$ of crushed stone, and 26 $m^3$ of sand. These ROP levels act as trigger points that indicate when a new order should be placed so that materials arrive before operating stock is depleted.
4. **Applying EOQ, SS, and ROP significantly reduces inventory costs.** The total inventory cost before analysis was IDR 20,005,302. After applying the EOQ, SS, and ROP methods, the inventory cost decreased to IDR 9,750,733. This corresponds to a **51.26% cost reduction** compared with the initial condition. Specifically, the EOQ method alone reduces inventory costs by **34.88%**, indicating that EOQ is already quite efficient for controlling material purchasing. Therefore, the combined application of EOQ, SS, and ROP is proven to be highly effective in reducing both purchasing and storage costs of materials in this project.

## REFERENCES

Adzaky, M. R., Erlina, Rr., & Ambarwati, D. A. S. (2024). *Analysis of raw material inventory control using Economic Order Quantity (EOQ) method. Journal of Business Management and Economic Development,* *2*(3), 1321–1334. https://doi.org/10.59653/jbmed.v2i03.977

Albert, I., Shakantu, W., & Ibrahim, S. (2021). *The effect of poor materials management in the construction industry: A case study of Abuja, Nigeria. Acta Structilia, 28*(1), 142–167. https://doi.org/10.18820/24150487/as28i1.6

Alnahhal, M., Aylak, B. L., Al Hazza, M., & Sakhrieh, A. (2024). *Economic order quantity: A state-of-the-art in the era of uncertain supply chains. Sustainability, 16*(14). https://doi.org/10.3390/su16145965

Ammar, T., Abdel-Monem, M., & El-Dash, K. (2022). *Risk factors causing cost overruns in road networks. Ain Shams Engineering Journal, 13*(5). https://doi.org/10.1016/j.asej.2022.101720

Babai, M. Z., Dai, Y., Li, Q., Syntetos, A., & Wang, X. (2022). *Forecasting of lead-time demand variance: Implications for safety stock calculations. European Journal of Operational Research, 296*(3), 846–861. https://doi.org/10.1016/j.ejor.2021.04.017

Barros, J., Cortez, P., & Carvalho, M. S. (2021). *A systematic literature review about dimensioning safety stock under uncertainties and risks in the procurement process. Operations Research Perspectives, 8*, 100192. https://doi.org/10.1016/j.orp.2021.100192

Gurtu, A. (2021). *Optimization of inventory holding cost due to price, weight, and volume of items. Journal of Risk and Financial Management, 14*(2). https://doi.org/10.3390/jrfm14020065

Kohar, S., Dana, I. N., Agung, W., & Nurasyiah, A. (2022). *Analysis of material inventory control in the Metrostater construction project in Depok. Sustainable Environmental and Optimizing Industry Journal, 4*(2), 131–141. https://doi.org/10.36441/seoi.v4i2.1189

Mega Puspita, M. (2020). *Analysis of raw material inventory control using the Economic Order Quantity (EOQ), Safety Stock (SS), and Reorder Point (ROP) methods on the production of footwear Haris Jaya Wedoro Sidoarjo.*

Yıldız, S., Güneş, S., & Kıvrak, S. (2024). *Examining the impact of material management practices on project performance in the construction industry. Buildings, 14*(7). https://doi.org/10.3390/buildings14072076