



PROJECT MANAGEMENT PRACTICES IN LAND DEVELOPMENT PROJECTS IN ALVIERA, PORAC, PAMPANGA: A PHENOMENOLOGICAL STUDY

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Abstract

This phenomenological study examined project management practices in land development projects in Alviera, Porac, Pampanga—a mixed-use estate integrating residential, commercial, institutional, and recreational developments that demand a high level of coordination, planning, and execution. Using a qualitative research design, semi-structured interviews were conducted with fifteen (15) purposively selected respondents comprising proponents/clients, project and construction managers, engineers, site supervisors, and contractors/subcontractors. Data were analyzed through thematic analysis focused on strategic planning and scheduling, cost management and budget control, quality assurance and control, and risk and stakeholder management. Findings show that a dedicated Project Management Team (PMT) significantly enhances project performance through structured coordination, clear role allocation, and centralized decision-making. Technical due diligence during planning contributes to more realistic scheduling and fewer project conflicts, while digital cost-monitoring and tracking tools improve financial oversight. A quality-first approach sustains compliance with construction standards despite schedule and budget pressures, and risks associated with soil conditions and weather are managed primarily through proactive flood-mitigation measures. The study concludes that structured, team-based project management practices meaningfully improve project efficiency, coordination, and overall project success in large-scale, mixed-use land development.

Keywords: *Alviera, Porac, Pampanga; construction management; land development; project management; project management team; quality-first approach*



Introduction

Large-scale land development projects have become a significant driver of economic growth and urban expansion in the Philippines, integrating residential, commercial, institutional, and industrial components that demand extensive coordination, planning, and execution. One prominent example is Alviera, a mixed-use estate in Porac, Pampanga, developed as a joint venture between Ayala Land, Inc. and Leonio Land Holdings, Inc. Alviera hosts a wide range of concurrent developments, including commercial and business establishments (e.g., Sandbox, City Kart, Alviera Country Club), institutional facilities (Miriam College at Alviera, La Salle Botanical Gardens), industrial operations (Monde Nissin, Badan Building Materials Corporation), and residential communities developed by Alveo Land, Ayala Land Premier, Avida Land, and Amaia Land. The simultaneous execution of these projects creates persistent challenges around budget resources, construction scheduling, quality assurance, and risk management, including recurring site-adaptation issues that arise when For Construction Drawings (FCD) are released without a completed utilities-clashing study.

Effective project management is widely regarded as central to navigating these challenges. Applying structured project management practices—PMBOK-aligned planning, scheduling, budgeting, and quality control—has been shown to increase client satisfaction and reduce contractual conflict (Hanifi, 2024), while strong direction and leadership significantly influence project performance in the land development construction industry (Waseem et al., 2024). Frameworks such as agency theory, systems theory, and the Project Management Body of Knowledge (PMBOK) provide a structured basis for examining how project management techniques shape outcomes in complex, multi-stakeholder developments such as Alviera (Project Management Institute [PMI], 2021).

The broader project management literature reinforces the centrality of planning, scheduling, cost, and quality control to construction outcomes. Planning establishes goals, identifies resources, and surfaces risks early, allowing project managers to anticipate conflict (Kerzner, 2017), while scheduling—identifying, sequencing, and estimating task durations—helps offset delays caused by weather, resource shortages, or coordination breakdowns (Larson & Gray, 2021). Cost control safeguards a project's financial soundness through procurement management and continuous expenditure monitoring, and quality management ensures that deliverables, materials, and workmanship meet design specifications, reducing rework and preserving structural integrity (Marzouk & Alshabou, 2021). Technology adoption has increasingly reshaped these core functions: Internet-of-Things (IoT)–enabled systems strengthen team coordination, monitoring, and decision-making across the project life cycle (Patil & Bhaumik, 2024), and the integration of Building Information Modeling (BIM) with Integrated Project Delivery (IPD) improves collaborative planning and tracking, making construction management more efficient and cost-effective (Yan et al., 2025). Effective risk management—covering identification, assessment, and mitigation—likewise contributes to client satisfaction, budget performance, and overall project success (Adeleke et al., 2019; Obadimu et al., 2024), and structured change-management practices help organizations absorb scope, quality, and cost disruptions with fewer downstream schedule impacts (Taher et al., 2025). In the Philippine setting specifically, qualitative research on multi-phase developments shows that interviews with contractors, engineers, supervisors, project managers, and clients surface contextual drivers—communication effectiveness, workplace culture, leadership influence—that are not readily captured through quantitative measures alone (Hanifi, 2024), underscoring the value of a phenomenological approach to studying project management practice in a setting like Alviera.

Despite this substantial literature base, empirical, Philippine-grounded studies that examine project management practices holistically—spanning planning, cost, quality, and risk—within a single large-scale, mixed-use land development remain limited, and much of the existing evidence is drawn from single-domain quantitative studies (e.g., labor productivity, schedule compression) rather than integrated, practitioner-perspective accounts. This study addresses that gap by examining, through the lived experience of practitioners directly involved in Alviera,



how project management practices shape planning and scheduling, cost and budget control, quality assurance, and risk and stakeholder management across the project life cycle.

Theoretical and Conceptual Framework

The study is anchored on the premise, drawn from the PMBOK Guide, that project management processes are interconnected: the output of one process becomes either an input to another process or a project-phase deliverable, and processes may occur once, periodically, or continuously across the project life cycle (PMI, 2017). Building on this, the study's conceptual framework treats team productivity, top-management support, and stakeholder collaboration as inputs that are processed through PMBOK-aligned tools and techniques and a systems-theory perspective—treating the project as an interdependent whole rather than a set of isolated tasks—to produce project performance as the output, operationalized as on-time completion, cost efficiency, quality-standard compliance, and stakeholder satisfaction. Agency theory further informs the framework's treatment of principal–vendor relationships (e.g., project owners and contractors), in which misaligned interests can generate conflict and variation orders when vendors do not act in the principal's best interests (Abdullah, 2024).

Statement of the Problem

This study examined how project management practices shape the planning, construction, execution, and completion stages of land development projects in Alviera, and how these practices relate to overall project performance. Specifically, it sought to answer the following questions:

1. What strategic planning and scheduling practices are employed in the implementation of land development projects?
2. What project management practices are utilized to achieve effective cost management and budget control during project implementation?
3. How are quality assurance and quality control practices implemented to ensure compliance with project specifications and standards?
4. What risks are encountered, and how are project management practices applied to address them during implementation?
5. What recommendations and reflections do practitioners offer for improving project management practices in land development projects?

Significance of the Study

This research is important because it enhances comprehension of how project management techniques affect the planning, budgeting, scheduling, and construction and operations of the mixed-use land development projects like those in Alviera. Through the use of qualitative methods and interviews with the engineers, project managers, contractors, and proponents involved in this project, the study seeks to produce practical data on how project management practices may improve budgeting, quality, construction schedules and timelines.

Contractors, Subcontractors, and Developers. The research may emphasize the significance of strengthening coordination with the Project Management Team to support continuous project execution and sustain financial stability across the project budget. This could help contractors, subcontractors and developers adopt the updated digital tools and technologies, which includes paperless documentation, cost monitoring systems, real-time tracking platforms for digitalized records to enhance project team workability and accuracy.

Engineers and Site Supervisors. This study may benefit engineers and site supervisors by providing insights to the effective project management practices that support the proper review and evaluation of drawings and plans. This could serve as a valuable reference to enhance site supervision, ensuring compliance with approved plans and specifications, and schedules, and improving overall construction quality. Furthermore, the study may contribute to strengthening quality control and quality assurance practices, including project documentation,



inspection procedures, and construction monitoring, leading to more efficient project implementation and successful project delivery.

Proponents, Clients, Investors, and Stakeholders. It can improve the project outcomes leading towards effective coordination, greater client satisfaction and increased investor trust. The results of this study can help proponents, clients, investors and stakeholders understand how important it is to monitor the scope so as to reduce changes and to make sure that all decisions are based on operational and cost analyses.

Project Managers, Construction Managers and PM Teams. The results will serve as a valuable reference for engineers, clients, project/construction managers, and construction management teams, etc. assisting them in enhancing their planning, budgeting, construction, scheduling, and execution. The research may also contribute to enhance project productivity, optimize resource allocation, site coordination and enhance client satisfaction, leading to more economical and timely project completion.

Policymakers and Regulators. The suggested research could offer valuable insights for the regulators and policymakers in developing policies and guidelines, acting as an element when they encounter weather-related risks. It could ensure consistency and accountability when quality control and assurance practices are applied to the core of project management.

Scholars and Researchers. This suggested research will enhance the existing body of knowledge in project management and construction management processes by providing other empirical aspects from the Philippine context, specifically the factors that define the field and value of project management on a mixed-use land development project. It will encourage future researchers who are interested in investigating the impact of technological tools, comparing the results between the different land development projects in other construction industries.

Society and Local Communities. This study could benefit the client and developers by highlighting the importance of effective project management practices in minimizing the social and environmental impacts of land development projects. It emphasized the use of risk management practices i.e. flood mitigation, and good stakeholder communication with transparency, and sustainable practices to support a safer project implementation, environmental protection, community trust, improved living conditions, sustainable economic development, and long-term community growth.



Methodology

Research Design

This study used a qualitative, phenomenological research design to examine how project management practices shape the planning, construction, implementation, and completion of land development projects in Alviera (Creswell & Poth, 2023). A qualitative approach was selected because it enabled the collection of detailed data on respondents' perceptions, experiences, and strategic decision-making, and provided insight into the practical challenges of managing cost, quality, and time in land development. This design follows prior qualitative work on construction management practice (Hanifi, 2024; Waseem et al., 2024).

Phenomenology was adopted as the specific tradition of inquiry to identify and analyze common understandings among respondents' lived experiences within the context in which they occurred (Moustakas, 1994; Creswell & Poth, 2023). Data were generated through in-depth, semi-structured interviews conducted in person or online, depending on respondent availability, allowing open discussion of planning effectiveness, budget management, quality assurance and control, and construction timelines (Yilmaz et al., 2024).

Respondents and Sources of Data

Primary data were obtained from fifteen (15) purposively selected respondents actively involved land development projects in Alviera, each with a minimum of five (5) years of relevant experience: four (4) proponents/clients, six (6) project/construction managers, two (2) contractors/subcontractors, and three (3) engineers/site supervisors (Table 1). Respondents' years of professional experience ranged from 5 to more than 20 years, with the largest single group (5 respondents) reporting 16–20 years of experience (Table 2). The sampling strategy prioritized depth of experience over sample size, consistent with the study's phenomenological design.

Table 1. Distribution of Respondents by Professional Position

Position	Frequency
Proponent / Client	4
Project/Construction Managers	6
Contractors and Subcontractors	2
Engineers and Site Supervisors	3
Total	15

Table 2. Distribution of Respondents by Years of Professional Experience

Years of Experience	Frequency
5–10 years	2
11–15 years	4
16–20 years	5
More than 20 years	4
Total	15



Research Instrument

A semi-structured interview guide, developed by the researcher and reviewed by one academic scholar and two construction management specialists, served as the primary data-collection instrument. It comprised open-ended questions organized around four domains: cost management and budget control; strategic planning and scheduling; quality assurance and control; and risk and stakeholder management. A pilot interview was conducted prior to formal data collection to refine the clarity, relevance, and sequencing of the questions.

Data Collection Procedures

Interviews lasted approximately 45–60 minutes and were conducted in person or virtually according to respondent preference, with audio recorded and later transcribed with each respondent's consent. Respondent identities were replaced with pseudonyms during transcription to preserve confidentiality, and access to the raw data was restricted to the researcher and academic adviser, who stored it in password-protected digital files for a maximum of five years. Data collection followed a consistent protocol to preserve comparability across interviews, and the researcher maintained neutrality throughout to reduce bias.

Data Analysis

Data were analyzed using thematic analysis to identify recurring patterns and classifications across responses relating to planning, scheduling, cost, quality, and risk management. Coded data were iteratively refined into themes to safeguard validity, reliability, and alignment with the study's research questions, consistent with the phenomenological design's emphasis on depth over breadth.

Ethical Considerations

The study followed the institutional ethics guidance of the Polytechnic University of the Philippines and observed the principles of informed consent, voluntary participation, privacy and data confidentiality, minimal risk, and provisions for potentially vulnerable subjects. Respondents were briefed on the study's purpose, data-handling procedures, and their right to withdraw at any point without penalty; all data were anonymized and reported in aggregate. The ethical protocol was designed to meet American Psychological Association (APA) standards and established research ethics principles in construction management studies (Gunduz et al., 2023).



Results

Thematic analysis of the fifteen interviews yielded seven major themes: (1) Professional Profile, (2) Real-World Experience in Alviera, (3) Strategic Planning and Scheduling, (4) Cost Management and Budget Control, (5) Quality Assurance and Control, (6) Risk and Stakeholder Management, and (7) Recommendations and Reflections. Most respondents were project/construction managers (6 of 15) with substantial industry tenure—five reported 16–20 years of experience and four reported more than 20 years—thereby lending considerable credibility to the data gathered.

Theme 1: Professional Profile

All fifteen respondents were actively engaged in Alviera projects, with career trajectories typically beginning in site operations (roughly four years, on average) before progressing to project and construction management roles. Four respondents held proponent-side roles overseeing the full project lifecycle—from feasibility and land acquisition through construction, operations, and after-sales—while six held Project/Construction Manager roles resembling a Project Director function, overseeing planning through post-construction before handoff to Ayala Property Management Corporation (APMC). Three respondents were project engineers/site supervisors directly coordinating multiple contractors, and two represented contractor/subcontractor organizations responsible for on-site execution and delivery. All respondents reported experience beyond Alviera, including work with major Philippine developers such as Ayala Land, Makati Development Corporation, EEI Corporation, Robinsons Land Corporation, SM Development Corporation, and DMCI Homes, indicating a pool of respondents with broad, transferable industry expertise.

Theme 2: Real-World Experience in Alviera

Respondents uniformly described the Project Management Team (PMT) as central to project performance. Systematic division of roles and responsibilities was reported to make execution “easier” (Respondent 1), and the PMT was described as the primary interface with contractors, particularly given limited on-site presence from some proponent teams (Respondent 14). Respondents attributed clearer project direction, improved monitoring, and faster decision-making to PMT presence (Respondents 3, 4, 6), while the PMQS team specifically was described as functioning as a client extension overseeing billings, project manager instructions, and coordination meetings (Respondents 2, 5). Conversely, all respondents indicated that projects lacking a committed PMT become more vulnerable to unregulated client-directed changes; Respondent 8 linked the absence of a PMT to weakened cost and schedule control and increased disputes, and Respondent 9 noted that reduced supervision delays problem recognition and undermines timely, economical, and profitable completion.

Theme 3: Strategic Planning and Scheduling

Respondents described strategic planning and scheduling in Alviera as a proactive progression from macro-level milestones to micro-level daily tasks, anchored in early due diligence. Ten of fifteen respondents identified thorough planning and due diligence as essential to addressing site challenges and unforeseen changes, with Respondent 8 emphasizing the need for realistic schedules that build in buffers for weather and site uncertainty, and Respondent 1 stressing early PMT engagement to keep designs realistic and procurement economical. Nine of fifteen respondents identified the rainy season—compounded by Alviera's sandy, silty soil—as the primary recurring threat to deadlines, addressed through Critical Path Method (CPM) schedule adjustments, prioritization of structural work ahead of the wet season, and interim measures such as sandbagging (Respondents 13, 14). Contractor respondents described submitting baseline schedules (typically developed in Oracle Primavera P6, including S-curve tracking) for client approval, with regular updates enabling early detection of delays and corrective action; eight of fifteen respondents cited extended working hours and front-loaded structural work as



common acceleration strategies. Five respondents highlighted third-party validation of contractor accomplishments through Project Technical Group (PTG) meetings as a further safeguard against schedule

Theme 4: Cost Management and Budget Control

Site adaptation—discrepancies between signed For Construction Drawings and actual site conditions—emerged as a leading cost driver, prompting 10 of 15 respondents to describe their reliance on a third-party PMT and Quantity Surveying Team (QST) to identify FCD-versus-site clashes early and issue technical/financial recommendations. All fifteen respondents described using digital cost-monitoring tools—principally Procore, Google Sheets, and Microsoft Excel—with structured cost-control analyses conducted at 20%, 50%, and 80% completion intervals, and consolidated monthly cost reports that tracked actual expenditures, committed costs, progress billings, and completion costs. Respondent 1 characterized monthly financial reporting as essential to tracking project performance and financial status throughout development.

Theme 5: Quality Assurance and Control

Respondents described quality assurance and control as anchored in standardized documentation and inspection processes: pre-construction kick-off meetings establishing required forms (RFA, RFI, IR) and confirming site possession (Respondents 3, 6), and—reported by 13 of 15 respondents—the use of Method of Statement (MS) and Inspection Test Plan (ITP) documents, pre-construction mock-ups, internal and external QA/QC audits, and Quality Environmental System (QES) integration, supported by third-party PMQS verification of workmanship and materials. Twelve of fifteen respondents linked recurring minor workmanship issues to certified skilled-worker training and trade testing, while Field Observation Reports (FOR) and Non-Conformance Reports (NCR) were used to document and remediate deficiencies, with contractor billing held pending correction (Respondents 3, 4, 6). Respondents consistently described a “quality-first” stance in which schedule or budget pressure does not justify compromising standards (Respondents 1, 9, 13).

Theme 6: Risk and Stakeholder Management

Thirteen of fifteen respondents identified soil classification and weather-related hazards—particularly dry-season grass fires and wet-season soil and silt erosion—as Alviera's most common risks, managed through APMC security monitoring, coordination with fire-response teams, and budgeted flood-mitigation measures. All fifteen respondents described managing stakeholder coordination through periodic Contractor Coordination, Project Technical Group, and Design Coordination meetings, as well as weekly Percentage of Completion (POC) updates. Stakeholder misalignment was most often traced to APMC “wish-list” or locator-specific requests outside the signed FCD scope (Respondent 10); the Construction Management Team's practice of adhering to approved scope and evaluating additional requests case by case, supported by PMT-facilitated technical/financial recommendations, was the most commonly cited resolution approach (8 of 15 respondents).

Theme 7: Recommendations and Reflections

Seven of fifteen respondents highlighted open communication and coordination as the clearest driver of harmonious, on-time task completion. Specific recommendations included peer-reviewing FCDs before release and avoiding on-site execution of incomplete plans to limit change orders, and ensuring timely billing given contractors' reliance on progress payments (Respondent 3), alongside early technical due diligence, clear brand and product deliverables, and schedules synchronized with the Work Plan Procurement and contractual obligations (Respondent 1). Ten of fifteen respondents called for broader adoption of digital tracking tools, paperless documentation, real-time progress monitoring, and platforms such as Procore, DocuSign, MS Teams, and AutoCAD. Advice for aspiring project managers centered on stepping outside one's comfort zone (Respondent 1), team unity toward shared objectives (Respondent 2), technical judgment built through experience (Respondent 3), authenticity in leadership style (Respondent 6), and—from Respondent 7—developing one's team, accepting



that skill comes only through experience, communicating proactively with contractors and stakeholders, and treating family as a first priority.

Discussion

The findings indicate that a dedicated Project Management Team functions as the practical mechanism through which the study's conceptual framework operates: PMT-coordinated inputs (team productivity, top-management support, stakeholder collaboration) are processed through PMBOK-aligned planning and systems-oriented coordination to generate the performance outcomes practitioners described—realistic schedules, controlled costs, sustained quality, and mitigated risk. This is broadly consistent with prior findings that structured project governance and strong managerial capability reduce risk and support timely completion in construction settings (Waseem et al., 2024), and extends that literature by showing, from a Philippine, mixed-use development context, that the PMT's value is most visible in its absence: respondents linked missing PMT oversight directly to unregulated scope changes, weakened cost and schedule control, and delayed problem recognition.

On planning and scheduling (RQ1), respondents' emphasis on early due diligence and schedule buffering supports the established view that planning quality shapes a project's capacity to absorb delay-inducing shocks such as adverse weather (Kerzner, 2017; Larson & Gray, 2021); the localized emphasis on rainy-season risk and CPM-based schedule recovery reflects a site-specific adaptation of these general principles to Alviera's sandy, silty soil conditions.

On cost management (RQ2), the consistent use of Procore, Excel, and Google Sheets alongside interval-based cost-control analysis (20/50/80%) illustrates how digital tools translate into practice the broader literature's finding that technology adoption strengthens coordination and decision-making in construction project management (Patil & Bhaumik, 2024; Yan et al., 2025). The QST/PMT partnership, identified as central to managing FCD-versus-site discrepancies, also echoes agency-theory concerns about misalignment between principals and vendors (Abdullah, 2024), suggesting that formal third-party verification functions partly as an agency-cost-reduction mechanism.

On quality (RQ3), the “quality-first” posture reported among respondents—where schedule and budget pressures do not justify compromised standards—aligns with and offers a practitioner-level account of quality management's established role in reducing rework and preserving structural integrity (Marzouk & Alshabou, 2021).

On risk and stakeholders (RQ4), the concentration of risk around soil and weather conditions, addressed through flood mitigation and proactive monitoring, is consistent with the literature's identification of effective risk management as a driver of client satisfaction and overall project success (Adeleke et al., 2019; Obadimu et al., 2024), while the stakeholder-misalignment findings reinforce the value of structured change-management processes in absorbing scope disruptions with minimal downstream impact (Taher et al., 2025).

Regarding recommendations (RQ5) and study limitations, respondents' calls for earlier FCD review, timely billing, and broader adoption of digital tools point to concrete, low-cost interventions for practice. As a single-site, phenomenological study of fifteen purposively selected respondents, the findings reflect the perspectives and experiences of practitioners embedded in one Philippine mixed-use development and should be interpreted as context-rich rather than statistically generalizable. The qualitative design was deliberately chosen to capture the depth of practitioner experience rather than to estimate population-level effects.



Conclusion

Effective project management practices notably increase project efficiency through proper role allocation, coordinated efforts, and streamlined processes throughout the project cycle. The presence of a Project Management Team enables seamless integration of planning, construction, execution, and supervision activities, serving as the core mechanism for coordinating project processes and stakeholders. Early planning, technical due diligence, and strategic scheduling strengthen credible planning and scheduling, particularly in resolving recurring challenges such as weather conditions and soil classification, while systematic coordination and monitoring support optimized workflow and timely completion. Strict enforcement of quality assurance and control processes ensures compliance with standards under a quality-first principle despite time and budget pressures, and consistent financial monitoring paired with digital tools optimizes budget control and minimizes cost overruns. Precautionary risk management and systematic coordination further mitigate project risks and resolve stakeholder misalignments. Overall, coordinated project management practices significantly improve project efficiency, coordination, and overall success in large-scale land development.

Recommendations

Contractors, Subcontractors, and Developers. Adopt digital cost-monitoring, real-time tracking, and paperless documentation tools; comply strictly with approved construction drawings to limit change orders; and strengthen coordination with the Project Management Team, including timely monitoring of billing status.

Engineers and Site Supervisors. Maintain continuous training, periodic inspections, and site monitoring; carefully review plans and specifications; and sustain quality control procedures, including Method Statements, Inspection Test Plans, and Non-Conformance Reports.

Proponents, Clients, Investors, and Stakeholders. Engage early in planning, support the integration of the Project Management Team, monitor scope closely to minimize changes, and prioritize timely approvals and active participation in coordination meetings.

Project Managers, Construction Managers, and PM Teams. Engage early in technical due diligence, realistic scheduling, and risk mitigation; use structured monitoring tools such as the Critical Path Method; and maintain transparent, electronically supported cost reporting and coordination.

Policymakers and Regulators. Strengthen and enforce policies on environmental and safety standards relevant to site conditions and weather-related risk, and promote consistent, accountable documentation and monitoring guidelines across projects.

Scholars and Researchers. Extend this study by examining the impact of technological tools, comparing outcomes across different land development and construction contexts, and analyzing specific project management practices in greater depth.

Society and Local Communities. Encourage Project Management Teams and developers to assess social and environmental impacts, particularly around soil and weather-related risk, and to sustain transparent communication and environmentally sound practices with local communities.



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