

# Angelito Villar Monte

Structural/Geotechnical Engineer  
BIM Specialist, Project Manager

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## Career Profile

Registered Civil Engineer with post-graduate specializations in Structural and Geotechnical engineering, having over 20 years of extensive experience in coordinated design and construction of building and infrastructure projects has characterized his career. Earned master's degree in Global BIM Management, Project Management (PMP) and Value Engineering (AVS) certifications are testament to his continuous professional improvement in facing the growing challenges in the industry. He has manifested exceptional leadership and contribution in the professional and academic communities. He seeks to optimize the utilization of his skills as a Senior Structural Engineer and Project Manager adapted into the BIM methodology.

## Key Skills and Experience

**Technical Competency** in both design and construction of steel and concrete structures, including site inspections and investigation of critical cases. His synergistic expertise between Structural and Geotechnical Engineering (investigation and design) and conducting Value Engineering studies add more value to projects.

**Codes & Standards.** Wide understanding of international codes and standards such as the ASCE 7, ACI 318 & others, PCI, AISC, AISI, ASTM, IBC, Saudi Bldg. Code, among others.

**Project Management.** Successfully managed complex construction projects as per design and contract, ensuring that the contractor completes the project by adhering to timelines, budgets, quality, and safety standards. Demonstrated strong project planning and organizational skills, coordinating multiple disciplines and stakeholders to achieve project objectives. Implemented effective project control measures, including scope management, risk assessment, and change control processes.

**Process Design.** Develop and streamline existing engineering design and construction processes based on well established methodologies such as Stage-Gate Process, Mashroat guide, APQC Process Framework, BPMN specification, and Project Management Institute's standards and guides.

**BIM Implementation.** Lead and coordinate the production of BIM deliverables (i.e., models, drawings, extracted information) complying to ISO 19650, 12006 (classification), 29481 (delivery manual), Uniclass, Masterformat, Omniclass, including preparation and presentation of technical reports and proposals such as the BIM Execution Plan (BEP).

**Software Proficiency** in using *Autodesk* products: Revit, Navisworks, BIM 360, Robot Structural Analysis, Autocad and other BIM applications like Solibri, BIMcollab, Archicad, Plannerly. *Structural:* STAAD Pro, ETABS, SAFE. *Geotechnical:* Prokon, QuickSuite. *Project Management:* Primavera; spreadsheets programs, and Microsoft Office applications, among others, for an efficient workflow.

**Leadership.** Fostered and motivated strong working relationships with interdisciplinary teams by adapting a strategic leadership approach in engineering and construction, professional organizations, and the academe. Presiding over meetings to facilitate progress reporting and discussions. Practicing effective coordination with engineering professionals, contractors, consultants, and upper echelon of the organization to integrate design and construction processes and facilitate smooth project delivery. A Competent Communicator of Toastmaster International.

## Relevant Career Achievements

**BIM Implementation.** In his current work, the Design Department's drive of digital transformation by adapting the application of Building Information Modelling (BIM) has added into the design and development challenge of streamlining its workflows. Appointed into the BIM Team to develop an implementation plan, he scrutinized the existing processes in delivering design projects as a starting point. Equipped with the knowledge of project life cycle, project management, process frameworks, the BIM methodology and ISO 19650, he developed the department's BIM design process flow and its associated workflows. The output of this task was subsequently turned into a set of Policy and Procedure that clearly define the successful implementation of the BIM methodology in the Design Department and significantly improved the delivery of design projects.

**Design Projects.** In Saudi Arabia, for almost 15 years, he designed, reviewed and value engineered no more than 10 medium-to-high rise buildings (up to 22 stories), and over a hundred of small-to-medium rise projects of varied use (medical, institutional, industrial, military, infrastructure). The integrated design projects were developed with a collaborative multidisciplinary team. Every project design begins by clearly identifying the objectives, requirements and scope of works, including preparation and review of Request for Proposals (RFP). But the most exciting design works he delivered are the critical modification and structurally impending and failed cases. Thinking out-of-the-box and innovations that are constructible to suit existing site conditions have provided the structural solutions.

**Construction Projects.** Conducted structural inspections, review of shop drawings, materials, quantities, and other technical submittal for five years of the 15-hectare Royal Saudi Land Forces Headquarters in Riyadh. The military complex composed of buildings and tunnels of various functionalities and structural materials and systems. Several modifications to the designs has posed the challenge to rethink and innovate using the other materials such as precast concrete. A huge cavity discovered in the substrata was treated by conducting further geotechnical investigation and filling the cavity with plain concrete and grout injection.

**Geotechnical projects.** Operating my own consultancy office in the Philippines, conducting geotechnical investigations starting with the preparation of the investigation program, research on available information, reconnaissance, evaluation of soil & rock exposures, SPT borehole drilling, sampling for laboratory tests, analysis, calculations, and preparation of geotechnical report. The most challenging project was a hydropower plant. Trekking the mountains and gathering data adheres more to the principles of geology.

**Leadership.** It is psychologically challenging to handle teams composed of different cultures and backgrounds. In one particular project, the contractor's project manager is almost always of heightened mood. He admitted to be oftentimes 'high hot'. The animosity created by his character impacted the project negatively. Having some understanding about emotional intelligence, being calm and polite in spite of heated situation has tamed his temper. The project concluded with the project manager knowing how to control himself. Moreover, in the professional organization and the academe, knowing how to increase the morale of the group can lead to superior accomplishments.

## Work History

Sep 2014 – Present **Structural Engineer**

King Faisal Specialist Hospital & Research Center, Riyadh, Saudi Arabia

- Appointed as member/leader of the BIM implementation team. Workflows turned into Policy and Procedure significantly improved the delivery of design projects.
- Contributes to streamline the design and development workflows of the department using concepts of the Project Management Institute (PMI), stage-gate principles, lean management, maturity models, and process improvement frameworks.
- Manages projects in accordance with the contract including conduct of meetings, progress

- monitoring to assure quality, within project cost and time, prepares reports, and closes the project.
- Coordinates with other design disciplines, project-user departments, and other stakeholders.
- Conducts site investigation prior to design and during project implementation.
- Performs detailed analysis and design of reinforced concrete, steel structures and other materials.
- Produces design package which basically includes structural calculations based primarily on the American design codes, models, drawings, bill of quantities and technical specifications for tendering purposes using software such as Autodesk suite like Revit, Navisworks, Autocad, BIM 360 Robot, STAAD Pro, ETABS among others.
- Reviews shop drawings, designs and technical reports submitted by the contractors.
- Contributes in the preparation of request for proposals and issuance of project memos.

**May 2009 – Mar 2014 Structural Engineer**

General Directorate of Military, Ministry of Defense and Aviation, Riyadh, Saudi Arabia

- Reviewed structural design calculations, drawings, geotechnical reports, material submittals, and construction procedures.
- Conducted inspection during construction stage.
- Recommended solutions to immediate technical problems encountered during construction covering works for civil, survey, and structural engineering.
- Provided technical advice of safe designs and constructions.
- Prepared reports, designs and drawings for the structure.
- Liaison with professional staff such as engineers and architects.

1996 – 2009 **Operations Management Senior Consultant**  
JPA Engineering Solutions, Naga City, Philippines

2001 – 2008 **Engineering Manager**  
ASP Engineering Design Center, Naga City, Philippines

1998 – 2007 **University Instructor**  
College of Engineering, Ateneo de Naga University, Philippines

2000 – 2002 **Engineering Department Head**  
College of Engineering, Ateneo de Naga University, Philippines

1999 – 2000 **Executive Assistant to the President**  
College of Engineering, Ateneo de Naga University, Philippines  
Established the Civil Engineering Program

## **Certifications**

Civil Engineering Licensure Examination, Board of Civil Engineering, Philippine

Professional Regulation Commission, PRC No. 74630

Saudi Council of Engineers, Consultant Degree, KSA

Project Management Professional (PMP), PMI, USA

Associate Value Specialist (AVS), SAVE Int'l, USA

Competent Communicator, Toastmasters Int'l, USA

## Education

Nov 2020 – Nov 2021	<b>Master of Science: Global BIM Management</b> Zigurat Global Institute of Technology University of Barcelona, Spain
Jun 2002 – Mar 2004	<b>Master of Science: Geotechnical Engineering</b> Mapua Institute of Technology Manila, Philippines
Jun 1996 – Mar 1998	<b>Master of Science: Structural Engineering</b> University of the Philippines – Diliman Quezon City, Philippines
Jun 1990 – Mar 1995	<b>Bachelor of Science: Civil Engineering</b> University of Nueva Caceres Naga City, Philippines

## Volunteer Works

Philippine Institute of Civil Engineers,  
KSA-Riyadh International Chapter, Saudi Arabia

2010 – 2017 **Review Instructor**

- Conducted lectures in Geotechnical Engineering for the Special Professional Licensure Board Examinations (SPLBE) administered by the Philippine Professional Regulations Commission (PRC)

2012 – 2013 **Chairman, Board of Directors**

- Spearheaded the revision of the organization's Constitution and By-Laws
- Formulated the organization's strategic plan 2020

2011 **President**

- Instituted reorganization to address the expanded services such as more continuing education.
- Increased the organization's revenue to be the biggest in the history of the organization

2010 **Vice President for Education**

2009 **Member, Board of Directors**

Philippine Institute of Civil Engineers, Naga City Chapter, Philippines

1999 **Chairman, Continuing Professional Education Committee**