



Exponent®
Engineering & Scientific Consulting

Mariangel Molina Ramirez, PMP

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Professional Profile

Ms. Molina has experience working on all stages of construction project life cycles, ranging from feasibility studies to project closeout and claims analysis. She leads the execution of large and complex projects as well as fast-paced programs, offering a breadth of knowledge in project management, project controls, estimation, and change order management while leveraging her understanding of engineering concepts, construction methods, financial assessment, and contract management.

Ms. Molina manages multiple electric utility projects and programs. She provides project management and controls services, including cost forecasting and variance analysis, business case contingency estimation, bid and change order analyses, scheduling and coordination, and progress tracking. She develops automated project and program-level reporting to facilitate communication with stakeholders, risk identification and mitigation, performance monitoring, variance analysis, and resource forecasting. She develops and implements processes and tools to improve project delivery efficiency and maintain governance compliance.

Ms. Molina also has experience in the development and analysis of construction project claims in the United States and internationally. Ms. Molina's forensic delay and cost analysis, contract review, research, data analytics, and information visualization skills have contributed to the successful resolution of multiple disputes.

Prior to joining Exponent, Ms. Molina gained experience in construction cost estimating, value engineering, bid analysis, and schedule analysis. In the San Francisco Bay Area, Ms. Molina worked on private and public construction project estimates of industrial, commercial, residential, and recreational projects. In Costa Rica, she increased business profitability by optimizing a scheduling program that maximized employee productivity while also minimizing overtime hours. She has collaborated with many project stakeholders and participated in a pre-construction assessment of an apartment complex, evaluating options of and developing site logistics, constructability, cost, and schedule plan.

Academic Credentials & Professional Honors

M.S., Civil and Environmental Engineering, University of California, Berkeley, 2018

B.S., Civil and Environmental Engineering, University of California, Berkeley, 2017

Licenses and Certifications

Project Management Professional (PMP)

Prior Experience

Associate Estimator, M. Lee Corporation, California

Languages

Spanish

Project Experience

Utility

Infrastructure Inspection and Remediation Program

Developed and implemented project management and project controls processes as the regional lead of an emergency infrastructure maintenance program. Managed daily field crew operations and overall project schedule. Produced an array of reports to monitor progress, schedule and resource allocation, program achievements, and program scope fluctuations. Coordinated with environmental, permitting and engineering teams to plan and track work of construction crews. Worked with multiple stakeholders to resolve constructability issues.

Underground Transmission Capital Projects

Served as Assistant Project Manager on a \$300M portfolio by conducting major business case and job estimate development, providing financial monitoring and performing cost analyses. Validated forecasts, reviewed monthly financial information and invoices, set annual budgetary targets, assessed and reported on program performance, and coordinated with project teams.

Transmission Capital Projects

Provided project controls services on a \$400M electric transmission project portfolio. Was responsible for schedule management, cost accounting and forecasting, financial analysis, and status reporting throughout project lifecycle. Initiated and monitored change order processing with vendors and provided construction contractor oversight. Maintained risk registers for major projects and conducted project risk workshops with all relevant stakeholders.

Engineering and Estimating Group Monthly Reporting

Managed monthly executive leadership reporting for Transmission Line Engineering and Estimating, tracking design milestone adherence and design costs. Analyzed robust data sets to assess engineer and estimator productivity, tracked performance indicators and metrics, and reported out accomplishments.

Heavy Civil

Supported the development and analysis of delay, quantum, and engineering claims disputed in international arbitrations pertaining to various South American construction projects. Helped develop expert reports providing independent expert assessments of the damages and impacts at termination in both English and Spanish.

Participated in the schedule delay claim analysis and development of a natural gas project, conducted a critical path method assessment, and developed as-planned vs. as-built graphics and delay models to assign adequate responsibility for impacts to the project schedule.

Conducted nuclear research and built expert report framework for a claim pertaining to the construction of a mixed-oxide fuel fabrication facility along with other Exponent subject matter experts.

Infrastructure

Estimated construction cost of a transit terminal in California using a Costworks database and performing takeoffs on Bluebeam.

Estimated an electrical panel upgrade at an airport terminal, using a Costworks database for materials and vendors' quotes on specialized equipment. Conducted a comparative analysis and participated in bid leveling.

Residential

Collaborated in the pre-construction constructability assessment of an apartment complex in Costa Rica. Participated in value-engineering meetings with architect and engineer and reported on cost-savings measures. Contributed to the preliminary construction schedule development and site logistics planning.

Transportation

Worked in a Costa Rican public transit company, optimizing operational efficiency by automating a scheduling program that streamlined resource allocation to maximize employee productivity while minimizing total overtime needs.