

Sathya Lakshmi Gunasekaran

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CORE COMPETENCIES

- 6 years of post-secondary engineering experience in Civil Engineering with professional knowledge of the principles and practices of planning, design, scheduling, construction, operation, and maintenance of Civil infrastructure.
- Demonstrated construction planning and scheduling skills while working on Project Management Plan for the renovation of an existing building- Toronto.
- Portrayed excellent interpersonal, written/oral communication skills while leading my team for the Sustainable Strategy for Tannery Waste Disposal- Ontario.
- Exhibited attention to detail, creative thinking, and analytical skills while working on the Study of interference effect on low-rise building using CFD Simulation.
- Managed Contractors and supervisors with effective budget fore-casting skills in a team-oriented environment while working under 3 Senior Civil Engineers along with the guidance from the Managing Director of KP Civil Construction Pvt Ltd and established strong and effective working relationships with them.
- Awarded Head coordinator role for National Level College Symposium- “Reconin” for 2017-18., A National level technical symposium was conducted for the Department of Civil Engineering around for 250+ colleges and universities .

EDUCATION

Master of Engineering in Civil Engineering specialized in Construction Management

Department of Building, Civil, and Environmental Engineering
Concordia University

Jan 2020 - Sep 2021

Bachelor of Engineering in Civil Engineering

Department of Civil Engineering
St. Joseph's College Of Engineering

May 2014 - May 2018

CAREER EXPERIENCE

Project Engineer Trainee

KP Civil Construction Pvt Ltd

Jun 2018 - Sep 2019

- Coordinated 10+ residential project status throughout all steps and ensured compliance with all applicable code for safety regulations and design requirements including quantity calculations, design reports, contract drawings, contract documents, and site inspections.
- Ensured Safety, Health and Quality at site by adhering to all regulations and promoting plans, policies, and procedure on regular basis.
- Lead the Site administration team with various tasks including management of project information, documentation, maintenance of project files, review of completed timesheets, processing of invoices, change-orders, and billing of all stages of work.
- Tracking, reporting, and documentation of project schedule activity which includes start-finish % complete, and major milestones thereby coordinating with construction activities, providing guidance and clarification of the design during construction.
- Managed work processes for contractors to maintain project schedules for 10+ residential construction and documented project reports on Labour management for bi-weekly and monthly reviews along with daily cost sheets for all types of construction activity.
- Prepared and distributed project related correspondence including reports, qualification documents like shop drawings, RFIs, RFQs and RFPs presentations for sub-contractors and other confidential communications.
- Guided project manager regarding construction material quality and cost-effectiveness towards effective site management.
- Supervised all contract documents from bidding till project take-off meetings throughout the tender process and worked under legal documentation, registration of land, and plan submission according to the standard code of conduct.
- Administrative assistance to Project Managers in business development while building and maintaining a good relationship with clients,
- Performed other related administrative or project-based duties as assigned and coordinated and managed utility locates as required.

Civil Engineering Intern

TechnipFMC

Jan 2018 - Feb 2018

- Designed an Oil Pipeline project using STAAD Pro and Navisworks software for planning, modeling, analysis, and designing pipe racks according to National Building Code.
- Developed in-depth detail and assembly drawings for pipe racks to withstand the pipe load.
- Test prototypes and standard models and reported the results for documentation and performed other duties as assigned.

Make me Builder

- Leading around 100+ interns under vendor research to make/update a database of companies providing engineering and construction solutions.
- Handled 10,000+ databases to keep track of all company inventory establishments in the construction sector by submitting weekly reports
- Addressed customer concerns in reference to products, services rendered, or employee interactions.
- Trained new interns on company standards and procedures, from how to handle a negative customer experience to how to properly interact with clients.

ACADEMIC EXPERIENCE

- **Asset Management Plan for Water Distribution System-Waterloo**
 - Determined the average lifecycle cost of the water distribution system and capital investment strategy for the next 20 years based on the proposed risk impact framework using criticality and level of service of the pipe system.
 - Developed a Deterioration model for 431km of pipes network having approximately 14,000+ pipes using GIS and MS Excel software.
- **Cost Estimation of School Building, Manitoba**
 - Performed detailed cost estimation including bid-pricing, work breakdown structure, and quantity-take-off with pricing for school building with 2660sqm area and the maximum capacity of 400 people using RS Means data and MS Project.
 - Achieved a \$1 million bidding price (40% less than the original quoted price) by effectively choosing the right construction material at each project phase.
- **Modelling of Net Zero Energy Building using Building Information Modelling**
 - Optimized construction stimulation by 5D modelling for linking quantity takeoff with material cost and construction model with the schedule by using BIM 360 (Revit, Navisworks, and Dynamo software) and Primavera P6 Software.
- **Study of interference effect on low-rise building using CFD Simulation**
 - Analyzed the effects of variation in wind load on the low-rise building due to the presence of high-rise buildings using ANSYS-FLUENT simulation software.
 - Achieved 90% Optimum velocity of the airflow in the CFD Simulation model.
- **Project Management Plan for renovation of an existing building- Toronto**
 - Remodeled the existing school building, acting as a design-build firm entity for the design, procurement, execution, control, and completion of the project within the defined scope.
 - Proposed the design and renovation services was based on lump-sum contract and estimated according to RS Means 2011.
 - Effective planning and scheduling of the renovation project was accomplished using MS Project for creating WBS based on critical path method and for Budget forecasting by Earned value Analysis.
 - 20% of risk factor was analyzed during Qualitative Risk assessment using the Delphi Matrix for safety hazards, financial crisis, subcontractors, and vendors delays on the project.

TECHNICAL SKILLS

- Civil Software - AUTOCAD, Primavera P6, Bluebeam, Procore (Project Manager), PlanGrid, BIM (Revit, Navisworks & Dynamo), MS Project, Adobe PDF.
- Microsoft Suite - Excel, Word, PowerPoint, Outlook

MEMBERSHIPS AND CERTIFICATIONS

- Student member in American Society Civil Engineers (ID:12217699) and Project Management Institute (ID:6544667).
- Certificated in Construction Management: Lean Construction, RS Means, and Cost Data, Techniques and Technology, Reading drawing and Specification and Green building Concepts foundation (Issued by LinkedIn)
- Certified in Primavera P6 Advanced Training by UDEMY.
- Certified with Distinction in “Sustainable Cities” offered by SDGAcademy of Indian Institute of Human Settlements (IIHS).
- Completed with a certificate in training module of “Supervisor Health and Safety Awareness in 5 Steps” by the Ministry of Labour, Training and Skills Development and WHMIS 2015 AIX Safety.