

Estella Miao

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AREAS OF EXPERTISE

- **Software:** Proficient with S-Frame, SAP 2000, ETAB, Auto CAD and MS Excel
- **Code and Standard:** Solid knowledge on CSA S6, CSA S16, CSA S23, OHBDC and NBCC codes
- **Design Experience:** 4+ years of experience in concrete design and steel design
- **Coursework:** Pre-stressed Concrete Design, Bridge Design and Seismic Design courses taken at graduate level
- **Project Management:** Experienced with subcontractor management, familiar with RFI, project schedule follow up and engineering approval of invoice
- **Communication Skills:** Strong oral and written communication skills with 3+ years of project coordination experience
- **Independence and Teamwork:** Able to work individually or in a team, maintained good relationship with teammates, co-workers, client and subcontractors
- **Professional Membership:** Registered EIT in Alberta, eligible to be registered as P. Eng. in Ontario within a year
- **Others:** Valid full driver license and willing to travel

EDUCATION

MEng - Civil Engineering (Structural Specification) – McGill University – GPA 3.6/4.0 2015 - 2017
BS - Civil Engineering (Structural Minor) – University of Calgary – GPA 3.4/4.0 2007 - 2011

ACADAMIC PROJECTS

Civil Master Student 2015 - 2017
McGill University, Montreal, QC

Edmonton Steel Plate Girder Bridge Design Project 2016
Project Summary:

- Performed detailed design of a 60-meter span steel plate girder bridge according to Alberta Transportation Bridge Structures Design Criteria and Canadian Highway Bridge Design Code
- Designed components including steel plate girder, shear connection, deck, barriers, expansion joints and bearing design
- Designed for fatigue and lateral load resistance system

Master Non-thesis Project – Design of Steel Single Plate Shear Tab Connections 2016 – 2017
Project Summary:

- Conducted full-scaled shear tab steel connection tests at McGill structural lab
- Performed detailed analysis of the experimental design data
- Proposed an updated design approach for single plate shear tab connections
- Compared the experimental data and prediction to verify the design approach

PROFESSIONAL EXPERIENCE

Saipem Canada Inc., Calgary, AB 2011 - 2015
Undertook two major multi-billion EPC projects at engineering company: Husky Sunrise Project and CNRL Horizon Project. Performed detailed structural design, structural steel fabrication, field engineering, vendor management and project management. Earned multiple promotions and recognition for problem solving skill, enthusiasm and motivation.

Field Civil Engineer 2014 - 2015
Main Activities:

- Partnered with site construction team for early civil work, mass excavation, structural steel erection, road construction, fireproofing application and concrete foundation construction pile driving activities on CNRL Horizon
- Performed on-site design revision and resolved issues related to design change or constructability and issued Field Design Note (FDN), Standard Deviation (SD) and Site Work Instruction (SI)

- Coordinated with sub-contractors and vendors and responded to Request for Information (RFI)
- Resolved constructability issues with innovative, cost-saving and time-saving engineering solutions
- Built and maintained strong relationships with clients, issued RFIs to them and provided professional answers to their concerns with respect to engineering questions
- Delivered site QA/QC engineering clarification to ensure fulfillment of client's standards & project specifications
- Prepared Construction Work Package (CWP) and provided engineering support to site construction team for the correct interpretation of drawings

Onshore Structural Specialist

2013 - 2014

Main Activities:

- Executed fabrication of 100+ steel modules with yard engineering and construction team within a year. Focused on special considerations based on transportation load
- Issued design procedure for temporary supports and construction sequence procedure
- Managed subcontractor and supplier, handled engineering approval of Labour Equipment Material Report (LEM), invoice and project progress report
- Produced temporary transportation support standard for the structural modules and enforced the utilization of certain standard on the yard. This led to zero-incident records for 100+ module shipment
- Ensured that all civil aspects of the project were in accordance with the client's specifications and responsive to company's procedures and policies

Structural Engineer

2011 - 2013

Main activities:

- Performed detailed design of industrial structural steel structures, foundations and piles and designed typical structural steel moment connection and shear connection details
- Analyzed design load utilizing SAP2000, S-Frame and foundation 3D
- Created drawings for early civil work and grading plans
- Prepared bidding documents, and strategized cost/labor saving ideas such as using an existing foundation to perform tank hydro testing reducing 100K CAD in bidding price
- Coordinated between Piping, Electrical and Instrumentation Departments to obtain required design information
- Responded to RFI from construction, subcontractor and vendor and prepared MTO for civil work and structure
- Managed and updated quantity data with company civil quantity management program
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REFERENCES

- Available upon request