

Ministry

Infrastructure

Describe: Basic Job Details

Position Name (30 characters)

Intern - Structural Engineer

Class

Engineering & Related Level 1

Job Focus

Operations/Program

Supervisory Level

00 - No Supervision

Organizational Structure

Division, Branch/Unit

SIO, Technical Services & Procurement Branch

Design: Identify Job Duties and Value

Job Purpose and Organizational Context

Why the job exists:

The intern's main responsibilities will focus on learning on-the-job and assisting the Senior Structural Engineer, who is the Ministerial Authority on Structural Engineering. The mandate of the Senior Structural Engineer position is to develop structural design standards and guidelines, actively participate in the review of engineering reports, drawings and specifications prepared by Consultants for GoA projects, provide structural engineering expertise for design of new construction and renovation / modernization of existing facilities, investigate structural issues and concerns in existing facilities, and provide recommendations for remediation.

Responsibilities

Job outcomes (4-6 core results), and for each outcome, 4-6 corresponding activities:

Key job responsibilities will include:

- Receive training, mentorship and gain hands-on experience in structural engineering related to buildings.
- Assisting Senior Structural Engineer in:
 - Design reviews - review of technical reports and contract documents (drawings and specifications)
 - Site review and assessments
 - Investigation of structural deficiencies
 - Engineering analysis and design
 - Research in structural codes and design standards, investigation, monitoring and rehabilitation
 - Engineering advisory services

- Professional development and networking.
- Working and learning with other Technical Services Branch sections as required.

Problem Solving

Typical problems solved:

Perform quality assurance check of contract documents; conduct site review and assessments; prepare memos and reports; research issues, such as, design live load for GoA offices; prepare structural engineering related presentations for the AI PM & FM community.

Types of guidance available for problem solving:

Discuss issues with immediate supervisor and other staff in the section, division, and ministry as needed.

Direct or indirect impacts of decisions:

Assist and facilitate the work flow of the structural and geotechnical engineering disciplines.

Key Relationships

Major stakeholders and purpose of interactions:

Internal:

- Senior Structural Engineer: Daily communication for supervision, advice, and guidance.
- Senior Geotechnical Engineer: Communication frequency based on project assignment needs.

External:

- AI PMs / FMs: As needed, provide advisory services, investigation and evaluation of conditions, and design reviews.
- Consultants / Contractors: As needed, getting contracted services.
- Other GoA Ministries: As needed.

Required Education, Experience and Technical Competencies

Education Level	Focus/Major	2nd Major/Minor if applicable	Designation
Master's Degree	Engineering	Engineering	Other

If other, specify:

Master's Degree in Structural Engineering required. Designation - eligible for APEGA EIT preferred.

Job-specific experience, technical competencies, certification and/or training:

- New graduate with less than 2 years of experience
- Technical competence in structural engineering, and knowledge and familiarity with other engineering disciplines, such as geotechnical.
- Superior investigation and problem-solving skills.
- Well organized, have excellent interpersonal skills and work effectively with others.
- Strong verbal and written communication skills with emphasis on client services, teamwork and collaboration.
- Proficiency in Microsoft Office products (Word, Excel and PowerPoint).
- Some working knowledge of AutoCAD software will be considered an asset.
- Knowledge of the National Building Code of Canada, the Alberta Building Code, and the Canadian material standards for design in structural steel, reinforced concrete, masonry and wood will be considered an asset.
- Previous employment experience in structural engineering will be considered an asset.
- Master's Degree in Structural Engineering from an accredited university required.
- Eligible for registration with The Association of Professional Engineers and Geoscientists of Alberta (APEGA) as an Engineer-In-Training (EIT).
- A valid Class 5 Alberta driving licence will be considered an asset.

Behavioral Competencies

Pick 4-5 representative behavioral competencies and their level.

Competency	Level					Level Definition	Examples of how this level best represents the job
	A	B	C	D	E		

Agility	<input checked="" type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	<p>Understands need for change and manages own emotions:</p> <ul style="list-style-type: none"> • Uses common sense and past experience to approach ambiguous problems • Prevents emotions from affecting others negatively • Looks for information on changes • Open to new ideas and helping co-workers 	<p>Clients' needs change from time to time. Flexibility is required to meet the demand.</p>
Creative Problem Solving	<input checked="" type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	<p>Is open to new ideas and breaks problems down to identify solutions:</p> <ul style="list-style-type: none"> • Breaks down problems into small parts • Constructively questions and challenges the norm • Open to other's perspectives and aware of own • Contributes ideas for improving processes, and adapts existing practice to address problems 	<p>Problems are often unique, requiring solutions that fall outside common practice. Engineering investigations can be very complex, requiring a multi-disciplinary approach and extensive analysis.</p>
Drive for Results	<input type="radio"/> <input checked="" type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	<p>Works to exceed goals and partner with others to achieve objectives:</p> <ul style="list-style-type: none"> • Plans based on past experience • Holds self and others responsible for results • Partners with groups to achieve outcomes • Aims to exceed expectations 	<p>The position is technical resource to assist in providing engineering services to stakeholders. Prioritizing tasks ensures stakeholders' concerns are resolved in most cost/time efficient way.</p>
Develop Networks	<input checked="" type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	<p>Maintains collegial internal relationships and understands external network:</p> <ul style="list-style-type: none"> • Seeks to understand perspectives and needs of others • Follows through, has integrity and respect for others • Helps and follows through • Keeps key stakeholders informed; is professional 	<p>This position works with and provide support to Project and Property Managers and Coordinators. It also communicates with consultants and contractors to exchange information.</p>

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