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Job Class Profile: Engineer II

Point Band: Pay Level: CG-38 848-881 Development Environmental Accountability & Decision Interpersonal and Working Total Factor Knowledge Skills Physical Effort Concentration Complexity Making Impact Leadership Conditions Points 5 5 5 3 Rating 6 2 5 5 4 Points 13 280 83 24 150 108 103 64 43

JOB SUMMARY

The Engineer II performs professional engineering and project management work related to design, construction and renovation projects. Responsible for contract administration, including assessment of progress claims, change orders and reporting to the client; reviewing design and tender packages to provide direction to consultants, contractors and inspectors to ensure budgets, schedules and quality objectives are met; preparing designs for in-house projects and providing technical advice for the maintenance and operations staff; investigating and reporting on building problems and solutions for the purpose of establishing priorities for future capital and maintenance projects.

Key and Periodic Activities:

- Coordinates and supervises contractors; ensures specifications, engineering design plans, safe working practices and regulatory requirements are followed during construction. Assesses and provides direction to contractor disputes onsite.
- Manages project budget; including assessment, approval or disapproval of project payments and change orders.
- Inspects the integrity of completed work onsite to make sure all applicable specifications and design requirements have been followed.
- Reviews proposed design packages with consultants to ensure client's project requirements are met.
- Prepares in-house design packages including design, coordinating design review, preparing specifications, project cost estimates, tendering, project award and construction management.
- Hosts/conducts project pre-construction and progress meetings to address project coordination concerns. Takes minutes of meetings and makes sure critical path action items are completed by designates to ensure project schedule and budget are efficiently maintained.
- Coordinates inspections for Technical Service Inspectors in order to measure construction progress, develop deficiency lists and determine final completion of projects.
- Travels to and conducts site visits for pre, during and post construction stages of projects.
- Mentors Engineering work term students on in-house projects and technical issues.
- Practices continuing professional development by staying abreast of engineering practices; new regulations, codes and standards; construction material technologies; and project management by attendance at seminars, self directed study and reading.

SKILL

Knowledge General and Specific Knowledge:

- Knowledge of various software for spreadsheet, database and design applications
- Knowledge of engineering project management

Formal Education and/or Certification(s):

— Minimum: An undergraduate degree in Engineering

Years of Experience:

— Minimum: 2 to 3 years

Competencies:

- Project management skills.
- Ability to use computer software for spreadsheets, database and design applications.
- Ability to communicate with others.
- Ability to interpret public tendering process.

Interpersonal Skills

- A range of interpersonal skills include listening to receive information, asking questions to gain information processes, providing routine information and direction, communicating complex ideas to others and gaining the cooperation of others to complete work or address/solve problems. There are also interactions to negotiate contracts and agreements, resolve technical issues and deal with upset contractors and chair formal progress meetings.
- Communications occur with supervisors or managers to seek advice, receive guidance and assignments and to report project status and problems; employees in the immediate work area and peers/employees within the department to ask questions or seek advice; contractors to coordinate construction projects; clients to ensure needs are met; with students to provide guidance and feedback; and subject matter experts/senior engineers for advice and guidance.
- Most significant interactions are with employees in the immediate work area and peers/employees in the department to ask questions or seek advice; contractors to coordinate construction progress, provide direction on technical issues and enforce contracts; and clients to ensure their needs are met for new construction and maintenance/ renovation.

EFFORT

Physical Effort
 The demands of the job occasionally results in considerable fatigue requiring periods of rest. Work also requires occasional lifting of light objects less than 10 lbs. Work requires sitting at a computer constantly using fine finger or precision work utilizing a variety of software; standing, walking and climbing and getting in awkward areas occasionally when an construction site or precision work utilizing a site or precision.
and occasional driving.
Concentration

- Visual concentration of high intensity is required when reviewing and preparing engineering

- drawings with a high amount of detail, and preparing design documents and specifications.
- Auditory concentration when listening to interpret situations described on the phone requiring analysis and solutions; listening while also taking minutes and chairing meetings are required.
- Alertness for the health and safety of self is required on job sites and higher than normal levels of alertness may be required when on a construction site and when designing complex systems where malfunctions can put people at risk.
- **Time pressures, deadlines and interruptions** occur on a regular basis when dealing with construction projects. It is critical to meet timelines and budgets.
- Exact results and precision are required with all aspects of project management, but especially during design phases to ensure client needs, regulatory requirements and industry standards are followed to exactly and precisely complete projects.

Complexity

- Tasks typically range from occasionally repetitive/well defined to often being different and unrelated which require a broad range of skills and knowledge. There are diverse tasks involving a wide variety of responsibilities and situations.
- Regularly there are issues that can be resolved by following procedures or guidelines, but there
 are also those with limited opportunity for standardized solutions.
- Regularly there are challenges or problems that must be defined and practical solutions found. Less frequently there is a requirement for creative problem definition and development of complex solutions.
- A typical challenge or issue relates to a construction problem where a design provided by a consultant has to be changed due to specific construction site conditions. This can occur frequently. There are multiple issues that can arise; especially if the contract has already been awarded and construction started.
- There are high technical tasks or problems.
- There are sources of information to resolve a problem: Canadian Standards Association, American Society of Heating, Refrigeration and Air Conditioning Engineers Standard, Life Safety Code, Occupational Health and Safety, government Project Management Design Administration Manual, Department Specifications and design standards, National Codes and regulations, OHS regulations, precedents and professional Engineering and other expert staff are available as references or resources.

RESPONSIBILITY

Accountability and Decision-Making

- Work tasks are moderately prescribed or controlled.
- Discretion and judgement are used in interpreting specifications and contract language; reviewing, approving and drafting designs; resolving contract disputes. Discretion is used in assessing designs for compliance with legislation.
- Decisions can be made to provide solutions to technical problems on construction and maintenance projects. Also, has authority to assign work to students and coordinate work of inspectors and project coordinators.
- Supervisory approval is required for all financial related matters i.e. approval of progress

payments, release of holdback monies and approval of changes orders.

Impact

- Results are directly felt within the immediate work area, department, within and outside the
 organization and by clients and the general public.
- Results directly impact equipment, processes, finances, contractors, the general public, and health and safety.
- Consequences of errors could be moderate but is evaluated for compliance with technical standards, appropriateness and conformity to policy.

Development and Leadership of Others

- There is no supervision of staff. However, may assist with mentoring and training of engineering work term students.
- Performs as a project manager for various projects.

WORKING CONDITIONS

Environmental Working Conditions

- Work tasks require Standard Personal Protection Equipment protective gear and precautions when conducting site visits.
- The likelihood of injury or illness is limited.
- Regularly exposed to glare from computer screens.
- Occasionally exposed to a variety of undesirable environmental conditions and hazards such as dust, wet or slippery surfaces, dangerous heights or depths, temperature extremes, isolation and travel and heavy machinery when inspecting construction projects/sites and/or conducting investigations.