Update

Ministry

Infrastructure

Describe: Basic Job Details

Position

Position ID

Position Name (30 characters)

Senior Electrical Engineer

Current Class

Job Focus

Corporate Services

Supervisory Level

00 - No Supervision

Agency (ministry) code

Cost Centre

Program Code: (enter if required)

Employee

Employee Name (or Vacant)

Organizational Structure

Division, Branch/Unit

Strategic Integration & Operation, Technical Service

☐ Current organizational chart attached?

Supervisor's Position ID

Supervisor's Position Name (30 characters)

Supervisor's Current Class

Design: Identify Job Duties and Value

Changes Since Last Reviewed

Date yyyy-mm-dd

2008-09-27

Responsibilities Added:

Provide leadership in communicating with stakeholders as it relates to electrical engineering.

- Conduct presentations of lesson learned and updated standards/guildlines.
- Meet and discuss with external and internal stakeholders to understand their needs.

Provide leadership in research projects as related to electrical engineering.

- Identify recurring issues and conduct research internally for small projects.
- Manage consultants to conduct large research projects.

Responsibilities Removed:

N/A

Job Purpose and Organizational Context

Why the job exists:

Reporting to the Director of the Engineering, Environment & Sustainability Section, this position is the

Ministerial Authority on Electrical Engineering as it relates to healthcare facilities and government facilities. This is a specialized engineering position that requires extreme technological depth and develops electrical engineering design standards and guidelines as they relate to the design, construction, maintenance and upgrading of healthcare and government facilities. This position actively participates in projects, providing design expertise for new construction and solving problems in existing facilities and is a "go-to" and a "write the book" position for the GOA and industry for electrical engineering as it relates to healthcare and government facilities. This position is required to maintain current technical and construction knowledge in the field of electrical engineering and to introduce this information to the design process.

Responsibilities

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

1. Establish design standards and policy.
    - Develop and maintain electrical engineering design standards and guidelines.
    - Advise clients, stakeholders and consultants of such standards and policies.
    - Keep current these design guidelines.

2. Provide technical advice for the design/renovation of facilities.
    - Participate in meetings with clients, project managers, property managers, and consultants.
    - Define electrical engineering criteria.
    - Review project drawings and specifications.
    - Conduct technical discussions with consultants and contractors.

3. Investigate electrical engineering problems in existing facilities.
    - Coordinate and review work of consultants engaged in the investigation of such facilities.
    - Conduct on-site investigations and prepare reports.
    - Identify recurring problems and implement appropriate changes in design standards.

4. Introduce current technology and construction methods into projects.
    - Maintain competency and currency through ongoing review of technical journals, participations at conferences and industry seminars.
    - Develop through needs or obsolescence new and innovative methods and systems.
    - Evaluate performance of new projects using established or new methodology.

5. Provide leadership in communicating with stakeholders as it relates to electrical engineering.
    - Conduct presentations of lesson learned and updated standards/guildlines.
    - Meet and discuss with external and internal stakeholders to understand their needs.

6. Provide leadership in research projects as related to electrical engineering.
    - Identify recurring issues and conduct research internally for small projects.
    - Manage consultants to conduct large research projects.

Problem Solving

Typical problems solved:

- Services provided can be varied and complex, and require technical dialogue with project managers, consultants, contractors, Municipalities and other departments.

- Design standards and guidelines have significant impact in the construction of buildings.

- Engineering investigations can be complex, requiring expertise from multi-disciplines and extensive analysis.

- This position provides and assists with planning, design, reviews, specifications and problem solving with new and existing government owned and funded facilities throughout Alberta involving hospitals and government buildings.

- Electrical engineering issues are normally involved in planning, design, and construction stages.

Types of guidance available for problem solving:

-This position works within technical codes and standards which guide the quality of activities. For complex assignments, consultation with external and internal stakeholders is conducted to ensure that the required information/advice is reasonable, practical and cost efficient.

Direct or indirect impacts of decisions:

Design Standards and guidelines have a significant impact affecting the construction of healthcare and government facilities throughout the province.

Developing and maintaining the technical standards results in high quality of infrastructure facilities.

Resolving issues in existing facilities ensures the proper operation during the facility life-time.

Key Relationships

Major stakeholders and purpose of interactions:

Contacts are diverse and include a mix of internal clients, other government agencies and private sector. Internal contacts are primarily comprised of Project Managers, Property Management Professionals and Senior Ministry Management where the focus is on program delivery issues, budget, scope, and time lines. Collaboration on design and construction requires extensive contact with private sector resources such as Engineering Consultants, Contractors, and Manufacturers.

Required Education, Experience and Technical Competencies

Education Level	Focus/Major	2nd Major/Minor if applicable	Designation
Bachelor's Degree (4 year)	Engineering		

If other, specify:

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

- Bachelor's Degree in Electrical Engineering with a minimum of 10 years experience in the consulting engineering field and in the practice of electrical engineering as it relates to building design. A Master's Degree in electrical engineering would be an asset.

- Registered and in good standing with APEGA.

- Strong technical competence in electrical engineering, in particular with respect to design of healthcare and government facilities, and a good working knowledge of other engineering and architectural disciplines related to design.

- Knowledge of building codes, technical standards, Occupational Health and Safety Act, Ministry requirements.

- Strong investigative skills.

- Strong team and leadership skills.

- Well developed consulting and communication skills.

Behavioral Competencies

Pick 4-5 representative behavioral competencies and their level.

Competency	Level A B C D E	Level Definition	Examples of how this level best represents the job
Drive for Results	○ ○ ◉ ○ ○	Takes and delegates responsibility for outcomes: • Uses variety of resources to monitor own	This position provides technical support to ensure the constructions or renovations are completed on schedule

		performance standards • Acknowledges even indirect responsibility • Commits to what is good for Albertans even if not immediately accepted • Reaches goals consistent with APS direction	and on budget. Site investigation should be completed as per property managers' requirements.
Creative Problem Solving	○ ○ ◉ ○ ○	Engages the community and resources at hand to address issues: • Engages perspective to seek root causes • Finds ways to improve complex systems • Employs resources from other areas to solve problems • Engages others and encourages debate and idea generation to solve problems while addressing risks	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.
Systems Thinking	○ ○ ◉ ○ ○	Takes a long-term view towards organization's objectives and how to achieve them: • Takes holistic long-term view of challenges and opportunities • Anticipates outcomes and potential impacts, seeks stakeholder perspectives • Works towards actions and plans aligned with APS values • Works with others to identify areas for collaboration	The position is a technical resource to provide engineering services to stakeholders. Prioritizing tasks ensures stakeholders' concerns are resolved in a most cost efficient way. Responsibilities also include supporting other disciplines to deliver high quality infrastructure facilities.
Develop Networks	○ ○ ◉ ○ ○	Leverages relationships to build input and perspective: • Looks broadly to engage stakeholders • Open to perspectives towards long-term goals • Actively seeks input into change initiatives • Maintains stakeholder relationships	This position works with and provide support to Project and Property Managers. It also communicates with consultants and contractors to exchange latest technology information.