



## IDENTIFICATION

Department	Position Title	
Infrastructure	Project Officer, Civil	
Position Number	Community	Division/Region
33-251	Yellowknife	Air, Marine & Safety

## PURPOSE OF THE POSITION

The Project Officer, Civil, is responsible for the planning, development, implementation, technical support and oversight of a variety of airport capital and Operations and Maintenance (O&M) infrastructure projects, through all the project stages, including assessment, planning, concept, design, construction and post-construction, associated with the 27 airports owned and operated by the Government of the Northwest Territories (GNWT). This is done so that airport infrastructure is efficiently planned, designed, constructed and maintained, in accordance with Canadian Aviation Regulations, national and international Civil Aviation Aerodrome Standards & Recommended Practices, and national and territorial acts, regulations, standards and policies, to meet the needs of northern air travellers, airport tenants and air carriers.

## SCOPE

The Department of Infrastructure (INF) is highly decentralized in the delivery of its programs and services and is responsible for territory-wide government programs such as the planning, design, project management, construction, acquisition, operation and maintenance of government infrastructure, including airports, buildings, ferries, highways and bridges, and to promote the development and increased use of energy efficient technologies. The Department is also responsible for the provision of motor vehicle and mechanical/electrical/elevator regulatory safety services to the public, the provision of petroleum products to communities that are not serviced by the private sector, environmental assessment and remediation, property management, disposal of surplus property and goods, fleet management, and the marine transportation of cargo to NWT communities.

The airport system must be operated in a highly regimented regulatory environment. Transport Canada, the regulatory authority, can close an airport not managed according to national regulatory standards. Without an airport, scheduled carriers cannot use the airport, which potentially isolate a community and reduce its ability to function. This industry is extremely



sensitive to safety and security and depends on people performing in a very consistent manner in an environment where there is little margin for error.

The Project Officer, Civil, is located in Yellowknife, and reports to the Manager, Infrastructure & Planning. This position provides planning, design and management for the delivery of airport civil projects, to effectively and efficiently manage the overall integrity of both building and airfield infrastructure at the 27 airports owned and operated by GNWT.

## **RESPONSIBILITIES**

### **1. Develops and evaluates plans and criteria for the preparation and periodic updating of airport planning studies, including Airport Development Plans which define and establish priorities, project implementation plans, and budget projections, for the development, growth and expansion of airports over a 20-year planning horizon.**

- Identifies civil needs for new or updated Airport Development Plans, in consultation with regional Airport Managers, and corporate headquarters staff and management.
- Contributes to Airport Development Plans for each airport within the Northwest Territories over a 30-year planning horizon, and regularly reviews each Plan and updates as required.
- Participates as a member of the Departmental Steering Committee for Airport Planning Studies and assesses the feasibility of solutions and concepts proposed by these planning studies and integrates review comments of Steering Committee members.
- Provides expert civil technical advice about airport planning, while participating in consultations with air carriers, communities, Nav Canada, Environment Canada, regional Airport Managers and Superintendents, and Departmental technical staff, intended to solicit input and feedback.
- Assists in integrating the recommendations outlined in Airport Development Plans into the Department's 20-year needs and ongoing five-year capital project plan. Supporting activities of the above responsibility.
- Drafts large and small capital project substantiation sheets for supervisor review.

### **2. Develops or directs development of project briefs, conceptual plans, functional plans, and preliminary and final designs, for new or reconstructed airport civil projects.**

- Conducts feasibility studies, technical assessments and inspections, pre-design and planning studies, to establish preliminary engineering and community data.
- Manages the process used to develop functional and conceptual plans and defines and establishes design constraints and parameters.
- Consults with Nav Canada, Environment Canada, regulatory agencies, air carriers, tenants, communities and other stakeholders, and analyses passenger forecasts, to determine specific requirements with respect to project size and function, and assesses



needs in conjunction with headquarter, regional and operational personnel, and integrates input as appropriate.

- Determines needs and operational requirements through data analyses, assessments, development plans, consultations and guidelines.
- Assesses and analyses the feasibility, technical accuracy and adequacy, and soundness of proposed design solutions proposed by others.
- Applies existing criteria and constraints to new situations and draws conclusions from comparative situations.
- Undertakes inspections and performs technical evaluations of existing civil works, to determine conformance to standards, regulations and design drawings, and to identify operating deficiencies and level of maintenance being administered.
- Recommends upgrades to existing works, re-designs, or improvements, in operating standards and procedures, to extend the life and/or improve the efficiency of existing airport infrastructure.
- Prepares detailed cost estimates for projects, and initiates requests for funding.
- Develops technical and functional requirements for each project into a scope of work and/or design brief, to guide project implementation.
- Researches new information regarding construction techniques, materials and procedures, and makes recommendations for their incorporation into infrastructure.
- Identifies project land requirements and assists in land acquisitions.

**3. Provides technical advice and supports and implements capital and O&M civil projects.**

- Develops and modifies established guidelines, new approaches, technical standards and procedures, for the design, implementation and construction or reconstruction of airport civil infrastructure.
- Provides conceptual, preliminary and tender-ready civil work designs, contract drawings, specifications, quantity surveys and cost estimates, utilizing civil engineering design computer software, and recommends optimal design.
- Manages technical consultants to ensure stamps and seals of all civil contracts, construction drawings and specifications are completed.
- Initiates and manages the process undertaken to implement the new construction or reconstruction work for airport civil infrastructure.
- Identifies projects requiring the services of consultants, prepares requests for proposals, reviews consultant proposals, and participates as a committee member in the consultant selection.
- Provides advice on the qualifications of consultants and contractors, and in the making of final tender awards.
- Presents or participates in presenting preliminary and final designs to community councils, band councils, community members, air carriers and airport tenants.



- Reviews drawings and specifications, and coordinates review comments of the Division's specialists in each engineering discipline, to provide project implementers' clear and consistent instructions.
- Develops Plans of Construction Operations (PCOs), in conjunction with the Division's Programs & Standards Section and Transport Canada's Aerodrome Safety.
- Obtains land-use and quarry permits, as required.
- Chairs pre-tender meetings and prepares and distributes minutes to participants.
- Responds to technical inquiries on project design and scheduling from potential contractors during tendering process, and prepares addenda as required.
- Monitors physical progress and financial status of capital and O&M construction projects, providing recommendations and technical advice as required.
- Prepares correspondence and organizes and participates in meetings to resolve project-related construction concerns or problems that involve consultants, contractors and project implementers.
- Negotiates and prepares contract change orders.
- Participates in progress, interim and final on-site inspections.
- Prepares and certifies progress certificates, interim certificates and final certificates of completion of work, in accordance with the terms of the contract, and recommends and approves payments.
- Keeps account of capital and O&M expenditure details provided by project implementers, including project expenditures to year-end, noting and explaining variances and recommending reallocation, if necessary.
- Prepares post-construction reports.
- Monitors and approves the production of "as-built" drawings.
- Prepares contractor and consultant performance evaluations.

## **WORKING CONDITIONS**

### **Physical Demands**

No unusual demands.

### **Environmental Conditions**

No unusual demands.

### **Sensory Demands**

No unusual demands.

### **Mental Demands**

Duty travel may involve up to six weeks' travel during the construction season. During the other times of the year, the incumbent may be required to travel, on average, one week per month for



inspections, project review, planning and meeting with consultants and contractors.

### **KNOWLEDGE, SKILLS AND ABILITIES**

- Knowledge of airport planning, airport operations, safety regulations and zoning requirements.
- Knowledge of airport and aviation terminology, and northern air transportation facilities.
- Knowledge of aircraft characteristics and performance, air carrier operations and their services.
- Knowledge of general construction practices and materials, and factors affecting northern construction.
- Knowledge of northern geotechnical and environmental considerations, and northern construction practices.
- Knowledge of technical standards applicable to design of Canadian airports.
- Knowledge of runway, apron and taxiway design principles.
- Knowledge of project management, cost estimation, cost controls and construction contract law.
- Knowledge of northern airport navigational and visual systems, airfield lighting, and field electrical centers.
- Knowledge of engineering management practices and project planning.
- Knowledge of financial management, budget planning and financial control systems.
- Oral and written communications skills.
- Ability to resolve conflict and work in a team environment.
- Ability to correspond adeptly with contractors, project personnel, divisional staff, and the public.
- Contract management and administration skills.
- Ability to interpret civil drawings, designs and specifications.
- Ability to assess the suitability of such designs for the northern climate.
- Ability to interpret and apply engineering, airport design and operation standards and regulations.
- Ability to produce and review, coordinate and implement multiple projects simultaneously.
- Ability to develop and analyze short- and long-term construction projects, as well as to manage complex construction projects throughout all stages of planning, development and completion.
- Ability to utilize Word, Excel, PowerPoint, Outlook, and other required software.
- Problem solving ability to address project design, planning or construction issues.
- Ability to commit to actively upholding and consistently practicing personal diversity, inclusion and cultural awareness, as well as safety and sensitivity approaches in the workplace.

**Typically, the above qualifications would be attained by:**

Completion of a bachelor's degree in civil engineering with three (3) years of relevant experience and one (1) year of experience specifically related to airports.

Equivalent combinations of education and experience will be considered.

**ADDITIONAL REQUIREMENTS**

A Class 5 NWT Driver's License is required for this position.

A Restricted Radiotelephone Operator's Certificate (Aeronautical) and

An Airside Vehicle Operators Permit, which may be obtained following appointment.

Registration with the Northwest Territories and Nunavut Association for Professional Engineers and Geoscientists (NAPEG) within 90 days of hire is required, with flexibility for international registrants.

**Position Security** (check one)

- ☐ No criminal records check required
- ☒ Position of Trust – criminal records check required
- ☐ Highly sensitive position – requires verification of identity and a criminal records check

**French language** (check one if applicable)

- ☐ French required (must identify required level below)
  - Level required for this Designated Position is:
  - ORAL EXPRESSION AND COMPREHENSION
    - Basic (B) ☐ Intermediate (I) ☐ Advanced (A) ☐
  - READING COMPREHENSION:
    - Basic (B) ☐ Intermediate (I) ☐ Advanced (A) ☐
  - WRITING SKILLS:
    - Basic (B) ☐ Intermediate (I) ☐ Advanced (A) ☐
- ☐ French preferred

**Indigenous language:** Select language

- ☐ Required
- ☐ Preferred