REQUEST FOR PROPOSAL FOR CONSULTANT SERVICES

TO PROVIDE A COMPREHENSIVE REVIEW AND SUPPORT DOCUMENT IN DIRECT RELATIONS TO THE REHABILITATION OF THE AIRPORT ELECTRICAL POWER SUPPLY SYSTEMS FOR BOTH STANDARD AND EMERGENCY POWER. THE CONSULTANT'S REPORT WILL PROVIDE CAPITAL COSTING, DESIGN AND TENDER READY DOCUMENTS AND SUPPORT DOCUMENTATION TO MEET FUNDING CRITERIA UNDER THE TRANSPORT CANADA AIRPORTS CAPITAL ASSISTANCE PROGRAM ACAP BASED ON THE CRITERIA SET IN TP-312, THE CANADIAN AVIATION REGULATIONS AND OTHER RELATED DOCUMENTS

North Bay Jack Garland Airport Corporation

May, 2015

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1.0 INTRODUCTION

1.1 Purpose

The Terms of Reference defines the scope of work required from the Consultant for professional engineering services for a review of the Main electrical systems both emergency and normal for the airport, recommended retrofits, cost estimates, tender and support documents for the required work. Additional support documents to meet TC requirements to submit an application for funding under the ACAP Airports Capital Assistance Program based on Transport Canada's requirements.

Systems noted are main power feeds, associated transformers, switch gear, generators, main breaker cabinets and any other associated distribution and panels.

While the NBJGAC has taken every effort to ensure the accuracy and completeness of the RFP, it is provided solely as a guideline for Proponents. The NBJAGC accepts no responsibility for any information or errors or omissions that may be contained in the RFP. The Proponents are responsible for forming their own opinions and conclusions concerning all matters associated with the RFP.

1.2 Location

North Bay Airport is located approximately 8 km from the North Bay City Centre. The aerodrome elevation is 370m (1215') above sea level. Strategically located near the trans-Canada Highway 17 and Highway 11, and the Ontario Northland Railway, the airport serves not only the City of North Bay itself but the surrounding districts of Nipissing, Parry Sound, Temiskaming, and many other communities within Northern Ontario. Access to the airport from major ground transportation corridors including Highways 11 and 17 is via Airport Road.

1.3 Background

Airport Operating Conditions

North Bay Airport is operational 24 hours per day, 7 days per week, and is capable of supporting both VFR and IFR operations down to Cat 1 precision approach limits and departures in visibilities of RVR 1200 and 1/4, statute miles.

Critical Aircraft

The critical aircraft for the primary runway is the B767/A310 (reference code D). The secondary runway supports aircraft up to the Dash-8 (reference code C).

Airport Operations

The manoeuvring area consists of two intersecting paved runways, one turf runway, an adjoining taxiway system, and five aprons. The primary runway (08-26) is 10,004 feet long by 150 feet wide with 25 feet paved shoulders on either side, and the secondary runway (18-36) is 4,492 feet by 150 feet wide.

1.4 NavCanada

Operates a flight Service Station 16 hours per day and all electrical systems are integral to the airport power system.

1.5 Air Carrier

The airport currently offers daily scheduled passenger service by Air Canada Jazz to Toronto's Lester B. Pearson International Airport and Bearskin Airlines to Sudbury and with departures between 05:00 and 01:00 hours.

1.6 Ownership

The North Bay Airport is certified as a public aerodrome The Airport is owned by Corporation of the City of North Bay and is operated by North Bay Jack Garland Airport Corporation.

1.7 Construction History

A continuous program of capital improvement has been undertaken at North Bay Airport in response to the needs of the community and the stakeholders of the facility.

2.0 OBJECTIVES

2.1 General

NBJGAC must be able to provide a safe and reliable electrical system that meets all building standards and codes as well as Transport Canada Regulations and standards for airports. All proposed components need to take into account the ability to reduce operational cost and the consumption of energy.
The Airport Electrician conducted an assessment of the current systems and the availability of replacement parts and components to maintain these systems. The average age of these units is between 30 and 50 years and are now obsolete with no or limited availability of replacement parts and in some case the manufacturers are no longer in business. All units have exceeded their normal life expectancy.

In general, the objectives are to provide professional engineering and planning services

for the following project as approved by the airport.

These services will be broken down into 3 defined areas.

1. Project development and applications which will include standard engineering practices and all requirements under the Transport Canada Airports Capital Assistance Program (ACAP). Which will include:

   a) Review of existing equipment and load requirements

   b) Recommend options to rehabilitate all components that will provide a 30 year window of operations.

   c) Preliminary design

   d) Proposed Project Schedule

   e) Cost Estimates

   f) Completed ACAP application document

   The Airport Capital assistant Program information is available at http://www.tc.gc.ca/programs/airports/acap/apply.htm reference material include TP12313.

   Please contact TC Ontario Region for first phase environmental process document for ACAP projects

2. Completion of Required documents for ACAP and to proceed with the project

   a) Final Design

   b) Tender Specifications and Documents

3. Contract Administration and Supervision which includes the tender process.

2.2 Current Objectives

The scope of work intended to be carried out by the North Bay Jack Garland Airport Corporation subject to financing and the evaluation of various options and the required work by a professional Engineering firm would be as follows:

Airport Main Power Supply Substation

Re-habilitate the power system from the main line supplied by North Bay Hydro which includes the substation and feeds to the power supply building.
Please see attached information on existing structure Appendix A

Airport Power supply Building

This electrical center is the main power supply for the Maintenance Garage, Field Navigation Equipment (ILS, VOR, DME etc.), Terminal, Admin building, NavCanada support equipment and tower. Rehabilitate normal and emergency power supply components.

Please see the additional information on existing infrastructure requiring rehabilitation on Appendix B

Airfield Lighting Substation and Power Supply

Rehabilitate power supply from the North Bay Hydro line to the substation and normal and emergency components up to the constant current regulators.

Please see the additional information on existing infrastructure requiring rehabilitation on Appendix C

3.0 SCOPE OF CONSULTING SERVICES

3.1 General Requirements

In completing the above noted projects, the following is a brief description of the general requirements of work to be undertaken:

- Collection of Background Information regarding each objective.
- Meeting with the airport to review details of the project and establish priorities.
- Review eligibility with Transport Canada.
- Preparation of ACAP Applications including:
    - Inclusion of mandatory support documentation.
    - Detailed description of project and related deficiencies.
    - Outline of project eligibility.
    - Design.
    - Specifications.
    - Cost Estimates.
    - Scheduling.
    - Environmental Assessment in accordance with Canadian Environment Assessment Act (CEAA) and other local environmental requirements.
- Conduct necessary survey work including identification of underground utilities.
- Confirm current status of applicable regulatory requirements with Transport Canada.

- Preparation of Design Brief providing details of design methodology. The purpose of this document is to clearly identify all project elements, restraints, solutions, options, costs, scheduling and construction implementation strategies.
- Review of the preliminary Design Brief with Airport.
- Prepare final design all in accordance with TP312. National electrical code and any other reference material.
- Prepare tender documents and specifications.
- Preparation of cost estimates at various stages during the design process as requested by the North Bay Jack Garland Airport Corporation.
- Prepare a Plan of Construction Operations, including Transport Canada approval, and liaison/consultation with stakeholders including NAV Canada and the airlines.
- Confirm approval requirements with NAV Canada and complete and administer any applications for the approval process.
- Review Final Design/Tender Documents with the North Bay Airport.
- Tendering of works and organization of pre-bid meeting with all contractors.
- Review of bids received and recommendation of contract award.
- Construction supervision and administration.
- Commissioning and testing.
- Overseeing of flight testing as required by Transport Canada with assistance from the airport if required
- As-Built Conformity Analysis and Engineer's Attestation of Compliance.
- Project Close Out Documentation as required by Transport Canada and the NBJGAC.
- Assisting the airport in the preparation of monthly progress payment requests to Transport Canada.

3.2 ACAP Project Data required

Reference Manual TP 12313
Project Specific Data (as appropriate)

- a statement of project requirements and scope of work including a project definition and justification based on the evaluation criteria;
- a quality of assurance program before and during project implementation;

- a statement of project management services including design, consultant services, construction, field services, quality control and commissioning;
- a cost plan incorporating budgeting, estimating and cost control processes as well as a substantive estimate of cost by major work item for all phases of project delivery (i.e. design, environmental assessment, tendering, construction, etc.);
- a project schedule for all phases of project delivery showing anticipated start and finish dates, major milestones and a cash flow projection;
- a financial plan incorporating the securing of project financing including cost sharing arrangements, payment certification, and project accounting;
- a design indicating geometric dimensions, specifications, construction methods, materials, etc.;
- the source of the design and the name of the engineer/engineering, firm/architect which prepared or reviewed the design;
- as evidence of appropriate maintenance of the existing facility and/or equipment, an operational/maintenance plan (i.e. crack filling program, electrical maintenance, vehicle maintenance, etc.), and relevant copies of maintenance records indicating maintenance work undertaken and costs incurred;
- Anticipated changes in operating and maintenance costs as a result of the project. The project should be sufficiently developed to enable the Applicant to tender the project within a reasonable timeframe after the signing of the contribution agreement.

Environment

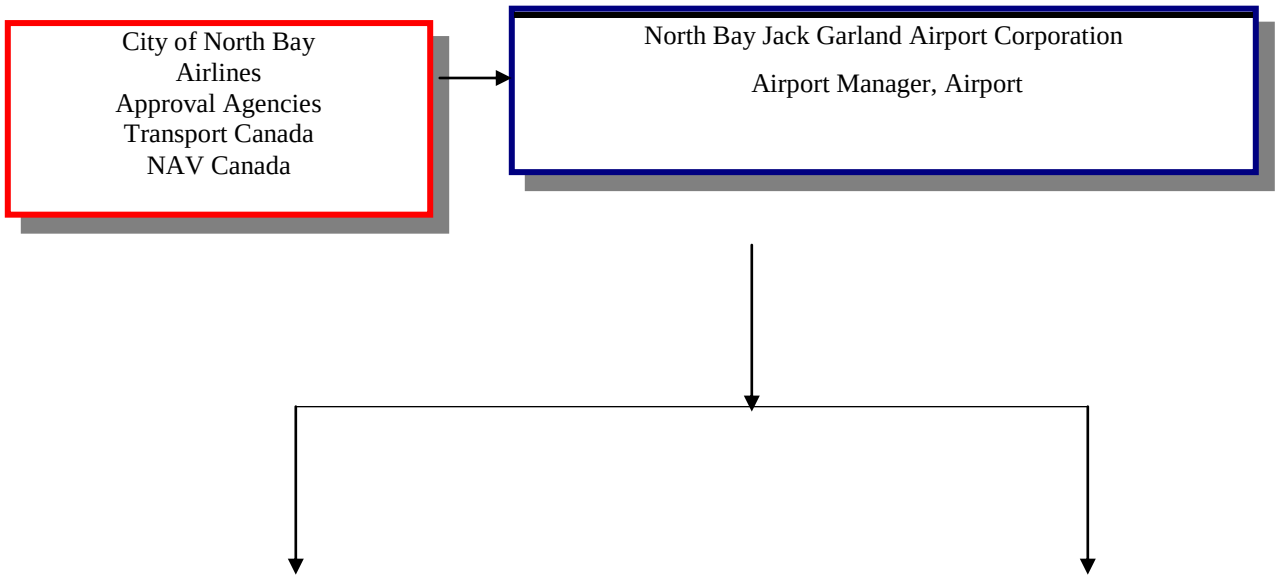
- In support of the Government's objective to incorporate sustainable development principles in the management of its programs, whenever possible, the Applicant should demonstrate that environmental considerations have been integrated into the project. For example, this could include seeking cost-effective ways of reducing the use of raw materials and the generation of waste associated with the project or by investigating the feasibility of acquiring heavy mobile equipment that will minimize harmful emissions.

- An environmental review must be completed in accordance with the Canadian Environmental Assessment Act and approved by the Regional Office of Transport Canada.

3.3 Project Methodology

To carry out construction for the project, it is anticipated that the contracts will be a unit price based contract and will include Quality Control responsibilities by the Contractor. Quality Assurance, however, will be the responsibility of the Consultant acting on behalf of the Airport.

The following organization and responsibility chart indicates the intended contractual and administrative structure for the various contemplated projects.



It should be clearly understood that the Consultant will have extended project management responsibilities as a result of this organization

4.0 PROJECT SCHEDULING

It is intended that the Consultant retained will enter into a Contract with the Airport, for the provision of engineering services.

The Consultant will initially work with the Airport in establishing priorities and identifying the scope of the project for submission for ACAP Funding.

The ACAP Application for this project is to be submitted to Transport Canada by September 1, 2015. Final design and tender process in 2016 and construction is anticipated to occur in 2016/17.

5.0 PROJECT REQUIREMENTS

Proponents are asked to provide services generally referred to as “Engineering Services” for the purpose of the RFP. The successful proponent will be awarded a Contract and be referred to as “Consultant” to the Airport.

The scope of required services will be classified generally into five phases and will involve, but may not be limited to, the following:

5.1 ACAP Application

Upon award of the Contract to the Consultant, meetings will take place between the Airport and Transport Canada as required to identify ACAP eligible projects components.

Upon selection of the priority of projects, ACAP Applications are to be prepared, based on the schedule agreed to by all parties.

The ACAP Applications generally involve the following:

i) Review of all background information including existing drawings, surveys, and reports.

ii) Carry out field reconnaissance to become fully familiar with the site and the work required. Collection of the background information from the North Bay Airport for the “front end” of the ACAP Application.

iii) Review various rehabilitation options and conduct a Cost Benefit Analysis.

iv) Selection of preferred alternative that meets physical, schedule and operational objectives of the Airport.

v) Perform any and all design calculation and recommend appropriate construction methods, products and materials.

vi) Summarize Scope of Work.

vii) Preparation of Cost Estimates.

viii) Outline of proposed scheduling and cash flow requirements.

ix) Prepare and submit necessary environmental documents to appropriate departments within the Federal and Provincial governments.

x) Liaison with NAV Canada, Transport Canada and stakeholders, including airlines, regarding the proposed work.

xi) Submission of preliminary ACAP Application to the Airport for review and approval.

xii) Submission to Transport Canada on behalf of the Airport.

xiii) Address any questions/concerns of Transport Canada, during Transport Canada’s review.

xiv) Attend meetings as required with the Airport/Transport Canada.

5.2 Design Development Phase including Preliminary and Final Design

As part of the ACAP Application preparation as outlined above, there is a need to complete preliminary and final design for the ACAP project.

The Consultant shall finalize the design documents, based on consultation with Transport Canada in order to meet ACAP Funding requirements.

5.3 Tendering for Construction Phase

During the tender stage, hold Pre-Tender Meetings, prepare responses to bidders queries and prepare Addenda as required. Review tenders received and provide recommendations on Award of Tender.

5.4 Construction Phase

Upon Award of the work, the Consultant shall supervise construction so that “best practices” and standards are complied with. The Consultant will be responsible for all aspects of the construction administration and supervision. The Consultant will be responsible for all management of the project.

The responsibilities of the Consultant are briefly outlined below, but are not limited to:

i) Supervise work in accordance with all applicable safety standards and regulations for this type of work.

ii) Set out any required control points and benchmarks for the work.

iii) Review and approve Contractor’s work plan including the proposed materials, test certificates, shop drawings and other relevant documents. Review the Contractor’s plan for compliance with any construction safety requirements and contract terms.

iv) Inspect materials and workmanship to ensure Contractor’s work meets the intent of the design and conforms to plans and specifications.

v) Provide, if necessary, the Airport with any calculated distances required for runway displacement (ASDA, TODA, LSDA, TORA) if required.

vi) Provide and design, if necessary, all markers, flags, lights, and signs as required by Transport Canada to meet temporary day/night runway displacement.

vii) Supervise and review quality assurance testing, initiating corrective action as required to ensure that project objectives are met.

viii) Monitor the effectiveness of the Contractor’s Quality Control Program and recommend adjustments as necessary to ensure that project objectives are maintained.

ix) Monitor the Contractor for compliance with all safety and security requirements. Liaison with Airport Manager and issue immediate instructions to the Contractor in the event of any violation against the requirements.

x) Maintain detailed record daily diaries with appropriate photos, Minutes of Meeting, Amendments to drawings, Instructions to Contractor, contractor's site activities and other relevant data.

xi) Call and chair regular site meetings with the Airport Manager, Contractor and others as necessary at time intervals to be determined by the owner.

xii) Prepare monthly progress claims for airport approval.

xiii) Advise immediately of any cost overruns and obtain prior approval of owner before any issuance of Change Orders. Institute a Contemplated Change Order process and other processes to establish cost and schedule control.

xiv) Liaison with, receive instructions from, submit documents for approval to and report regularly, both orally and in writing to the Airport Manager. In addition, prepare and submit a written monthly progress report covering all aspects of the work. The format of the reports and their content shall be to the approval of the Airport Manager. Include monthly cost reports, separately for engineering, quality control, assurance testing and construction services, and explain any variance from budget and schedule. Participate in forecasting processes leading to cost estimates to complete the work and schedule analysis.

xv) Preparation of monthly progress reports for submission to Transport Canada by the Airport Manager.

5.5 Completion, Commissioning and Post Construction Phase

i) At project completion, provide the Airport for record purposes, one reproducible film and one blackline print of each As-Built and single line drawing. Also, provide Design,single line and As-Built Drawings on computer disc, in PDF format and Microstation or AutoCAD format as per the City of North Bay requirements.

ii) Perform final inspection and ensure that all deficient items are corrected.

ii) Review and assist the North Bay Airport to negotiate any outstanding claims with the contractor, making appropriate recommendations to the airport.

iii) Prepare all documents related to aviation publication updates including CFS, CAP and AOM as required

vi) Prepare an As-Built Design Conformity Analysis of each project as applicable for geometric compliance with TP312 standards. Submit a Summary Report and Engineer's Attestation of Compliance.

vii) Submission of project close out documentation required by Transport Canada.

5.6 Drawing and Specification Production

Consultant will observe the following:

i) Specifications shall be in National Master Specifications format with modifications agreed to by the North Bay Airport.

ii) CAD drawings must be provided in Microstation or AutoCAD format

iii) Drawings to be consistent with a Drawing Control Procedure.

5.7 Code and Regulation Compliance

Consultant shall review all relevant codes, statues, regulations and by-laws applicable to the design, and ensure those authorities having jurisdiction are consulted and approvals as appropriate are secured or complied with. These may include but not be limited to:

- NBC 1995 or latest issue, if applicable
- Provincial Plumbing Code
- Provincial Gas Safety Act
- National Fire Codes of Canada
- Applicable NFPA Codes
- Applicable CSA Codes
- Department of Labour, Occupations Environmental Regulations
- The Workers Compensation Industrial Health and Safety Regulations
- The Power Engineers & Boiler & Pressure Vessel Safety Act?
- ASME and ANSO Codes
- ASHRAE Design Standards
- ASPE Design Standards
- SMACNA Design Standards
- Transport Canada Requirements
- Environmental Standards
- Canadian Electrical Code
- Ontario Electrical Authority

6.0 INSTRUCTIONS TO PROPONENTS

6.1 General

Eligible proponents must provide with their proposal:

1. Proof of licence to practice within the Province of Ontario.
2. Letter of good standing with the Workplace Safety & Insurance Board.
3. Letter from Insurance Company stating availability of Professional Liability Insurance.
4. Proof of General Liability and Comprehensive Automobile Insurance for all owned vehicles, non-owned vehicles and leased: $5,000,000 inclusive per occurrence.

The information contained in the proposal must be organized under the same headings and in the same order as outlined in the following section entitled “Mandatory Proposal Components”.

6.2 Mandatory Proposal Components

Please order proposal as follows:

1.0 **Introduction**, including the following:

1.1 Introductory letter describing the proponent’s team and indicating the firm’s commitment to the project signed and sealed as outlined above.

1.2 Letter of good standing with the Workplace Safety and Insurance Board.

1.3 Letter from Insurance Company stating availability of Professional Liability Insurance specific to this job, the successful Consultant will be required to carry a minimum of $5,000,000 per occurrence in professional liability insurance and 5,000,000 in general liability. The insurance coverage cannot be modified without written consent of the Owner. Clauses that limit the liability of the Consultant or the insurance company to the value of the fees paid/payable will not be considered.

1.4 Proof of General Liability and Automobile Liability Insurance.

2.0 Corporate Overview (Proponent and Sub-consultants)

2.1 History of Firm(s) and experience in general.

2.2 Size of firm – Number of full time and part time employees, associated sub-consultants.

2.3 Related Experience – A summary of relevant experience of the proposed project team, including prime and sub-consultants, in completing assignments of this type in a similar size, scope, and complexity. The relevant experience should be limited to work in the following areas:

- Airports, Electrical and associated projects (civil/electrical)
- Familiarity with Transport Canada
- Airport Projects –

  Provide details of related projects including names, positions and telephone numbers of client references for at least three (3) relevant projects. Consultant must have completed similar services for a minimum of three (3) projects within the last three (3) years.

- Non Airport Related Projects –

  Provide details of related projects including names, positions and telephone numbers of client references for at least three (3) relevant projects. Consultant must have completed similar services for a minimum of three (3) projects within the last three (3) years.

2.4 Statement of ability to handle this work in conjunction with any existing workloads.

3.0 Project Team Members

3.1 A description of the experience and capabilities of each team member, number of years at the firm, and their role and responsibility during this project (limit one page/member). The relevant experience should be limited to work in the areas indicated above. Team leaders must be involved in projects completed in last 3 years.

4.0 Organization and Methodology

4.1 Provide a schedule to organize the work and the project.

4.2 Describe the approach during both design and construction phases for:

- Quality Assurance
- Cost Control
- Schedule Control

5.0 Submission of Price and Terms of Payment

Consultant to provide at this stage, a fixed price for completing various phases of the project identified in these Terms of Reference.

6.0 Ownership

All maps, drawings, photographs, surveys, reports or similar materials prepared or produced pursuant to these Terms of Reference or the Contract Document will become the property of the North Bay Jack Garland Airport Corporation and the City of North Bay and shall be transferred to the Airport upon completion of the project.

The Consultant must prepare and include a statement which gives the Airport Corporation the drawings, plans and specifications for the project. The statement shall also expressly state that the Engineer shall not hold the Airport Corporation and/or Her Majesty the Queen responsible for any costs incurred in connection with the preparation of such drawings plans and specifications.

7.0 PROPOSAL EVALUATION CRITERIA

The Consultant's proposal shall be evaluated in accordance with the following criteria.

7.1 Proposals will be evaluated by the North Bay Jack Garland Airport Corporation on the basis of perceived "best value" to the Airport as such, the lowest price may not mean award. The North Bay Jack Garland Airport Corporation reserves the right to select and award using its sole discretion and to reject any and all proposals as it sees fit.

7.2 The NBJGAC reserves the right to reject any or all submissions to the RFP process if, in the sole determination of the NBJGAC, proposals do not meet the requirements as outlined in this RFP, or if the submissions are not satisfactory to the NBJGAC. The NBJGAC further reserves the right:

- At any time, add, delete or modify terms or conditions included in the RFP Process and require each Proponent to advise the SSMADC as to the effect of any such change on the Proponents' Proposal; and,

- At any time, delay or terminate the RFP process.

8.0 SUBMISSION INSTRUCTIONS

8.1 Address for Submission of Proposals

Address for submittal of Proposals:
Clearly mark sealed packages:

PROPOSAL SUBMISSION FOR:
Planning, Design, Project Management and Contract Administrative Services
North Bay Jack Garland Airport Corporation
50 Terminal St. Suite 1
North Bay, Ontario
P1B 8G2

8.2 Closing Time for Submission of Proposals

Proposals must be received no later than:

13:00 pm, Eastern Standard Time, June 24th, 2015

13:30 pm, Public opening Airport Boardroom June 24th, 2015

8.3 Form of Submission

Six (3) hard copies and 1 electronic copy.

Proposals are to be delivered by the closing time noted in 8.2 to the address noted in section 8.1. No late deliveries.

8.4 Enquiries from Consultants

Consultants are to direct enquiries during the proposal call period to:

Jack Santerre
Airport Manager
Phone: 705-474-3020 ext 224 Fax: 705-472-9867
Email: jack.santerre@northbayairport.com
North Bay Jack Garland Airport Corporation
50 Terminal St. Suite 1
North Bay, Ontario
P1B 8G2

Appendix A

Airport Main Power Supply Substation

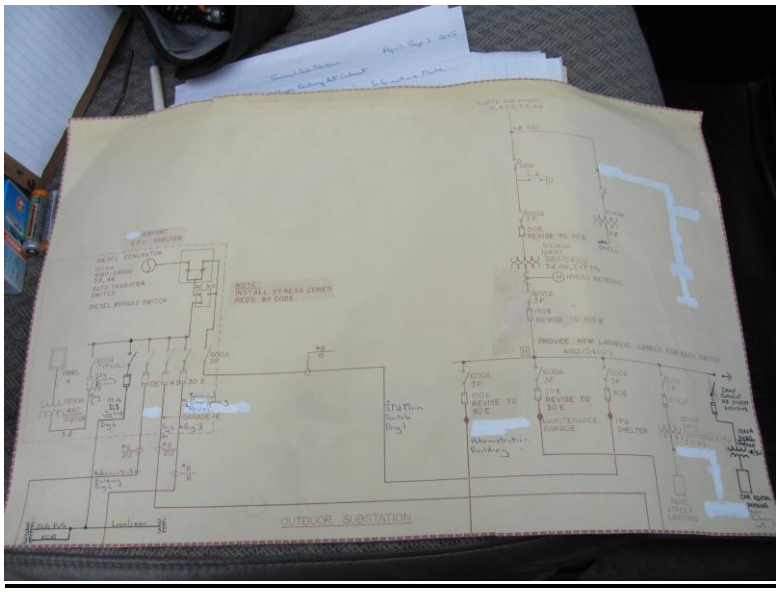
Re-habilitate the power system from the main line supplied by North Bay Hydro which includes the sub-station and feeds to the power supply building.

Pictures of the various equipment and information on existing infrastructure requiring rehabilitation. The average age of this equipment and technology is 50 years plus.

Airport Sub-Station Main	Transformer	Metering	Transitional Secondary Transformer	Administration Building, Nav-Aids, Tower Transformer	Maintenance Garage Transformer	IPU Building Transformer	Roads and Parking lot Transformer	Road lighting

Airport Main Sub-station layout reference picture # 1

Airport Main power substation



Line drawing for airport main power

North Bay Hydro main power feed

Appendix B

Airport Power supply Building

This electrical center is the main power supply for the Terminal, Maintenance Garage, Field Navigation Equipment (ILS, VOR DME etc.), Admin building, NavCanada support equipment and tower. Average age of the equipment and technology is 35 years plus.

Pictures of the various equipment and information on existing infrastructure requiring rehabilitation.

Airport Main power distribution building

Distribution Cabinets, 1 IPU main switch, 2 Administration Building, 3 Terminal Emergency Power, 4 Maintenance Garage, 5 IPU building 6, ILS and VOR/DME

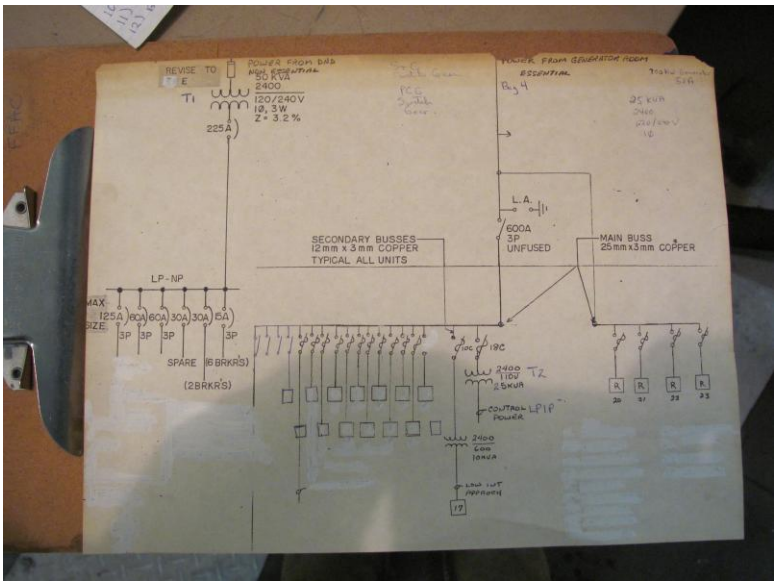
150 KW back up diesel generator powered by a Cummins engine

PCG Switch Gear type roll arc 400D

Appendix C
Airfield Lighting Substation and Power Supply

Rehabilitate power supply from the North Bay Hydro line to the substation and components up the constant current regulators.

Pictures of the various equipment and information on existing infrastructure requiring rehabilitation. Average age of equipment and technology is 35 years plus.



Line drawing for Airfield Electrical center

Airfield electrical Centre

North Bay Hydro 12,880 V feed and airport's step down transformer

PCG switch gear

S&C switch gear five cabinets CDT-55495

Incoming switch gear 3 cabinets Cat # 34510R5-T3

300 KW Generator with Detroit Diesel engine