April 3, 2023

Cariboo Regional District
c/o Darron Campbell, Manager of Community Services
Phone: 250-392-3351
Email: dcampbell@cariboord.ca

RE: South Cariboo Regional Airport (108 Mile Airport)
Airport Runway Overlay and Electrical Upgrades
Reference | 00-9901-01

1. BACKGROUND

Avia NG Inc. is pleased to submit our Proposal for the Airport Runway Overlay and Electrical Upgrades Project (the "Project") at the 108 Mile Airport ("CZML" or the "Airport"). This proposal outlines Avia NG's profile, expertise to perform, relevant project experience, organization, methodology, detailed work schedule and fee schedule offered to the Cariboo Regional District ("CRD").

The airport runway, taxiways and apron were originally constructed in the 1940's. The last major rehabilitation for these areas took place in 1998, which consisted of pulverization and resurfacing. 25 years later, the condition of the pavements has deteriorated to the point that they require rehabilitation to maintain safe aircraft operations. In addition, the airfield lighting is an aging system and is due for upgrade and replacement with LED infrastructure.

2. OUR FIRM

Avia NG Inc. is an airport consulting firm specializing in airport planning, design, contract administration and construction phase services for airport infrastructure projects. We operate from four offices throughout Canada and serve airports, government and private clients throughout Canada and the Caribbean. Our team of over forty-five (45) full-time employees offer a broad range of experience with a combined 400+ years of direct airport consulting on over 500+ assignments. We leverage our experience and interest in aviation to deliver high quality and timely services to our clients. Our projects range from simple to complex including planning, restoration, expansion, and greenfield developments. Our mission is to provide our clients with timely and high-quality aviation consulting services through technical excellence, extensive industry experience, innovation, and long-term collaborative relationships.

Our Capabilities

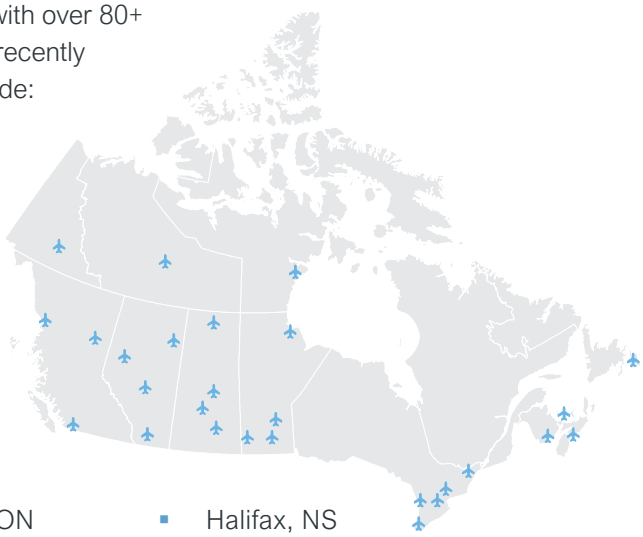
Avia NG provides a wide array of pure aviation services ranging from feasibility studies to site selection analysis, design, tendering, and construction services through to project closeout. Key services include:

- Airport Condition Assessment/Capital Planning
- Airport Planning
- Aircraft Movement and Gate Simulations
- Airside Civil Engineering
- Airside Drainage and Stormwater Management
- Ground Transportation, Parking, Signage
- Commercial Development and Site Servicing
- Airside Electrical Engineering
- Airfield Electrical Centres
- Approach Lighting Systems
- Inset Lighting and Low Visibility Infrastructure
- PAPI Siting and ILS Harmonization
- Project Management
- Plan of Construction Operations (PCO)
- Nav Canada Land Use Planning
- TP312 Certification and Facility Audits
- Obstacle Limitation Surface (OLS)
- ICAO Type A Charts
- Stakeholder and Public Consultation
- Airport Zoning Regulations (AZR)
- Runway Grooving, Roughness / Friction
- Runway End Safety Areas
- Contract Administration
- Construction Inspection

Our Canadian Experience

Since the 1990's, Avia NG team members have completed more airfield pavement rehabilitation projects than any other aviation consultant in Canada. Our airfield engineering team is industry leading in pavement rehabilitation methods, airport construction staging and contract administration, which has gained the trust of clients across the industry.

We have worked on over 200+ airport-related projects with over 80+ clients across Canada and Internationally. Some of our recently completed airfield pavement rehabilitation projects include:



- Fort St. John, BC
- Dawson Creek, BC
- Prince George, BC
- Kamloops, BC
- Tofino, BC
- Edmonton, AB
- Fort McMurray, AB
- Fort Chipewyan, AB
- Grande Prairie, AB
- Red Deer, AB
- Regina, SK
- Saskatoon, SK
- Prince Albert, SK
- Stony Rapids, SK
- Thompson, MB
- Brandon, MB
- Churchill, MB
- St Andrew's, MB
- Winnipeg, MB
- Ottawa, ON
- Hamilton, ON
- Windsor, ON
- Sarnia, ON
- Toronto (Pearson), ON
- Toronto (Billy Bishop), ON
- Saint John, NB
- St. John's, NL
- Charlottetown, PE
- Halifax, NS
- Whitehorse, YK
- Yellowknife, NWT
- Rankin Inlet, NU

3. PROJECT TEAM

We have carefully selected personnel for our team to provide CRD with the industry's most experienced and locally knowledgeable personnel and have designed the structure of our team to take advantage of each team member's strengths.

Our proposed team will be led by James Gunn, with support from Jeff Lo, Bryan Liska and Nick Heisz For the construction phase, we will provide a dedicated full-time aviation experienced on-site inspector for the duration of the work; in addition to our proposed team being available 24/7 for any issues that may arise. Our Calgary office will provide technical support to the team as needed.

JAMES GUNN, P.Eng.

Project Director/Engineer of Record

Calgary, AB | 19+ Years Experience

James is a professional civil engineer with nearly 20 years of aviation engineering experience. Since graduating in 2004 from the University of Alberta, James has worked exclusively in the aviation consulting industry over the course of his career and brings a broad resume of airport design & construction projects.

As a Senior Project Manager, James uses his communication skills to effectively deliver aviation projects to successful completion. He has been responsible for successful design and construction projects involving civil rehabilitation and electrical infrastructure improvements at 30+ airports across Canada, including countless projects across Canada.

James recently completed a two-year runway rehabilitation project as Project Manager at the Fort McMurray Airport. Taking advantage favorable pricing, James worked with the airport to undertake additional scope, such as Taxiways A through F and Apron I pavement restoration, drainage improvements, SSALR replacement, ODALs to SSALR upgrades, and the construction of a service road from pavement rehabilitation by-products. James' experience also includes design and construction services on several recent pavement rehabilitation projects including Thompson, Smithers, Fort Chipewyan and Kamloops.

James will oversee the Avia NG team to ensure the successful and timely completion of the Project. James will be the Engineer of Record for the project. He will be supported by Jeffrey and other key team members with his extensive background of the Airport.

JEFFREY LO, P.Eng.

Project Manager

Calgary, AB | 12+ Years Experience

Jeffrey Lo is a professional civil engineer with over 10 years of experience. His areas of expertise include airside design, planning and construction, airside rehabilitation, in addition to groundside design. His experience includes extensive work in Alberta, Saskatchewan, Manitoba, Ontario, and British Columbia.

His recent relevant projects have included the Runway Restoration Project in Fort McMurray, which also included the replacement of an existing SSALR, and upgrade of ODALs to SSALR. He was the engineer and inspector responsible for the concrete restoration of Taxiway G in Winnipeg. Most recently, Jeffrey led the Runway Restoration Project at Saskatoon John G. Diefenbaker International Airport.

Jeffrey will be the Project Manager responsible for the civil engineering design and overall delivery of the project. He will coordinate all the design disciplines, manage the construction effort and administer the contract during construction.

BRYAN LISKA, C.E.T., PMP

Design Lead

Calgary, AB | 22+ Years Experience

Bryan has been working in project management and construction inspection of civil aviation construction projects for the past 16 years; many of the projects have been complex, with many inter-dependencies. He was most recently a Project Manager for the Calgary Airport Authority for six years, having joined Avia NG during the pandemic.

Prior to his time at YYC he spent 16+ years inspecting civil construction projects. He is experienced with residential, commercial, subdivision, utilities, roads, highways, rail, aviation and IT. Bryan also has excellent communication skills which help in ensuring the proper messages are delivered and received by personnel in the field. He has a strong safety background, having served on Safety Committees for former employers.

Bryan will support the management and production of the engineering design and tender documents. Bryan will work closely with James and Jeff during the design phase.

NICK HEISZ, P.Eng.

Electrical Engineer

Southampton, ON | 17+ Years Experience

Nick Heisz is an electrical engineer and project manager with over 17 years of experience and is licensed and practicing in provinces across Canada. Nick specializes in electrical infrastructure for Airports while completing other design tasks such as groundside electrical at Airports, street lighting, parking lots, site power distribution and communications infrastructure.

Nick is responsible for electrical design and planning for airfield ground lighting (AGL) systems and is well versed in all aspects of airfield electrical and lighting systems including approach lighting systems, edge lighting systems, PAPIs, inset lighting, field electrical centers, standby power systems, apron flood lighting, ILS power and communications, and site power distribution. Nick has undertaken many major airfield electrical condition assessments, funding applications, TP312 compliance reviews, major airfield electrical rehabilitation designs, inspections and supporting contract administration.

Nick will complete the design including the engineering drawings, technical specifications, and cost estimate and support the project team during construction. Nick will be the Engineer of Record for the electrical scope.

4. SCOPE OF WORK

The Cariboo Regional District is proposing pulverization and resurfacing of all airfield pavements (Runway, Taxiways and Apron) to maintain the integrity of the airfield and ensure continued long-term safety and reliability. The CRD is also proposing upgrading the airfield lighting system to LED, with other improvements proposed as well. We understand that the CRD is seeking a proposal to carry out the engineering design, tendering, contract administration and construction inspection for the project.

An evaluation of the CZML airfield pavement and electrical system was commissioned by the CRD in 2018, where Avia NG completed the preliminary design report. The recommendations in the infrastructure assessment report forms the basis of the pavement design and scope for the Project.

Based on our team's familiarity with the project requirements and condition of the Airport assets, the scope of the project will consist of pulverization of the existing pavements and removal of 100mm of this material to adjust grades adjacent to the paved areas. New granular material will be placed to bring the pavement structure up to the elevation of base of pavement, and new asphalt will be placed on all surfaces. The paint markings will be reapplied. The electrical system upgrades will include removal of the old system and installation of all new LED components including elevated edge lights, runway threshold/end lights, PAPIs, apron floodlighting, illuminated guidance sign and a wind direction indicator as well as replacement of associated constant current regulators and airfield lighting control system. Drainage replacement and major regrading are assumed to not be necessary at this time.

We understand the Airport will be closed for the duration of construction, so expediency in project delivery is key. Avia NG will ensure the project is run on a fast track once construction has begun, in order to minimize the amount of time the Airport is unable to operate.

The proposed scope of work include the following key components:

- **Project Start-up Meeting** via Microsoft Teams to discuss and understand project requirements, confirm scope, tenant access needs, project schedule, etc.
- **Preparation of Detailed Design Drawings** including the following:
  - Title Sheet listing all the drawings for quick reference as well as showing an inset with the work site;
  - Site Plan identifying the construction access, as well as labeling key elements for the work site;
  - Construction Staging showing construction phasing and its associated work zones, construction, construction barriers/fencing, airside access routes and any construction restrictions. Maximum equipment working height restrictions will also be identified.
  - Pavement Plan and Profiles detailing the horizontal alignment and geometry, and new pavement structures for the runway. Pavement Types and New Geometry will also be shown;
  - Pavement Details and Sections showing typical sections to represent the design (including all pavement structure layers and surface structures such as edge lights and storm drainage structures);
  - Pavement Line Markings showing any applicable pavement line marking removals as well as all new markings, including runway and taxiway centreline and edge lines, intersection markings, and any other airside paint markings required;
  - Electrical Layout, Details and Single Line Diagram showing all removals and installation of new electrical components on the airfield.
- **Technical Specifications and Tender Documents** to enable the competitive procurement and clearly define the expectations and requirements for contractors. The Avia NG standard construction document front end will be utilized.
- **Cost Estimates** with each design submission for CRD to utilize for budgeting and cash flow.
- **Tendering Services** including posting of the tender online, a pre-bid meeting held via Microsoft Teams, answering tenderer questions and preparation of Addenda.
- **Tender Review and Recommendation** of Award based on the tenders received by the CRD and forwarded to Avia NG electronically. Tender amounts, unit rate and bidder qualifications will be scrutinized thoroughly as part of our recommendation for award.
- **Preparation of Contract and Issued for Construction Documents** for execution. Documents will be provided electronically.
- **Construction Inspection** with a full-time on site representative to ensure quality construction that is being completed in accordance with the contract.
- **Contract Administration** including the review and recommendation of progress payments, preparation of site instructions, change notices, change orders; and the periodic inspections from senior engineers at key milestones. Construction progress meetings will be held via teleconference on a bi-weekly basis.

- **Project Closeout and Record Drawings** to formally conclude the project, reconcile quantities and contract amounts, and provide the CRD with record data of the construction that occurred.

Refer to Section 6 for assumptions and exclusions.

5. SCHEDULE

We will take a leadership role in managing the project schedule throughout the project. The initial schedule will be reviewed with CRD at the project initiation-off meeting, revised based on comments provided, and resubmitted to form the baseline schedule alongside the project plans. We will track the project schedule and ensure that critical path items (field investigations/critical design decisions/client inputs/construction/etc.) are on schedule. Schedule slip will be identified and reported in a timely manner and recommendations made on a regular basis to mitigate schedule impacts.

For the Project, we propose the following milestone schedule. We are flexible with the schedule and will be pleased to discuss and modify to suit the needs of CRD.

- Award of Contract ..... April, 2023
- Project Start Up Meeting..... Completed
- 90% Design Submission May16, 2023
- *Client Review Period*.....*May 23, 2023*
- Issued for Tender Submission .....May 30, 2023
- *Tender Close (3-week tender period) .....June 22, 2023*
- Tender Award ..... July 6, 2023
- 2023 Construction Period .....August - September, 2023
- Project Closeout.....October 2023
- Warranty Inspection..... July 2024

6. PROFESSIONAL FEES AND ASSUMPTIONS

Based on the identified scope of work, proposed methodology, and estimated schedule, Avia NG is prepared to complete this assignment under the tasks outlined in our fee proposal below. A detailed fee matrix is attached for further breakdown.

Phase	Total (Fixed Fee)
Detailed Design	$94,368.00
Tendering	$19,430.00
Construction/Contract Administration Based on an estimated 8 weeks. Includes all travel and disbursements.	$190,196.00
Post Construction	$30,166.00
Professional Fees Total Plus applicable taxes	**$334,160.00**

Assumptions and Exclusions

Please note that following assumptions that formed part of our calculation. Should any assumptions substantially change, we reserve the right to reassess with collaboration with CRD:

1. Applicable taxes are excluded in all amounts shown.
2. Fees and rates shown are inclusive of all disbursements and expenses, such as photocopying, CAD workstations, regular size printing, long distance phone calls, travel, accommodation and mileage; as applicable to the scope of work as described. Disbursements will not be itemized on invoices.
3. Fixed fees will be invoiced monthly on a percent complete basis.
4. Schedule and construction duration are generally as estimated in this proposal, with an estimated 8 week construction period during the 2023 construction season. Should the construction duration deviate significantly, it may be necessary to reassess fees.
5. Should there be significant changes it may be necessary to reassess fees in collaboration with the CRD.
6. Avia NG's standard insurance policies are included at no additional charge. Should additional or project-specific insurance be required, we will procure policies on a cost + 5% basis.
7. Quality assurance testing programme to be determined with CRD dependant on actual and perceived needs as well as the reputability of the contractor and contractor's quality control testing firm. Quality assurance testing is assumed to not be required at this time. Should it be required, we will retain a local testing firm on a cost + 5% basis.
8. Assumes the CRD will provide locates for airport owned utilities as required.
9. Based on our understanding of the scope and budget, we have assumed that the rehabilitation will consist of asphalt pulverization, gravel works and paving only, with the addition of electrical work.
10. No environmental investigations, assessments nor testing is required at this time.
11. No stakeholder meetings are required. We will provide technical support if needed to assist the CRD with stakeholder engagement.
12. Assumes that all documents and submissions will be provided electronically. The printing of drawings and contracts are not included.
13. The project is assumed to be completed no later than December 31, 2023, with the exception of the warranty inspection in 2024. Should the project be delayed or deferred, we reserve the right to reassess fees.

The budgets and fees proposed are based on Avia NG's understanding or the scope of work and generally applicable engineering effort. If the scope of work changes significantly or differs from that detailed in this proposal, Avia NG reserves the right to negotiate changes to our fee structure and schedule.

7. CLOSING

We believe that our team is the most qualified, capable, and best value consultant for the Cariboo Regional District on the Airport Runway Overlay and Electrical Upgrades Project. Our team is highly familiar with both the Airport and the local market. We understand the complexities of construction in the district and our experience will help to ensure a successful project.

With your approval, we will begin planning and organizing travel. We would be pleased to answer any questions that you may have or provide clarifications as needed.

Thank you again for the opportunity to continue our relationship with Cariboo Regional District.

Sincerely,
Avia NG Inc.

James Gunn, P.Eng.
Senior Project Manager, Principal

CC | Jeffrey Lo, Avia NG
Nick Heisz, Avia NG