Sault Ste. Marie Airport

REQUEST FOR PROPOSALS (RFP) for ENGINEERING CONSULTING SERVICES

Infrastructure Assessment

May 2024

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1.0 INTRODUCTION

1.1. AIRPORT BACKGROUND

The Sault Ste. Marie Airport is located 15 kilometers southwest of the City of Sault Ste. Marie (SSM). The Sault Ste. Marie Airport Development Corporation (SSMADC) is the legal, non-profit entity that took over ownership and control of the Sault Ste. Marie Airport (Airport) from the federal government on March 28, 1998. It is this organization that is undertaking the significant task of ensuring that Sault Ste. Marie and area have a self-sustaining commercially viable airport which operates on a break-even basis and meets the needs of the users of the facility and the flying public.

1.2. OBJECTIVE AND PURPOSE

The objective of the airport facilities infrastructure assessment is to provide a documented record with sufficient information, analysis, and conclusions concerning the condition and rate of deterioration of the airport facilities to identify the capital improvements necessary and provide recommendations for the short-term and long-term planning for the Airport.

The information contained in the report(s) should allow the Airport to:

1. Establish the need for major repairs or replacement.
2. Identify which buildings, assets and hard pavements have greater or lesser maintenance requirements than they are currently receiving.
3. Estimate the remaining useful service life.
4. Estimate the year and costs, inflated to the recommended year of implementation, associated with the necessary improvements. Costs should include ALL costs associated with the project including engineering, insurance, bonding, etc.
5. Identify operating cost savings by completing the recommended improvements.
6. Identify minor maintenance requirements.

The consultant shall also provide information on funding programs through which the Airport may receive assistance for the recommended improvements.

2.0 PROPOSAL INFORMATION

2.1. PROPOSAL SUBMISSION REQUIREMENTS

The Submission shall be enclosed in one (1) sealed package containing three (3) copies of the submission in paper format and one (1) additional electronic copy in Adobe PDF format and submitted to:

Sault Ste. Marie Airport Development Corporation
1-475 Airport Road
Sault Ste. Marie, ON P6A 5K6
Attn: Mr. Terry Bos, President & CEO

The Proposal should be clearly marked as follows:

SAULT STE. MARIE AIRPORT
PROPOSAL FOR ENGINEERING CONSULTING SERVICES
INFRASTRUCTURE ASSESSEMENT

Alternately the submission will be received via email to bost@saultairport.com

The name and address of the Proponent should be clearly marked on the envelope.

The Proposal shall not exceed ten (10) pages in length, including appendices but excluding resumes and corporate brochures.

2.2. RFP ADDENDA

Any addenda issued will supersede and amend the RFP. Amendments or additions made in any manner other than addenda will not be binding upon any party.

In order to ensure that Proponents have sufficient time to prepare submissions, no addendum of substantial amendments or additions to the RFP will be issued within three (3) business days of the Proposal Due Date.

2.3. PROPOSAL SUBMISSION DEADLINE

Proponents must submit a completed Proposal document no later than June 6, 2024 at 2:00 pm (EST).

Submissions received after the above noted time and date may not be considered.

Proposals shall remain irrevocable in the form submitted by the Proponent for a period of 60 days from the Proposal Submission Deadline.

2.4. INQUIRY CONTACT

Any inquiries related to this RFP shall be submitted to:

Mr. Terry Bos
President & CEO
1-475 Airport Road
Sault Ste. Marie, ON P6A 5K6
(705) 779-3031 ext. 205
Email: bost@saultairport.com

2.5. EVALUATION PROCESS

2.5.1. General

The evaluation will be led by the SSMADC. The evaluation will occur as soon as possible after closing date for submissions.

2.5.2. Evaluation of the Proposals

The Proposal will be evaluated for compliance with the Request for Proposal and assessed for conflict of interest. If compliant, the proposal shall be rated according to the criteria set out in this section of the RFP. The Evaluation Committee will assign preliminary scoring of Proponents based on the information provided in the Proposals.

2.5.3. Final Selection

The Airport will advise the selected Proponent and request the Proponent to commence immediately with preparation of a Contract satisfactory to both parties. Should negotiation fail within a reasonable amount of time and with consideration of the Project schedule, the second ranked Proponent will be invited to enter negotiations. This process will be repeated as required to engage a consultant. Notwithstanding all of the above, the Client is under no obligation to enter into a contract with any Proponent.

2.6. EVALUATION CRITERIA

2.6.1. Experience

The proposal shall include a corporate background which details professional expertise and prior work experience related to the proposed undertaking. Special attention will be provided to sub-consultants with expertise in ACAP related projects and the ACAP (Airports Capital Assistance Program) application process for all areas that would be ACAP eligible, namely airfield infrastructure.

2.6.2. Project Team

A list of personnel who will be working on the project shall be included in the proposal. The Curricula Vitae for each individual detailing name, title, professional expertise and related work experience shall be included.

2.6.3. Methodology

(a) Approach

Describe unique aspects, procedures, benefits, special skills and techniques of the Project Team that demonstrate a comprehensive understanding of the requirements of this RFP and its relevancy to the project.

(b) Proposed Schedule and Control Procedure

Bidders should describe the evaluation and reporting schedule. They should also outline the roles and responsibilities of the participants in the schedule and control process. Bidders should present a preliminary schedule of key events and various phases of the project, highlighting concerns, if any, raised by this initial planning. (Maximum 2 pages for this section).

2.6.4. Fee Proposal

Fees shall be an all-inclusive lump sum fixed price. The fees should include a complete breakdown of professional fees, expenses and disbursements, excluding taxes based on the proposed project methodology.

2.7. CONSULTANT AGREEMENT

Upon notice of selection by the Airport, the successful Proponent shall present their standard consultant agreement to the Airport. The Airport shall execute the Agreement with the successful Proponent upon acceptance of the terms and conditions presented within the standard agreement form.

3.0 INFRASTRUCTURE ASSESSMENT

3.1. INFRASTRUCTURE ASSESSMENT PROCEDURES

3.1.1. General

The procedure for conducting infrastructure assessment inspections for purposes of establishing the need and scheduling for capital restoration or replacement shall include the following:

(a) Interviews between the Engineer(s) and the Airport Management Team in order to obtain information on any specific problem areas encountered and what routine or preventative maintenance has been conducted.

(b) An inspection of the actual buildings, assets and hard pavements above-ground. Any underground inspections shall be at the request of the Airport (i.e.: camera work for drainage, inspection of catch basins.)

(c) Specific tests for underground segments of facilities as designated by the Airport.

3.1.2. Airport Infrastructure

The Airport Infrastructure to be assessed under this project shall include the following:

Airside Facilities (preferably by an aviation firm with expertise in ACAP applications)

- Runways
- Taxiways
- Apron
- Airside Lighting System
- Navigation Aids
- Drainage Works
- Fencing

Groundside Facilities

- Airport Access Road / Internal Road System
- Car Parking (including car park systems)
- Street Lighting (including building exterior lighting)

Building and Plant

- Passenger Terminal Building **(including all water piping)**
- Operations/Administration Building **(including all water piping)**
- Maintenance/Equipment Storage Building
- Old Fire Hall
- Field Electrical Centre
- Sand Storage Buildings (old & new)
- Misc. Buildings in Maintenance Compound
- Old Radar Building
- SSMADC owned Hangar Facilities (JD Aero)
- SSMADC T-hangar facilities

Operating Equipment

- Existing inventory
- Equipment Condition Rating

Site Servicing

- Waterworks **(including water tower and water tower piping)**
- Sewage Works
- Telephone
- Solid Waste Disposal
- Natural Gas
- Electrical Power Supply
- Fuel tanks/pumps

Note: old water piping condition is a priority review for this assessment.

3.1.3. Condition Reporting

The condition of each building, asset and pavement that has been inspected shall be reported on the basis of the following major elements:

(a) Quantitative defect ratings of each principal component of a facility.

(b) A quantitative rating of the general overall condition of the complete facility.

(c) An estimate of maintenance requirements (i.e.: repairs, etc.).

(d) An estimate of the remaining service life of the facility for establishing when restoration or replacement is being recommended.

(e) A cost estimate for any repairs, restoration or replacement being recommended in future year dollar terms.

3.1.4. Pavement Facilities Survey Methodology

Prior to the survey, reference to the construction history of the pavements, to pavement maintenance records, and to previous condition surveys is to be conducted. The construction history will provide a basis for subdividing the pavements into separate areas for evaluation. This subdivision should generally be consistent from one condition survey to the next. The construction history will also indicate the year of construction, which will be needed for estimating the year of rehabilitation. The pavement maintenance record may assist in identifying problem areas and their causes. Previous condition survey reports may contain information or remarks that should be followed up in this succeeding survey.

The Engineer conducting the survey should have an Airport employee accompany them during the survey in order to point out problem areas.

Report forms are to be completed at the time of the observation along with any photographs that are required. The major elements that should be considered during the assessment include:

(a) Area Designations

The condition of each runway, taxiway, and apron or of each access road and parking area is to be reported separately.

(b) Information Reporting Items

The items of information to be reported for each area being examined are to include the estimated year in which rehabilitation will be required, estimated costs for the rehabilitation in future Canadian dollars, general condition, and all the defects that were identified in the pavements.

It is also important that the Engineer determines the cause of the defects observed. The Engineer should note whether the defects are localized or general and whether they are load-related or non-load-related. The cause underlying present pavement defects could influence future pavement performance and estimates of remaining service life.

With load-related defects, the Engineer is to attempt to determine whether the overloading relates to the design of the pavement structure or to substandard construction materials. These factors could influence rehabilitation design measures.

(c) Key Plan

The pavement condition survey reports are to be accompanied by an Airport key plan to illustrate the subdivision of the pavement areas that was made by the Engineer for reporting purposes. Areas of major distress are to be indicated.

(d) Written Report

The condition report is to be accompanied by a written report. The report may expand upon the type and extent of defects present, their cause, and implications with respect to future condition, aircraft or vehicular operations, and rehabilitation requirements.

Another subject for discussion in the written report is the surface and sub-surface drainage. It is not necessary to conduct a full-scale drainage survey during a condition survey, but the Engineer should be alert to note any obvious problems that are evident at the time of the survey.

(e) Photographs

Photographs are a valuable and effective means of conveying impressions of pavement conditions, and their inclusion in the pavement condition report is required. Each photograph should be numbered and the location identified on the key plan. Photographs are to be in electronic format with a printed copy attached to the written report.

3.1.5. Sanitary Sewers, Storm Sewers and Sub-Drains Methodology

The inventory of the existing sanitary sewers and storm sewer system should provide the following information:

- sizes and lengths of sewer pipe,
- pipe material,
- age of sewers,
- type of joints and joint material,
- type of perforations (if perforated pipe).

The age of a sewer system may partially suggest its general condition and potential problems.

Examination of the topography of an area should reveal the extent and direction of the surface drainage and the location of low-lying areas and areas where the sewers are close to or cross swampy areas.

An inspection of the sub-drainage system should also be included in the assessment. The identification of sub drains should be based on distance and diameter.

(a) Storm Sewer Inspection

The physical examination of the storm sewers and manholes should be conducted when flows are minimal so that irregularities or damaged conditions can be most easily observed.

For reporting purposes, it may be well to divide the sewer system into smaller subsystems according to the age of the sewer since sewers constructed in different years may present different problems.

Some sewer connections may be located at critical elevations in relation to the discharge of the system. These connections, as well as flood-susceptible connections, should be specifically identified.

Large storm sewers, one (1) meter in diameter and larger, can be inspected internally by an individual walking/crawling through the pipe with a portable lamp. Observations should be made of large cracks (evidence of structural problems), material deterioration, alignment and grade of sewer, abnormal openings or connections, conditions that could result in silting within the pipe, and the amount of material and debris in the pipe.

Smaller sewers should be examined with the aid of a portable light and mirror. The portable light used should be capable of providing a powerful concentrated beam along the barrel of the pipe. With the aid of a mirror and a lamp, or a lamp only, observations should again be made of the condition of the sewer.

During these inspections, a feeling for the general condition of the sewer can usually be obtained. If the light beam can easily be observed from one manhole to the next and there are no obstructions or protrusions, or deposition in the pipe, the sewer can be considered to be in good condition.

Any further requirements for close circuit television camera or photographic means shall be up to the SSMADC.

(b) Subsurface Drainage Inspection

The subsurface drainage system should be inspected when the water table in the area is high.

The drains should first be checked at the outlet and at the catch basins for evidence of flow. If flow is present, the drains should be traced upstream by the observer and several other observations made for any difference of flow. This method should give a preliminary indication of the operation of the drains.

If no water, or surprisingly little flow is observed from the drains, several observation holes should be dug along the route of the drains to determine the location of the water table. The location of the water table should be indicative of the amount of flow in the sub-drain system. Prior approval from the SMS/Operations Manager & Fire Chief shall be received before any observation holes are dug to ascertain if further investigation is warranted.

Where outlets from sub-drains are not connected to a storm sewer system, but discharge directly to a watercourse, the outlets should be above the invert of the drain to allow for discharge.

(c) Information Reporting Items

The items of information to be reported for each area being examined are:

- Manhole or catch basin number,
- Loose frame or cover,
- Missing rungs,
- Corroded rungs,
- Condition of benching,
- Condition of watts,
- Silt,
- Settlement,
- Cracks,
- Odour,
- Surcharging,
- Sludge build-up
- Maintenance required,
- Other information.

In addition to the items listed, the Engineer should include the estimated year in which restoration should be required, estimated costs inflated to the anticipated year the restoration would occur, general condition, and any other defects that were identified in the storm sewers and sub-drains.

Each defect area is to be rated on a scale of 0 to 4 (double rating).

If the observer believes that maintenance is required on a storm sewer section, mention of the condition and type of maintenance required is to be made in the report.

3.1.6. Manholes and Catch Basins Methodology

Manholes and catch basins are to be focused on above ground visual areas only and quickly inspected at the same time as the Airside Pavements (i.e.: runways and taxiways). Only the ones that have been detected by visual inspection need be reported on.

(a) Inspection

Manhole frames are to be checked to ensure they are properly positioned over the manholes and do not create safety hazards.

The manhole benching should be checked for concrete deterioration and grease build-up. Grease or sludge build-up on the benching can be dangerous to personnel.

Catch basins are to be checked for soundness. The basins are to be inspected for cracks, deteriorated concrete or settlement.

Some deterioration of concrete is not serious. Once considerable steel or wire mesh begins to show, or the broken concrete contributes to the build-up of debris in the sump, or the structure becomes too week, corrective action is to be recommended.

(b) Information Reporting Items

The items of information to be reported for each area being examined are:

- Cracking,
- Settlement,
- Surface condition,
- Buckling,
- Corrosion,
- Erosion,
- Silting,
- Size,
- Material,
- Line of grade,
- Ponding,
- Maintenance required,
- Other information.

Along with the items listed, include the estimated year in which restoration will be required, the estimated cost of restoration at that time, the general condition, and several types of defects that commonly occur in manholes and catch basins.

Each defect area is to be rated on a scale of 0 to 4 (double rating).

If the observer believes that maintenance is required, mention of the condition and type of maintenance required is to be made on the reporting form and accompanied by a written report.

3.1.7. Fuel Storage Tanks

(a) General

The methodology outlined below is to be followed in reporting the condition and recommending the restoration of fuel storage and distribution equipment.

(b) Identification and Description

A condition report shall be completed for each fuel storage tank and covering all units of major equipment.

(c) Reporting Condition

Report the general condition, particularly of the shell. Report any condition that the inspector considers to be so severe as to require taking a unit out of service permanently. This might include an advanced state of corrosion, evidence of permanent deformation, cracking, or any combination of these.

Report the general condition of piping and valves and examine for evidence of leaking or of erosion, corrosion, scaling, and deposits. Report the general condition of level controls, fuel supply system, pumps and piping.

(d) Defects

When examining the equipment, it is important to determine the cause of the defects observed, because present defects will likely influence the safety, future performance, and estimates of remaining life.

Each defect area, namely: outer shell, inner shell, lining (insulation), headers, valves and controls, should be rated on a scale of 0 to 4 (double rating) based on the severity and extent of the defects.

(e) Leak Detection

Report any evidence of leaks from buried pipe mains or tanks.

(f) Corrosion Investigation

The corrosion protection system is to be inspected providing the following information:

- The corrosivity of the environment (soil or air),
- The condition of each element of a system including nature and extent of corrosion present,
- Suggested corrective action to prevent further deterioration,

- Projected operating life of the system or element assuming proper corrective action is (or is not) carried.

3.1.8. Field Lighting

Megger and inspect all main power feeds operating the Airside Lighting System and Navigation Aids.

3.1.9. Operating Equipment

Take the inventory of all existing equipment at the Sault Ste. Marie Airport and assign an equipment condition rating to each item. The observer should review available maintenance records in the determination of the condition rating.

3.1.10. Site Services

Site Services including telephone, natural gas, water, electrical power supply, and solid waste disposal shall be inspected and assessed.

3.2. CRITERIA FOR RATING FACILITY DEFECTS AND GENERAL CONDITION

3.2.1. Facility Defects Rating

A quantitative scale from 0 to 4 is to be used to rate the severity and extent of an observed defect as follows:

0 – none
1 – Minor
2 – Moderate
3 – Major
4 – extreme

3.2.2. General Condition Rating

The General Condition Rating for a facility or service is to be based on an overall assessment of all components of the facility. The Engineer is to use his/her experience and knowledge in determining the rating.

The General Condition Rating for all assets is to be rated on a scale of 0-10, where:

0	denotes REPLACE or CLOSED (to the general public)
1-3	denotes POOR condition
4-6	denotes FAIR condition
7-9	denotes GOOD condition
10	denotes NEW or AS-BUILT

3.2.3. Categories of Needs

Needs are divided into 6 categories as follows:

(a) O & M (Operation and Maintenance) / MINOR REPAIRS – a condition of a component that requires regular programmed maintenance. The costs for this maintenance would normally be covered with the O & M budget.

(b) MAJOR REPAIRS – the condition of a component/element which requires major repairs that would *NOT* be covered under normal O & M.

(c) COMPONENT REPLACEMENT/RECONSTRUCTION – the condition of a component/element that requires replacement/reconstruction that would *NOT* be covered under normal O & M.

(d) STUDY – an in-depth review to generate a technical solution to a problem that cannot be readily assessed by an on-site visual inspection.

(e) ASSET REPLACMENT/RECONSTRUCTION – only assets with a General Condition Rating of 3 or less and an Estimated Remaining Life of 10 years or less shall be identified for asset replacement/reconstruction to the original design or capacity. Provide a Class D Estimate for asset replacement/reconstruction.

(f) UPGRADE – needs which improve the effectiveness and/or efficiency of the existing asset and its operation. This does not include growth.

3.2.4. Types of Needs

The intent of identifying the type is to provide justification for the needs. Needs are to be divided into 5 types as follows:

(a) HEALTH AND SAFETY which is classified as any activity required to eliminate “imminent” danger to life and limb. This type of need has one level of urgency – immediate.

Immediate Health & Safety Needs should be rectified as soon as possible and are to be assigned an urgency of year “0” (immediate).

(b) RESTORATION OF UTILITY includes needs required to put the facility or service back into operation to meet the normal service demands.

(c) ARREST DETERIORATION includes any activity required which in itself does not substantially affect the ongoing use of the service or facility but which, if not attended to, will result in continued deterioration and would lead to complete breakdown of the facility.

(d) OPERATIONAL includes an activity which is required to maintain both the appearance and the utility of the service or facility but which is not necessarily critical to its ongoing use.

(e) CONFORM TO CODE is any activity which is required to ensure an asset conforms to current codes.