



**REQUEST FOR PROPOSAL /
DEMANDE DE PROPOSITION**

**RETURN BIDS TO /
RETOURNER LES SOUMISSIONS À:**

Bid Receiving – PWGSC / Réception des
soumissions - TPSGC
11 Laurier St. / 11 rue Laurier
Place du Portage, Phase III
Core 0B2 / Noyau 0B2
Gatineau
Québec
K1A 0S5

Proposal To: National Defence Canada

We hereby offer to sell to Her Majesty the Queen in
right of Canada, in accordance with the terms and
conditions set out herein, referred to herein or
attached hereto, the goods and services listed herein
and on any attached sheets at the price(s) set out
therefore.

Proposition à : Défense nationale Canada

Nous offrons par la présente de vendre à Sa Majesté la
Reine du chef du Canada, aux conditions énoncées ou
incluses par référence dans la présente et aux annexes
ci-jointes, les biens et services énumérés ici et sur
toute feuille ci-annexée, au(x) prix indique(s).

**Solicitation Closes /
L'invitation prend fin:**

At / à : 14:00 EST

On / le : January 31st 2023

Title / Titre: Vibration Table Replacement/ REPLACEMENT DE LA TABLE VIBRANTE		Solicitation No / No de l'invitation: W8472-215850/A AMD 005	
Date of Solicitation / Date de l'invitation: 2022-10-21			
Address Enquiries to – Adresser toutes questions à: Dalton Sicard 101 Colonel by Drive Ottawa ON D Mar P 2 K1A 0K2 dalton.sicard@forces.gc.ca			
Telephone No. / N° de téléphone:		FAX No / No de fax: N/A	
Destination: 9401 Wanklyn St., Lasalle QC H8R 1Z2 Canada			

Instructions:

Municipal taxes are not applicable. Unless otherwise specified herein all prices quoted must include all applicable Canadian customs duties, GST/HST, excise taxes and are to be delivered Delivery Duty Paid including all delivery charges to destination(s) as indicated. The amount of the Goods and Services Tax/Harmonized Sales Tax is to be shown as a separate item.

Instructions:

Les taxes municipales ne s'appliquent pas. Sauf indication contraire, les prix indiqués doivent comprendre les droits de douane canadiens, la TPS/TVH et la taxe d'accise. Les biens doivent être livrés «rendu droits acquittés», tous frais de livraison compris, à la ou aux destinations indiquées. Le montant de la taxe sur les produits et services/taxe de vente

Delivery required / Livraison exigée:	Delivery offered / Livraison proposée:
Vendor Name and Address / Raison sociale et adresse du fournisseur:	
Name and title of person authorized to sign on behalf of vendor (type or print) / Nom et titre de la personne autorisée à signer au nom du fournisseur (caractère d'imprimerie):	
Name / Nom: _____	Title / Titre: _____
Signature: _____	Date: _____

Solicitation No. - N° de l'invitation
W8472-215850/A
Client Ref. No. - N° de réf. du client
W8472-215850/A

Amd. No. - N° de la modif.
003
File No. - N° du dossier
W8472-215850

Buyer ID - Id de l'acheteur
Q08
CCC No./N° CCC - FMS No./N° VME

Request for Proposal (RFP) W8472-215850/A - Vibration Table Replacement

Solicitation Amendment 005 is proposed to extend the solicitation closing date and consolidate all previous amendments.

DELETE

Solicitation Closes – L'invitation prend fin
At – à : 14:00 EST
On - le : December 22nd 2022

INSERT

Solicitation Closes – L'invitation prend fin
At – à : 14:00 EST
On - le : January 31st 2023

Questions:

1. Does the floor have reaction mass in the concrete?

The floor itself doesn't. Seismic mass will be built prior to installation of the shaker once the winning bid will be determined.

2. Are we reusing the current amplifier?

No.

3. Are the trenches drained or cable?

Drain and service water supply piping.

4. Explain the power sources for the Shaker.

NETE facility receives 575V 3P Delta power from the city.

5. Is it 440 or 480 for Delta?

NETE facility receives 575V 3P Delta power from the city.

6. Where is the cooling tower and what are the specs?

The cooling tower is located on the roof and can supply approximately 500 gallons per minute depending on what other equipment is being used at the same time.

7. How did you want to layout the shaker?

Shaker layout must fit into the 7 meters by 10 meters (including the working area around the apparatus).

8. What are the amplifier specs? What is the model number and how old is it?

All of the requirements for the Shaker are driven by the SOW requirements. Old amplifier will not be re- used.

9. What is the overhead crane capacity?

15 Tons

10. Do you have vertical moment restriction?

The current Shaker has the vertical moment restriction of ± 1 inch (2 inches peak-to-peak). The Contractor must propose a solution for the Shaker that is compliant with the SOW paragraph 10.2.2.2.

11. Do you want an embedded pit?

Yes. See SOW 10.3.2

12. For the seismic mass do we want airbag or self leveling?

Request to provide a recommendation for the seismic mass that works with the recommended shaker (if required).

13. Is the old shaker supported?

Yes

14. Do we want all components CSA certified before delivery?

Yes, or an equivalent.

15. Is the 12 month delivery window set in stone?

No. A reasonable extension can be granted.

16. Do we want this within 12 months?

Yes.

17. What if seismic is not done before delivery?

Please provide a lead delivery time on the shaker system so it can be aligned with the creation of the seismic mass.

18. Is every article 10,000lbs, or is that the limit?

This is the limit per payload axis.

19. Do we normally need high G shock levels at 10,000lbs?

Please refer to the SOW requirements as per chapter 10.

20. What is the KVA of the amp?

Currently using 300 kVA.

21. What is the footprint in square meters for the shaker?

7 meters by 10 meters, including the working area around the apparatus.

22. Do you have temp controlled storage for the spares?

We do have a temperature controlled storage for spare parts, however, this would depend on the quantities and sizes of the spares. We also have non-temperature controlled storage for parts that do not need it.

23. Question about preventative maintenance in the SOW:

See SOW CDRL-TRG-01, CDRL-MNT-01, DID-TRG-01, and DID-MNT-01.

24. What is the total footprint size available to place the shaker, reaction mass, and skirt of 1.5m around the edge?

7 meters by 10 meters (including the working area around the apparatus).

25. Sine force expected is 42,000 lbf, is random force also expected to be 42,000 lbf?
Random force is not called out in the tender.

Yes, both the random and sine force expected should be 42,000 lbf.

26. What temperature is the cooling water held and what flow is available to the shaker system?

At least 500 usgpm at 20°C

27. Would you like a separate line item in the quote for engineering hours devoted to the design assistance of the reaction mass?

Yes, but it will not be a part of the evaluation process under this bid.

28. Can the ground survey be shared after bid completion to assist with engineering design of the reaction mass?

Yes, the report can be shared with the winning bidder for the assistance with the seismic mass design.

29. Do you require the same overturning moment used on the current shaker, or does that need to increase proportional to the shaker power increasing?

Please propose a system compliant with the SOW requirements.

30. Will we need to include the cost of millwrights for shaker movement into final location?

Yes

31. NETE wanted to explore having the shaker 'sunk in' so the slip table is more on the level.

Seismic mass (if not included together with the shaker) should be positioned in the embedded pit. The shaker itself can remain on the floor level.

The desire is to have the shaker as low as possible while still being able to conduct regular maintenance and operation from the ground level. See SOW 10.2.1.3.

32. NETE also wanted the amplifiers underneath in the RM pit.

The amplifiers can be placed outside of the embedded pit but they must reside besides the area where the operators are sitting. Everything needs to fit into the identified footprint (7 meters by 10 meters (including the working area around the apparatus)).

33. Do you have a survey of the ground?

Yes.

34. Is the Bid in CAD?

Please see 4.1.2 Financial Evaluation. Bids not in CAD can be converted for the evaluation.

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003
File No. - N° du dossier
W8472-215850

Buyer ID - Id de l'acheteur
Q08
CCC No./N° CCC - FMS No./N° VME

35. Is the bid in Hard Copy:

Please see PART 3 - BID PREPARATION INSTRUCTIONS

36. As per clause 6.2 of the subject solicitation it seems this purchase is subject to Controlled Goods. Could you please advise if it is possible to remove Controlled Goods Requirements from this solicitation?

The controlled goods clause only applies if the bidder chooses to supply controlled goods.

37. Regarding 10.2.1.1 Payload Weight (min): 4,536 kg (10,000 lbs) total, for all axis tests. The question comes from the (min) identified in total weight and the 10,000 lbs. total. Should this be (max)? Does this mass include the Head Expander? (Vertically)

The Shaker should be able to successfully vibrate no less than 10,000 lbs using head expander and the slip table each (i.e. 10,000 lbs via slip table and 10,000 lbs via head expander).

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PART 1 - GENERAL INFORMATION

1.1 Introduction

The bid solicitation is divided into seven parts plus attachments and annexes, as follows:

- Part 1 General Information: provides a general description of the requirement;
- Part 2 Bidder Instructions: provides the instructions, clauses and conditions applicable to the bid solicitation;
- Part 3 Bid Preparation Instructions: provides Bidders with instructions on how to prepare their bid;
- Part 4 Evaluation Procedures and Basis of Selection: indicates how the evaluation will be conducted, the evaluation criteria that must be addressed in the bid, and the basis of selection;
- Part 5 Certifications and Additional Information: includes the certifications and additional information to be provided;
- Part 6 Security, Financial and Other Requirements: includes specific requirements that must be addressed by Bidders; and
- Part 7 Resulting Contract Clauses: includes the clauses and conditions that will apply to any resulting contract.

The Annexes include the Statement of Work, the Basis of Payment, the Security Requirements Checklist, the Electronic Payment Instruments, the Federal Contractors Program for Employment Equity - Certification, mandatory evaluation criteria, design change/deviation form DND 672 and DND 626 task authorization Form.

1.2 Summary

- 1.2.1** The Department of National Defence (DND) has a requirement to purchase an electrodynamic Shaker system, delivered to and installed at the Naval Engineering Test Establishment (NETE), LaSalle QC, in replacement of the existing obsolete system.

In addition to the Shaker system there is a requirement for a spare parts list, a Technical Data Package (TDP) to be used by NETE to support maintenance and necessary training and training materials. An option for an additional warranty will also be included.

- 1.2.2** There are security requirements associated with this requirement. For additional information, consult Part 6 - Security, Financial and Other Requirements, and Part 7 - Resulting Contract Clauses. For more information on personnel and organization security screening or security clauses, Bidders should refer to the [Contract Security Program](http://www.tpsgc-pwgsc.gc.ca/esc-src/introduction-eng.html) of Public Works and Government Services Canada (<http://www.tpsgc-pwgsc.gc.ca/esc-src/introduction-eng.html>) website.
- 1.2.3** This procurement is subject to the Controlled Goods Program. The [Defence Production Act](#) defines Canadian Controlled Goods as certain goods listed in Canada's Export Control List, a regulation made pursuant to the Export and Import Permits Act (EIPA)."

- 1.2.4** There is an optional site visit associated with this requirement where personnel security screening is required prior to gaining access to secure information, assets or sites. Consult Part 2 – Bidder Instructions.”
- 1.2.5** The Federal Contractors Program (FCP) for employment equity applies to this procurement; refer to Part 5 – Certifications and Additional Information, Part 7 - Resulting Contract Clauses and the annex titled Federal Contractors Program for Employment Equity - Certification.”
- 1.2.6** The requirement is subject to the provisions of the following trade agreements: CETA, WTO-AGT, CPTPP, CCFTA, Canada - Colombia Free Trade Agreement, Canada - Honduras Free Trade Agreement, Canada - Korea Free Trade Agreement, CPFTA, CUFTA, CFTA.

1.3 Debriefings

Bidders may request a debriefing on the results of the bid solicitation process. Bidders should make the request to the Contracting Authority within 15 working days from receipt of the results of the bid solicitation process. The debriefing may be in writing, by telephone or in person.

PART 2 - BIDDER INSTRUCTIONS

2.1 Standard Instructions, Clauses and Conditions

All instructions, clauses and conditions identified in the bid solicitation by number, date and title are set out in the [Standard Acquisition Clauses and Conditions Manual](https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual) (https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual) issued by Public Works and Government Services Canada.

Bidders who submit a bid agree to be bound by the instructions, clauses and conditions of the bid solicitation and accept the clauses and conditions of the resulting contract.

The [2003](#) 2022-03-29 Standard Instructions - Goods or Services - Competitive Requirements, are incorporated by reference into and form part of the bid solicitation.

2.1.1 SACC Manual Clauses

B1000T (2014-06-26), Condition of Material – Bid

2.2 Submission of Bids

Bids must be submitted only to the Public Works and Government Services Canada (PWGSC) Bid Receiving Unit specified below by the date and time indicated on page 1 of the bid solicitation:

Bid Receiving – PWGSC / Réception des
soumissions - TPSGC
11 Laurier St. / 11 rue Laurier
Place du Portage, Phase III
Core 0B2 / Noyau 0B2
Gatineau
Québec
K1A 0S5

Facsimile number: 819-997-9776

2.3 Enquiries - Bid Solicitation

All enquiries must be submitted in writing to the Contracting Authority no later than 7 calendar days before the bid closing date. Enquiries received after that time may not be answered.

Bidders should reference as accurately as possible the numbered item of the bid solicitation to which the enquiry relates. Care should be taken by Bidders to explain each question in sufficient detail in order to enable Canada to provide an accurate answer. Technical enquiries that are of a proprietary nature must be clearly marked "proprietary" at each relevant item. Items identified as "proprietary" will be treated as such except where Canada determines that the enquiry is not of a proprietary nature. Canada may edit the question(s) or may request that the Bidder do so, so that the proprietary nature of the question(s) is eliminated and the enquiry can be answered to all Bidders. Enquiries not submitted in a form that can be distributed to all Bidders may not be answered by Canada.

2.4 Applicable Laws

Any resulting contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in Ontario.

Bidders may, at their discretion, substitute the applicable laws of a Canadian province or territory of their choice without affecting the validity of their bid, by deleting the name of the Canadian province or territory specified and inserting the name of the Canadian province or territory of their choice. If no change is made, it acknowledges that the applicable laws specified are acceptable to the Bidders.

2.5 Improvement of Requirement During Solicitation Period

Should bidders consider that the specifications or Statement of Work contained in the bid solicitation could be improved technically or technologically, bidders are invited to make suggestions, in writing, to the Contracting Authority named in the bid solicitation. Bidders must clearly outline the suggested improvement as well as the reason for the suggestion. Suggestions that do not restrict the level of competition nor favour a particular bidder will be given consideration provided they are submitted to the Contracting Authority at least 14 days before the bid closing date. Canada will have the right to accept or reject any or all suggestions.

2.6 Optional Site Visit

It is recommended that the Bidder or a representative of the Bidder visit the work site. Arrangements have been made for the site visit to be held 9401 Rue Wanklyn, LaSalle, QC, H8R 1Z2 on November 10th. The site visit will begin at 10:00, in TBD (insert location/room number).

Personnel security screening is required prior to gaining authorized access to the secure sites. The Bidder's Company Security Officer (CSO) must ensure that their representative(s) hold a valid security clearance at the required level for the site visit. Failure to comply with the security requirements will result in the representative(s) being denied access to the site.

Bidders must communicate with the Contracting Authority no later than November 2nd to confirm attendance and provide the name(s) of the person(s) holding a valid security clearance at the required level, who will attend. Bidders who do not confirm attendance and who do not provide the name(s) of the person(s) who will attend as required will not be allowed access to the site.

Bidders will be requested to sign an attendance sheet. No alternative appointment will be given to bidders

who do not attend or do not send a representative. Bidders who do not participate in the visit will not be precluded from submitting a bid. Any clarifications or changes to the bid solicitation resulting from the site visit will be included as an amendment to the bid solicitation

2.7 Bid Challenge and Recourse Mechanisms

- (a) Several mechanisms are available to potential suppliers to challenge aspects of the procurement process up to and including contract award.
- (b) Canada encourages suppliers to first bring their concerns to the attention of the Contracting Authority. Canada's [Buy and Sell](#) website, under the heading "[Bid Challenge and Recourse Mechanisms](#)" contains information on potential complaint bodies such as:
- Office of the Procurement Ombudsman (OPO)
 - Canadian International Trade Tribunal (CITT)
- (c) Suppliers should note that there are **strict deadlines** for filing complaints, and the time periods vary depending on the complaint body in question. Suppliers should therefore act quickly when they want to challenge any aspect of the procurement process.

2.8 Technical Data

Contact:

Department of National Defence
National Defence Headquarters
MGen George R Pearkes
101 Colonel By Drive
Ottawa, Ontario
K1A 0K2
ATTN: DMar P 2-3-5
Email: Dalton.sicard@forces.gc.ca

In order to receive Technical Data Packages against this solicitation, bidders must provide the following details with their request:

- Company Name
- Complete mailing & physical address (P.O. Box numbers not acceptable)
- Area code and telephone number
- Contact name
- E-mail address
- Solicitation Number & Closing Date

It is imperative that the request be done as soon as possible to ensure timely receipt. Notwithstanding Canada must not be held responsible for untimely release of the technical data.

PART 3 - BID PREPARATION INSTRUCTIONS

3.1 Bid Preparation Instructions

Canada requests that bidders provide their bid in separately bound sections as follows:

Section I: Technical Bid (3 hard copies)
Section II: Financial Bid (1 hard copy)
Section III: Certifications (1 hard copy)
Section IV: Additional Information (1 hard copy)

Prices must appear in the financial bid only. No prices must be indicated in any other section of the bid.

Due to the nature of the bid solicitation, bids transmitted by CPC Connect service will not be accepted.

Canada requests that bidders follow the format instructions described below in the preparation of hard copy of their bid:

- (a) use 8.5 x 11 inch (216 mm x 279 mm) paper.
- (b) use a numbering system that corresponds to the bid solicitation.

In April 2006, Canada issued a policy directing federal departments and agencies to take the necessary steps to incorporate environmental considerations into the procurement process [Policy on Green Procurement](https://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=32573) (https://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=32573). To assist Canada in reaching its objectives, bidders should:

- 1) Include all environmental certification(s) relevant to your organization (e.g., ISO 14001, Leadership in Energy and Environmental Design (LEED), Carbon Disclosure Project, etc.)
- 2) Include all environmental certification(s) or Environmental Product Declaration(s) (EPD) specific to your product/service (e.g., Forest Stewardship Council (FSC), ENERGYSTAR, etc.)
- 3) Unless otherwise noted, bidders are encouraged to submit bids electronically. If hard copies are required, bidders should:
 - a. use 8.5 x 11 inch (216 mm x 279 mm) paper containing fibre certified as originating from a sustainably managed forest and containing minimum 30% recycled content; and
 - b. use an environmentally preferable format including black and white printing instead of colour printing, printing double sided/duplex, using staples or clips instead of Cerlox, duo tangs or binders.

Section I: Technical Bid

In their technical bid, Bidders should demonstrate their understanding of the requirements contained in the bid solicitation and explain how they will meet these requirements. Bidders should demonstrate their capability in a thorough, concise and clear manner for carrying out the work.

The technical bid should address clearly and in sufficient depth the points that are subject to the evaluation criteria against which the bid will be evaluated. Simply repeating the statement contained in the bid solicitation is not sufficient. In order to facilitate the evaluation of the bid, Canada requests that Bidders address and present topics in the order of the evaluation criteria under the same headings. To avoid duplication, Bidders may refer to different sections of their bids by identifying the specific paragraph and page number where the subject topic has already been addressed.

Bidders must complete and demonstrate their compliance with all the sections of Annex "F" Mandatory Evaluation Criteria by providing substantial information describing completely and in detail how the requirement is met or addressed.

Section II: Financial Bid

Bidders must submit their financial bid in accordance with Basis of Payment in Annex "B". The total amount of Applicable Taxes must be shown separately.



3.1.1 Electronic Payment of Invoices – Bid

If you are willing to accept payment of invoices by Electronic Payment Instruments, complete Annex "D" Electronic Payment Instruments, to identify which ones are accepted.

If Annex "D" Electronic Payment Instruments is not completed, it will be considered as if Electronic Payment Instruments are not being accepted for payment of invoices.

Acceptance of Electronic Payment Instruments will not be considered as an evaluation criterion.

3.1.2 Exchange Rate Fluctuation

1. The Bidder may request Canada to assume the risks and benefits of exchange rate fluctuations. If the Bidder claims for an exchange rate adjustment, this request must be clearly indicated in the bid at time of bidding. The Bidder must submit form PWGSC-TPSGC 450 , Claim for Exchange Rate Adjustments with its bid, indicating the Foreign Currency Component (FCC) in Canadian dollars for each line item for which an exchange rate adjustment is required.
2. The FCC is defined as the portion of the price or rate that will be directly affected by exchange rate fluctuations. The FCC should include all related taxes, duties and other costs paid by the Bidder and which are to be included in the adjustment amount.
3. The total price paid by Canada on each invoice will be adjusted at the time of payment, based on the FCC and the exchange rate fluctuation provision in the contract. The exchange rate adjustment will only be applied where the exchange rate fluctuation is greater than 2% (increase or decrease).
4. At time of bidding, the Bidder must complete columns (1) to (4) on form PWGSC-TPSGC 450 , for each line item where they want to invoke the exchange rate fluctuation provision. Where bids are evaluated in Canadian dollars, the dollar values provided in column (3) should also be in Canadian dollars, so that the adjustment amount is in the same currency as the payment.
5. Alternate rates or calculations proposed by the Bidder will not be accepted for the purposes of this exchange rate fluctuation provision.

3.1.3 SACC Manual Clauses

Section III: Certifications

Bidders must submit the certifications and additional information required under Part 5.

Section IV: Additional Information

Bidders must provide the required certifications and additional information to be awarded a contract.

The certifications provided by Bidders to Canada are subject to verification by Canada at all times. Unless specified otherwise, Canada will declare a bid non-responsive, or will declare a contractor in default if any certification made by the Bidder is found to be untrue, whether made knowingly or unknowingly, during the bid evaluation period or during the contract period.

The Contracting Authority will have the right to ask for additional information to verify the Bidder's certifications. Failure to comply and to cooperate with any request or requirement imposed by the Contracting Authority will render the bid non-responsive or constitute a default under the Contract.

The only Security Requirement for this contract is that personnel working on this procurement require, as a minimum, a **RELIABILITY STATUS** before access to a secure site is granted.

PART 4 - EVALUATION PROCEDURES AND BASIS OF SELECTION

4.1 Evaluation Procedures

(a) Bids will be assessed in accordance with the entire requirement of the bid solicitation including the "technical", "financial" and all other applicable mandatory evaluation criteria.

(b) An evaluation team composed of representatives of Canada and Weir Canada, Inc. will evaluate the bids

4.1.1 Technical Evaluation

4.1.1.1. Mandatory Technical Criteria

In order to be compliant, Bidder's proposal must, to the satisfaction of Canada, meet all requirements and provide all information as requested in PART 3 - BID PREPARATION INSTRUCTIONS, 3.1 Section I - Technical Bid.

4.1.2 Financial Evaluation

The price of the bid will be evaluated in Canadian dollars, Applicable Taxes excluded, FOB destination, Canadian customs duties and excise taxes included.

The requested optional warranty period will be included in the Basis of Payment, however it will not form part of the bid evaluation.

4.1.2.1 Mandatory Financial Criteria

In order to be compliant, Bidder's proposal must, to the satisfaction of Canada, meet all requirements and provide all information as requested in PART 3 - BID PREPARATION INSTRUCTIONS, 3.1 Section II – Financial Bid.

4.2 Basis of Selection

4.2.1 Mandatory Technical Criteria

A bid must comply with the requirements of the bid solicitation and meet all mandatory technical and financial evaluation criteria to be declared responsive. The responsive bid with the lowest evaluated price will be recommended for award of a contract

A mandatory requirement is described using the words "shall", "must", "will", "is required" or "is mandatory".

PART 5 – CERTIFICATIONS AND ADDITIONAL INFORMATION

Bidders must provide the required certifications and additional information to be awarded a contract.

The certifications provided by Bidders to Canada are subject to verification by Canada at all times. Unless specified otherwise, Canada will declare a bid non-responsive, or will declare a contractor in default if any certification made by the Bidder is found to be untrue, whether made knowingly or unknowingly, during the bid evaluation period or during the contract period.

The Contracting Authority will have the right to ask for additional information to verify the Bidder's certifications. Failure to comply and to cooperate with any request or requirement imposed by the Contracting Authority will render the bid non-responsive or constitute a default under the Contract.

5.1 Certifications Required with the Bid

Bidders must submit the following duly completed certifications as part of their bid.

5.1.1 Integrity Provisions - Declaration of Convicted Offences

In accordance with the Integrity Provisions of the Standard Instructions, all bidders must provide with their bid, **if applicable**, the Integrity declaration form available on the [Forms for the Integrity Regime](http://www.tpsgc-pwgsc.gc.ca/ci-if/declaration-eng.html) website (<http://www.tpsgc-pwgsc.gc.ca/ci-if/declaration-eng.html>), to be given further consideration in the procurement process.

5.1.2 Additional Certifications Required with the Bid

5.2 Certifications Precedent to Contract Award and Additional Information

The certifications and additional information listed below should be submitted with the bid but may be submitted afterwards. If any of these required certifications or additional information is not completed and submitted as requested, the Contracting Authority will inform the Bidder of a time frame within which to provide the information. Failure to provide the certifications or the additional information listed below within the time frame specified will render the bid non-responsive.

5.2.1 Integrity Provisions – Required Documentation

In accordance with the section titled Information to be provided when bidding, contracting or entering into a real property agreement of the [Ineligibility and Suspension Policy](http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html) (<http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html>), the Bidder must provide the required documentation, as applicable, to be given further consideration in the procurement process.

5.2.2 Federal Contractors Program for Employment Equity - Bid Certification

By submitting a bid, the Bidder certifies that the Bidder, and any of the Bidder's members if the Bidder is a Joint Venture, is not named on the Federal Contractors Program (FCP) for employment equity "FCP Limited Eligibility to Bid" list available at the bottom of the page of the [Employment and Social Development Canada \(ESDC\) - Labour's](https://www.canada.ca/en/employment-social-development/programs/employment-equity/federal-contractor-program.html#) website (<https://www.canada.ca/en/employment-social-development/programs/employment-equity/federal-contractor-program.html#>).

Canada will have the right to declare a bid non-responsive if the Bidder, or any member of the Bidder if the Bidder is a Joint Venture, appears on the "FCP Limited Eligibility to Bid list at the time of contract award.

Canada will also have the right to terminate the Contract for default if a Contractor, or any member of the Contractor if the Contractor is a Joint Venture, appears on the ["FCP Limited Eligibility to Bid"](#) list during the period of the Contract.

The Bidder must provide the Contracting Authority with a completed annex titled Federal Contractors Program for Employment Equity - Certification, before contract award. If the Bidder is a Joint Venture, the Bidder must provide the Contracting Authority with a completed annex Federal Contractors Program for Employment Equity - Certification, for each member of the Joint Venture.

5.2.3 Security Requirements – Required Documentation

In accordance with the [requirements of the Contract Security Program](http://www.tpsgc-pwgsc.gc.ca/esc-src/introduction-eng.html) of Public Works and Government Services Canada (<http://www.tpsgc-pwgsc.gc.ca/esc-src/introduction-eng.html>), the Bidder must provide a completed Contract Security Program Application for Registration (AFR) form to be given further consideration in the procurement process.

Bidders are reminded to obtain the required security clearance and, as applicable, security capabilities promptly. As indicated above, bidders who do not provide all the required information at bid closing will be given the opportunity to complete any missing information from the AFR form within a period set by the Contracting Authority. If that information is not provided within the timeframe established by the Contracting Authority (including any extension granted by the Contracting Authority in its discretion), or if Canada requires further information from the Bidder in connection with assessing the request for security clearance (i.e., information not required by the AFR form), the Bidder will be required to submit that information within the time period established by the Contracting Authority, which will not be less than 48 hours. If, at any time, the Bidder fails to provide the required information within the timeframe established by the Contracting Authority, its bid will be declared non-compliant.

5.2.3.1 Status and Availability of Resources

The Bidder certifies that, should it be awarded a contract as a result of the bid solicitation, every individual proposed in its bid will be available to perform the Work as required by Canada's representatives and at the time specified in the bid solicitation or agreed to with Canada's representatives. If for reasons beyond its control, the Bidder is unable to provide the services of an individual named in its bid, the Bidder may propose a substitute with similar qualifications and experience. The Bidder must advise the Contracting Authority of the reason for the substitution and provide the name, qualifications and experience of the proposed replacement. For the purposes of this clause, only the following reasons will be considered as beyond the control of the Bidder: death, sickness, maternity and parental leave, retirement, resignation, dismissal for cause or termination of an agreement for default.

If the Bidder has proposed any individual who is not an employee of the Bidder, the Bidder certifies that it has the permission from that individual to propose his/her services in relation to the Work to be performed and to submit his/her résumé to Canada. The Bidder must, upon request from the Contracting Authority, provide a written confirmation, signed by the individual, of the permission given to the Bidder and of his/her availability. Failure to comply with the request may result in the bid being declared non-responsive

PART 6 - SECURITY, FINANCIAL AND OTHER REQUIREMENTS

6.1 Security Requirements

1. Before award of a contract, the following conditions must be met:
 - (a) the Bidder must hold a valid organization security clearance as indicated in Part 7 - Resulting Contract Clauses;
2. Before access to sensitive information is provided to the Bidder, the following conditions must be met:

- (a) the Bidder's proposed individuals requiring access to sensitive information, assets or sensitive work sites must meet the security requirements as indicated in Part 7 - Resulting Contract Clauses.
 - (b) the Bidder's security capabilities must be met as indicated in Part 7 - Resulting Contract Clauses;
3. For additional information on security requirements, Bidders should refer to the [Contract Security Program](http://www.tpsgc-pwgsc.gc.ca/esc-src/introduction-eng.html) of Public Works and Government Services Canada (<http://www.tpsgc-pwgsc.gc.ca/esc-src/introduction-eng.html>) website.

6.2 Controlled Goods Requirement.

SACC Manual clause [A9130T](#) 2019-11-28 Controlled Goods Program

PART 7 - RESULTING CONTRACT CLAUSES

The following clauses and conditions apply to and form part of any contract resulting from the bid solicitation.

7.1 Statement of Work

The Contractor must perform the work in accordance with the Statement of Work at Annex "A".

7.1.1 Optional Goods and/or Services

The Contractor grants to Canada the irrevocable option to acquire the goods, services or both described at Annex B Basis of Payment and the required "Recommended Spare Parts List" of the Contract under the same conditions and at the prices and/or rates stated in the Contract. The option may only be exercised by the Contracting Authority and will be evidenced, for administrative purposes only, through a contract amendment.

The Contracting Authority may exercise the option at any time before the expiry of the Contract by sending a written notice to the Contractor.

7.1.2 Task Authorization

The Work or a portion of the Work to be performed under the Contract will be on an "as and when requested basis" using a Task Authorization (TA). The Work described in the TA must be in accordance with the scope of the Contract.

7.1.2.1 Task Authorization Process

1. The Technical Authority will provide the Contractor with a description of the task using the "Task Authorization Form for non-DND clients" or "DND 626, Task Authorization Form" or "Task Authorization" form specified in Annex H.
2. The Task Authorization (TA) will contain the details of the activities to be performed, a description of the deliverables, and a schedule indicating completion dates for the major activities or submission dates for the deliverables. The TA will also include the applicable basis(bases) and methods of payment as specified in the Contract.
3. The Contractor must provide the Technical Authority, within 14 calendar days of its receipt, the proposed total estimated cost for performing the task and a breakdown of that cost, established in accordance with the Basis of Payment specified in the Contract.

-
4. The Contractor must not commence work until a TA authorized by the Contracting Authority has been received by the Contractor. The Contractor acknowledges that any work performed before a TA has been received will be done at the Contractor's own risk.

7.1.2.2 Task Authorization Limit

The Contracting Authority may authorize individual task authorizations up to a limit of \$TBD, Applicable Taxes included, inclusive of any revisions.

Any task authorization to be issued in excess of that limit must be authorized by the Contracting Authority before issuance.

7.1.2.3 Canada's Obligation - Portion of the Work - Task Authorization

Canada's obligation with respect to the portion of the Work under the Contract that is performed through task authorizations is limited to the total amount of the actual tasks performed by the Contractor.

7.1.2.4 Task Authorization - Department of National Defence

The administration of the Task Authorization process will be carried out by the Contracting Authority. This process includes monitoring, controlling and reporting on expenditures of the contract with task authorizations to the Contracting Authority.

7.2 Standard Clauses and Conditions

All clauses and conditions identified in the Contract by number, date and title are set out in the [Standard Acquisition Clauses and Conditions Manual](https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual) (https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual) issued by Public Works and Government Services Canada.

7.2.1 General Conditions

[2030](#) (2022-05-12_General Conditions - Higher Complexity - Goods, apply to and form part of the Contract.

7.2.2 Supplemental General Conditions

4001 (2015-04-01) Hardware Purchase, Lease and Maintenance, apply to and form part of the Contract.
4013 – Compliance with on-site measures, standing orders, policies, and rules (2021-11-29)
4006 – Contractor to Own Intellectual Property Rights in Foreground Information 2010-08-16

7.3 Security Requirements

7.3.1 The following security requirements (SRCL and related clauses provided by the Contract Security Program) apply and form part of the Contract:

1. The Contractor/Offeror must, at all times during the performance of the Contract/Standing Offer, hold a valid Designated Organization Screening (DOS), issued by the Contract Security Program (CSP), Public Works and Government Services Canada (PWGSC).

2. The Contractor/Offeror personnel requiring access to sensitive site(s) must EACH hold a valid RELIABILITY STATUS, granted or approved by the CSP, PWGSC.
3. Subcontracts which contain security requirements are NOT to be awarded without the prior written permission of the CSP, PWGSC.
4. The Contractor/Offeror must comply with the provisions of the:
 - a) Security Requirements Check List and security guide (if applicable), attached at Annex C;
 - b) *Contract Security Manual* (Latest Edition).

7.4 Term of Contract

7.4.1 Period of the Contract

The period of the Contract is from Contract Award date to the end of the warranty period inclusive.

7.4.2 Delivery Date

All the deliverables must be received on or before 12 months after contract award.

7.4.3 Delivery Points

Delivery of the requirement will be made to Naval Engineering Test Establishment (NETE), LaSalle QC.

7.5 Authorities

7.5.1 Contracting Authority

The Contracting Authority for the Contract is:

Name: Dalton Sicard
Title: D Mar P 2-3-5
Department of National Defence
Directorate: D Mar P 2
Address:
101 Colonel by Drive
Ottawa ON
K1A 0K2
Telephone:
E-mail address: dalton.sicard@forces.gc.ca

The Contracting Authority is responsible for the management of the Contract and any changes to the Contract must be authorized in writing by the Contracting Authority. The Contractor must not perform work in excess of or outside the scope of the Contract based on verbal or written requests or instructions from anybody other than the Contracting Authority.

7.5.2 Technical Authority

The Technical Authority for the Contract is:

Name:

Title:
Organization:
Address:

The Technical Authority named above is the representative of the department or agency for whom the Work is being carried out under the Contract and is responsible for all matters concerning the technical content of the Work under the Contract. Technical matters may be discussed with the Technical Authority, however the Technical Authority has no authority to authorize changes to the scope of the Work. Changes to the scope of the Work can only be made through a contract amendment issued by the Contracting Authority.

7.5.3 Contractor's Representative

Contractor's Project Manager to be inserted at contract award

Name: _____
Telephone: ___ - ___ - _____

7.6 Payment

7.6.1 Basis of Payment

In consideration of the Contractor satisfactorily completing all of its obligations under the Contract, the Contractor will be paid a firm price as specified in in Annex B for a cost of \$ __TBD__ Customs duties are included and Applicable Taxes are extra.

Canada will not pay the Contractor for any design changes, modifications or interpretations of the Work, unless they have been approved, in writing, by the Contracting Authority before their incorporation into the Work

7.6.2 Milestone Payments

For Annex B basis of payment Item 1, and should the option be exercised, Annex B basis of payment item 2:

Canada will make milestone payments in accordance with the Schedule of Milestones detailed in the Contract and the payment provisions of the Contract if:

(a) an accurate and complete claim for payment using PWGSC-TPSGC 1111, Claim for Progress Payment, and any other document required by the Contract have been submitted in accordance with the invoicing instructions provided in the Contract;

(b) all the certificates appearing on form PWGSC-TPSGC 1111 have been signed by the respective authorized representatives;

(c) all work associated with the milestone and as applicable any deliverable required has been completed and accepted by Canada.

7.6.3 Multiple Payments

For the Recommended Spare Parts Price List, should the option be exercised,

Canada will pay the Contractor upon completion and delivery of units in accordance with the payment provisions of the Contract if:

an accurate and complete invoice and any other documents required by the Contract have been submitted in accordance with the invoicing instructions provided in the Contract;

all such documents have been verified by Canada;

the Work delivered has been accepted by Canada.

7.6.4 Payment for Fuels, Oils and Lubricants

The Contractor is responsible for the supply and cost of all fuel, lubricating oil, hydraulic oil and other lubricants sufficient for fully charging all systems as required for operating the machinery and other equipment and for performing all tests and trials.

7.6.5 Method of Payment for Task Authorizations

Method of payments will be stipulated on each individual Task Authorisation (DND626) issued for emergent work. Each Method of Payment will be dependent on the nature of the work if the scope is known or unknown and may include:

7.6.5.1 Milestone Payments:

a) Canada will make milestone payments in accordance with a Schedule of Milestones detailed in the applicable Task Authorization, up to ninety percent (90%) of the amount claimed and approved by Canada if:

i. An accurate and complete claim for payment using form PWGSC-TPSGC 1111, Claim for Progress Payment, and any other document required by the Task Authorization have been submitted in accordance with the invoicing instructions provided in the Contract;

ii. The total amount for all milestone payments paid by Canada does not exceed the total amount to be paid under the Task Authorization less any holdback provided for in the Task Authorization;

iii. All the certificates appearing on form PWGSC-TPSGC 1111 have been signed by the respective authorized representatives; and

iv. All work associated with the milestone and as applicable any deliverables required have been completed and accepted by Canada.

b) The balance of the amount payable will be paid in accordance with the payment provisions of the Contract upon completion and delivery of the work required under the Task Authorization if the Work has been accepted by Canada and a final claim for the payment is submitted.

7.6.5.2 Progress Payments:

1. Canada will make progress payments in accordance with the payment provisions of the Contract, no more than once a month, for cost incurred in the performance of the Work, up to _____ percent of the amount claimed and approved by Canada if:

a. an accurate and complete claim for payment using form PWGSC-TPSGC 1111, Claim for Progress Payment, and any other document required by the Contract have been submitted in accordance with the invoicing instructions provided in the Contract;

b. the amount claimed is in accordance with the basis of payment;

c. the total amount for all progress payments paid by Canada does not exceed _____ percent of the total amount to be paid under the Contract;

d. all certificates appearing on form PWGSC-TPSGC 1111 have been signed by the respective authorized representatives.

2. The balance of the amount payable will be paid in accordance with the payment provisions of the Contract upon completion and delivery of all work required under the Contract if the Work has been accepted by Canada and a final claim for the payment is submitted

3. Progress payments are interim payments only. Canada may conduct a government audit and interim time and cost verifications and reserves the rights to make adjustments to the Contract from time to

time during the performance of the Work. Any overpayment resulting from progress payments or otherwise must be refunded promptly to Canada.

7.6.5.3 Payment Upon Completion

One lump sum payment shall be made following delivery and acceptance of the work if this method of payment is specified in the Task Authorization. Canada will pay the Contractor upon completion and delivery of the Work in accordance with the payment provisions of the Contract if:

- a) an accurate and complete invoice and any other documents required by the Contract have been submitted in accordance with the invoicing instructions provided in the Contract;
- b) all such documents have been verified by Canada;
- c) the Work delivered has been accepted by Canada.

7.6.6 Limitation of Expenditure - Cumulative Total of all Task Authorizations

1. Canada's total liability to the Contractor under the Contract for all authorized Task Authorizations (TAs), inclusive of any revisions, must not exceed the sum of \$ __TBD____ . Customs duties are included and Applicable Taxes are extra.
2. No increase in the total liability of Canada will be authorized or paid to the Contractor unless an increase has been approved, in writing, by the Contracting Authority.
3. The Contractor must notify the Contracting Authority in writing as to the adequacy of this sum:
 - a. when it is 75 percent committed, or
 - b. four (4) months before the contract expiry date, or
 - c. as soon as the Contractor considers that the sum is inadequate for the completion of the Work required in all authorized TAs, inclusive of any revisions, whichever comes first.
4. If the notification is for inadequate contract funds, the Contractor must provide to the Contracting Authority, a written estimate for the additional funds required. Provision of such information by the Contractor does not increase Canada's liability

7.6.7 Limitation of Price

SACC Manual clause [C6000C](#) (2017-08-17) Limitation of Price

7.6.8 Electronic Payment of Invoices – Contract

The Contractor accepts to be paid using any of the following Electronic Payment Instrument(s):

- a. Direct Deposit (Domestic and International);
- b. Electronic Data Interchange (EDI);
- c. Wire Transfer (International Only);

7.7 Invoicing Instructions

1. The Contractor must submit a claim for payment using form PWGSC-TPSGC 1111, Claim for Progress Payment.

Each claim must show:

- (a) all information required on form PWGSC-TPSGC 1111;
- (b) all applicable information detailed under the section entitled "Invoice Submission" of the general

conditions;

(c) the description and value of the milestone claimed as detailed in the Contract;

(d) Quality assurance documentation when applicable and/or as requested by the Contracting Authority.

2. The Goods and Services Tax or Harmonized Sales Tax (GST/HST), as applicable, must be calculated on the total amount of the claim before the holdback is applied. At the time the holdback is claimed, there will be no GST/HST payable as it was claimed and payable under the previous claims for progress payments.

3. The Contractor must prepare and certify one original and one (1) copy of the claim on form PWGSCPTSGC 1111, and forward it to the Contracting Authority identified under the section entitled "Authorities" of the Contract for appropriate certification after inspection and acceptance of the Work takes place.

4. The Contracting Authority will then forward the original of the claim to the Technical Authority for certification and onward submission to the Payment Office for the remaining certification and payment action.

5. The Contractor must not submit claims until all work identified in the claim is completed.

7.8 Certifications and Additional Information

7.8.1 Compliance

Unless specified otherwise, the continuous compliance with the certifications provided by the Contractor in its bid or precedent to contract award, and the ongoing cooperation in providing additional information are conditions of the Contract and failure to comply will constitute the Contractor in default. Certifications are subject to verification by Canada during the entire period of the Contract.

7.8.2 Federal Contractors Program for Employment Equity - Default by the Contractor

The Contractor understands and agrees that, when an Agreement to Implement Employment Equity (AIEE) exists between the Contractor and Employment and Social Development Canada (ESDC)-Labour, the AIEE must remain valid during the entire period of the Contract. If the AIEE becomes invalid, the name of the Contractor will be added to the "[FCP Limited Eligibility to Bid](#)" list. The imposition of such a sanction by ESDC will constitute the Contractor in default as per the terms of the Contract.

7.9 Applicable Laws

The Contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in Ontario.

7.10 Priority of Documents

If there is a discrepancy between the wording of any documents that appear on the list, the wording of the document that first appears on the list has priority over the wording of any document that subsequently appears on the list.

- (a) the Articles of Agreement;
- (b) the supplemental general conditions (2015-04-01)
- (c) the general conditions [2030](#) (2020-05-28)
- (d) Annex A, Statement of Work
- (e) Annex B, Basis of Payment;

-
- (f) Annex C, Security Requirements Check List
(i) the Contractor's bid dated _____, as clarified on _____ " or ",as amended on _____ "

7.11 Defence Contract

SACC Manual clause [A9006C](#) (2012-07-16) Defence Contract

7.12 Insurance

The Contractor is responsible for deciding if insurance coverage is necessary to fulfill its obligation under the Contract and to ensure compliance with any applicable law. Any insurance acquired or maintained by the Contractor is at its own expense and for its own benefit and protection. It does not release the Contractor from or reduce its liability under the Contract.

7.13 Controlled Goods Program

SACC Manual clause [A9131C](#)(2020-11-19), Controlled Goods Program

7.14 Dispute Resolution

- (a) The parties agree to maintain open and honest communication about the Work throughout and after the performance of the contract.
- (b) The parties agree to consult and co-operate with each other in the furtherance of the contract and promptly notify the other party or parties and attempt to resolve problems or differences that may arise.
- (c) If the parties cannot resolve a dispute through consultation and cooperation, the parties agree to consult a neutral third party offering alternative dispute resolution services to attempt to address the dispute.
- (d) Options of alternative dispute resolution services can be found on Canada's Buy and Sell website under the heading "[Dispute Resolution](#)".

7.15 Project Kick Off Meeting

Within ten (10) business days of Contract Award, the Contractor must convene and co-chair with the the Contracting Authority, a project Kick Off Meeting, IAW CDRL item CDRL-PM-05 and DID-PM-05 at NETE LaSalle facility, via video or teleconference or elsewhere as agreed to between the Contractor and NETE.

7.16 Acceptance Review Meeting

The Contractor must convene and co-chair chair with the Contracting Authority, an Acceptance Review Meeting(s) for the purpose of reviewing the design deliverables identified in the Technical Data Package (TDP) in accordance with CDRL-PM-02 and DID-PM-02 for review of the results of inspections and tests required to verify compliance with the TSOR.

7.17 Progress Review Meetings

Progress meetings, co-chaired by the Contracting Authority, will take place at the Contractor's facility as and when required, generally once a month. Interim meetings may also be scheduled. Contractor's attendees at these meetings will, as a minimum, be its Contract (Project) Manager and Quality Assurance

Manager. Progress meetings will generally incorporate technical meetings to be chaired by the Technical Authority.

7.18 Project Management Plan

The Contractor must prepare and deliver a Project Management Plan (PMP) IAW CDRL Item CDRL-PM-01 and DID-PM-01 to identify how the Contractor intends to fulfill the project management requirements of this SOW to both the Technical Authority and the Contracting Authority.

7.19 Progress Reports

The Contractor must monitor progress and deliver Project Status Reports (PSRs) IAW CDRL Item CDRL-PM-04 and DID-PM-04 to both the Technical Authority and the Contracting Authority.

7.20 Quality Plan

No later than 10 days after the effective date of the Contract, the Contractor must submit for acceptance by the Department of National Defence (DND) a Quality Plan prepared according to the latest issue (at contract date) of ISO 10005:2005 "Quality management systems - Guidelines for quality plans". The Quality Plan must describe how the Contractor will conform to the specified quality requirements of the Contract and specify how the required quality activities are to be carried out, including quality assurance of subcontractors. The Contractor must include a traceability matrix from the elements of the specified quality requirements to the corresponding paragraphs in the Quality Plan.

The documents referenced in the Quality Plan must be made available when requested by Public Works and Government Services Canada or DND.

If the Quality Plan was submitted as part of the bidding process, the Contractor must review and, where appropriate, revise the submitted plan to reflect any changes in requirements or planning which may have occurred as a result of pre-contract negotiations.

Upon acceptance of the Quality Plan by DND, the Contractor must implement the Quality Plan. The Contractor must make appropriate amendments to the Quality Plan throughout the term of the contract to reflect current and planned quality activities. Amendments to the Quality Plan must be acceptable to DND.

If the Contract includes the option for software design, development or maintenance of software, the Contractor must interpret the requirements of ISO 9001:2008 "Quality management systems - Requirements", according to the guidelines of the latest issue (at contract date) of ISO/IEC 90003:2004 "Software engineering - Guidelines for the application of ISO 9001:2000 to computer software".

7.21 SACC Manual Clauses

- B9028C** – Access to Facilities and Equipment, (2007-05-25)
- C2604C** – Customs Duties, Excise Taxes and Applicable Taxes – Non-resident, (2013-04-25)
- D2000C** – Marking, (2007-11-30)
- D2001C** – Labelling, (2007-11-30)
- D2025C** – Wood Packaging Materials, (2017-08-17)
- D5510C** – Quality assurance authority (Department of National Defence): Canadian-based contractor (2021-05-20)
- D5605C** - Release Documents (Department of National Defence) - United States-based Contractor (2010-01-11)
- D5540C** – ISO 9001:2008 Quality Management Systems - Requirements (Quality Assurance Code Q) (2021-05-20)

D5515C - Quality Assurance Authority (Department of National Defence) - Foreign-based and United States Contractor (2010-01-11)

D5606C – Release documents (Department of National Defence): Canadian-based contractor (2017-11-28)

D6010C – Palletization (2007-11-30)

D9002C – Incomplete Assemblies, (2007-11-30)

D5604C – Release Documents (Department of National Defence) - Foreign-based Contractor (2008-12-12)

7.22 Procedures for Design Change/Deviations

The Contractor must complete Part 1 of the Design Change/Deviation form DND 672 (Annex G) and forward one (1) copy to the Technical Authority and one (1) copy to the Contracting Authority.

The Contractor will be authorized to proceed upon receipt of the design change/deviation form signed by the Contracting Authority. A contract amendment will be issued to incorporate the design change/deviation in the Contract.

7.23 Recommended Spare Parts List - Contract

The Contractor must, within 30 days after contract award, provide to the Procurement Authority a Recommended Spare Parts List (RSPL) prepared in accordance with the current issue of Canadian Forces Specification D-01-100-214/SF-000. The RSPL must contain the Contractor's recommendation for spares required to maintain the equipment for a 24-month period, and must provide the basis for the spares selection to be made by Department of National Defence. Upon request from the Contractor, the specification will be provided by the Contracting Authority.

Supplementary Provisioning Technical Documentation (SPTD), as prepared by the actual manufacturer of the item, is required for the codification and cataloguing of all items listed in the RSPL. The SPTD called up in the above specification must accompany the RSPL as detailed in the specification. Specific details of the data elements required must be listed on a Provisioning Documentation Selection Sheet, prepared in accordance with the above specification, and be submitted in electronic ASCII text format.

Questions regarding the preparation, format or contents of the above provisioning documentation must be directed to the Procurement Authority.

7.24 Inspection and Acceptance

The Technical Authority is the Inspection Authority. All reports, deliverable items, documents, goods and all services rendered under the Contract are subject to inspection by the Inspection Authority or representative. Should any report, document, good or service not be in accordance with the requirements of the Statement of Work and to the satisfaction of the Inspection Authority, as submitted, the Inspection Authority will have the right to reject it or require its correction at the sole expense of the Contractor before recommending payment

7.25 Packaging Requirement using Specification D-LM-008-036/SF-000

The Contractor must prepare optional spare parts for delivery in accordance with the latest issue of the Canadian Forces Packaging Specification *D-LM-008-036/SF-000*, DND Minimum Requirements for Manufacturer's Standard Pack.

7.26 Release Documents - Distribution

The Contractor must prepare the release documents in a current electronic format and distribute them as

Solicitation No. - N° de l'invitation
W8472-215850/A
Client Ref. No. - N° de réf. du client
W8472-215850/A

Amd. No. - N° de la modif.
File No. - N° du dossier
W8472-215850

Buyer ID - Id de l'acheteur
Q08
CCC No./N° CCC - FMS No./N° VME

follows:

- a. One (1) copy mailed to consignee marked: "Attention: Receipts Officer";
- b. Two (2) copies with shipment (in a waterproof envelope) to the consignee;
- c. One (1) copy to the Contracting Authority;
- d. One (1) copy to:

*National Defence Headquarters
Mgen George R. Pearkes Building
101 Colonel By Drive
Ottawa, ON K1A 0K2
Attention: D Mar P 2-3-5*

- e. One (1) copy to the Quality Assurance Representative;
 - f. One (1) copy to the Contractor; and
 - g. For all non-Canadian contractors, one (1) copy to:

*DQA/Contract Administration
National Defence Headquarters
Mgen George R. Pearkes Building
101 Colonel By Drive
Ottawa, ON K1A 0K2*

E-mail: ContractAdmin.DQA@forces.gc.ca.

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Client Ref. No. - N° de réf. du client
W8472-215850/A

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File No. - N° du dossier
W8472-215850

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Q08
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ANNEX "A"

STATEMENT OF WORK

W8472-215850



**STATEMENT OF WORK
FOR PROCUREMENT OF
ELECTRODYNAMIC SHAKER SYSTEM**



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LIST OF ACRONYMS AND ABBREVIATIONS

Acronyms or Abbreviations	Definition
CA	Contract Award (in CDRL and DIDs)
CDR	Critical Design Review (meeting)
CDRL	Contract Deliverable Requirement List
CFTO	Canadian Forces Technical Order
CG	Centre of Gravity
CISD	Canadian Industrial Security Directorate
COTS	Commercial Off The Shelf
CSP	Contract Security Program
CTP	Cadre Training Package
dB	Decibels
dBA	A-weighted Decibels
DID	Data Item Description
DND	Department of National Defence
D Mar P	Director of Maritime Procurement
DOS	Designated Organization Screening
EMI	Electromagnetic Interference
FPM	Final Project Meeting
G	Acceleration of Gravity (9.82 m/s ²)
GOC	Government of Canada
GOCO	Government-Owned-Contractor-Operated
Hz	Hertz
IAW	In Accordance With
in/s	inches per second
ISO	International Organization for Standardization
ITAR	International Traffic in Arms Regulations
ITP	Inspection and Test Plan
km	kilometre
kN	kilo Newton
kVA	Kilo-Volt-Ampere
lbf	pound-force
l/min	liter per minute
m	metre
mil	Thousandth of an inch
mm	millimetre
mT	millitesla
m ²	square metres
m/s	meters per second
NDQAR	National Defence Quality Assurance Representative
NETE	Naval Engineering Test Establishment
OEM	Original Equipment Manufacturer
PDF	Portable Document Format
PM	Project Manager



PMP	Project Management Plan
PRM	Project Review Meeting
PSPC	Public Services and Procurement Canada
PSR	Project Status Reports
PWGSC	Public Works and Government Services Canada
QA	Quality Assurance
RCN	Royal Canadian Navy
RFI	Radio Frequency Interference
RFP	Request for Proposal
RSPL	Recommended Spare Parts List
SDS	Safety Data Sheet
SOW	Statement Of Work
SPT	Special Purpose Tools
TA	Technical Authority
TDP	Technical Data Package
THD	Total Harmonic Distortion
tonne(s)	Metric Tonne(s)
TSOR	Technical Statement of Requirements
UNC	Unified National Coarse (applicable to threads)
USA	United States of America
USML	Unites States Munitions List
V	Volt
VCR	Visit Clearance Request
WHMIS	Workplace Hazardous Material Information System
WME	Weir Marine Engineering

Table 1: Acronyms and Abbreviations



1 SCOPE

1.1 PURPOSE

- 1.1.1 The Purpose of this Statement of Work (SOW) is to describe the work associated with delivering an electrodynamic Shaker system (hereafter called a “Shaker”) at Naval Engineering Test Establishment (NETE), LaSalle QC, in replacement of the existing obsolete system.
- 1.1.2 This document also contains the Technical Statement of Requirements (TSOR) describing the minimum requirements for the Shaker.

1.2 BACKGROUND

- 1.2.1 The NETE is a Government-Owned-Contractor-Operated (GOCO) facility, headquartered at the Montreal borough of LaSalle, QC with detachments in Halifax, NS and Esquimalt, BC. As the Royal Canadian Navy (RCN)’s principal Test and Evaluation center, NETE supports the RCN from coast to coast. A Division of Weir Canada Inc., Weir Marine Engineering (WME) operates the NETE on behalf of the Government of Canada since 1953.
- 1.2.2 The original electrodynamic Shaker system (MB Dynamics C150) was installed at NETE LaSalle facility in early 1960s. Since that time, it was a major workhorse with extremely frequent intervals of use. The Shaker underwent a series of major upgrades in 2003, where its controller was replaced with a newer model and the drum exciter had an additional circulation hoses installed to improve cooling circulation. The current improvements allowed the equipment to continue operation, however, the Original Equipment Manufacturer (OEM) no longer supports this model.
- 1.2.3 To meet the constant and future demand from Department of National Defence (DND) and Industry clients, it is essential to maintain the vibration testing capability. Therefore, it is imperative to acquire a modern electrodynamic Shaker system that will continue to serve the RCN for years to come.

1.3 OBJECTIVES

- 1.3.1 The primary operational uses of the Shaker includes vibration excitation in both vertical and horizontal planes.
- 1.3.2 The fundamental objectives of the Shaker procurement are to:
- 1.3.2.1 Acquire an electrodynamic Shaker system with a robust and a proven design from a single manufacturer together with its associated components and ancillary equipment required for proper operation;
 - 1.3.2.2 Acquire a spare parts list;
 - 1.3.2.3 Acquire a Technical Data Package (TDP) to be used by NETE to support maintenance and Shaker operations through its intended life cycle; and,



1.3.2.4 Acquire necessary training and training materials IAW SOW Sections 5.4, 5.5, 5.6, and 5.7.



2 APPLICABLE DOCUMENTS

2.1 DND AND GOVERNMENT DOCUMENTS

2.1.1 Where standards are referenced in this document, the whole standard may not apply unless specifically directed. The reference will indicate what tailoring is required by the Technical Authority. If no tailoring is specified, then the Contractor must specify the extent of their compliance to the referenced standard in their proposal.

2.1.2 Applicable documents are as follows:

- 2.1.2.1 *R.S.C., 1985, c. D-1*: Canada Defence Production Act, 17 December 2020.
- 2.1.2.2 *D-03-003-019/SG-001*: Canadian Forces Technical Order (CFTO), Department of National Defence, Standard for Vibration Resistant Equipment, 9 April 1970.
- 2.1.2.3 *SOR/86-304*: Canada Occupational Health and Safety Regulations, 25 June 2018.
- 2.1.2.4 *NRCC 56190*: Canada Occupational Health and Safety Regulations, 2015.
- 2.1.2.5 *NFC*: National Fire Code of Canada 2015, 2015.
- 2.1.2.6 *CSA-C22.1-18*: Canadian Standards Association, Canadian Electrical Code Part I - Safety Standard for Electrical Installations, 2018.
- 2.1.2.7 *CSA-C22.2 No. 0-10*: Canadian Standards Association, Canadian Electrical Code Part II - General requirements, 2015.
- 2.1.2.8 *CSA-C22.2 No. 0.4-17*: Canadian Standards Association, Canadian Electrical Code Part II - Bonding of Electrical Equipment, 2017.
- 2.1.2.9 *SSC C-27*: Labour Code, Minister of Labour, Quebec Government, 1 September 2020.
- 2.1.2.10 *L.R.Q., c. S-2.1*: Act Respecting Occupational Health and Safety, Minister of Labour, Quebec Government, 20 October 2020.
- 2.1.2.11 *R.S.Q., c. A-3.001*: Act Respecting Industrial Accidents and Occupational Diseases, Minister of Labour, Quebec Government, 20 October 2020.
- 2.1.2.12 *R.S.Q., c. S 2.1, r.4*: Safety Code for the Construction Industry, Minister of Labour, Quebec Government, 1 September 2020.
- 2.1.2.13 *R.S.C., 1985, c. L-2*: Canada Labour Code Part II Occupational Safety and Health, Minister of Justice, Government of Canada, 15 February 2021.
- 2.1.2.14 *CFFM 4003*: Canadian Forces Fire Marshal Directive, December 2014.
- 2.1.2.15 *TBD*: NETE Shop Floor Plan.

2.2 NON-GOVERNMENT OF CANADA DOCUMENTS

2.2.1 Where standards are referenced in this document, the whole standard may not apply unless specifically directed. The reference will indicate what tailoring is required by the Technical Authority. If no tailoring is specified, then the Contractor must specify the extent of his compliance to the referenced standard in his proposal. If any referenced standard or regulation in section 2.2.2 below has been superseded by a new revision or it has become obsolete and it has been replaced by a new standard or it has not been replaced, then the Contractor must use the latest revision or replaced standard or an equivalent standard respectively.



2.2.2 Applicable documents are as follows:

- 2.2.2.1 *MIL-STD-167-1A*: USA Department of Defense, Test Method Standard, Mechanical Vibrations of Shipboard Equipment, 1 May 1974.
- 2.2.2.2 *MIL-STD-810H*: USA Department of Defense, Test Method Standard, Environmental Engineering Considerations and Laboratory Tests, 31 January 2019.
- 2.2.2.3 *Code of Federal Regulations Title 22 Part 121*: United States Munitions List.
- 2.2.2.4 *DataPhysics*: SignalStar Vibration Controller User Manual, Revision 14.

2.3 ORDER OF PRECEDENCE

- 2.3.1 In the event of a conflict between the Standard for Vibration Resistant Equipment and requirements defined in this SOW, the requirements of this SOW, together with DND requirements and NETE custom applications, must take precedence.
- 2.3.2 In the event of a conflict between the contents of this document and the applicable portions of any other referenced technical documents, the Contractor must inform NETE (specifically the Technical Authority (TA)) of the differences. NETE will inform the Contractor of the requirements to apply and amend the SOW as necessary.



3 PROJECT DELIVERABLES

3.1 GENERAL

3.1.1 The Contractor must:

- 3.1.1.1 Supply and install one (1) Electrodynamic Shaker system with all its associated ancillary and auxiliary systems and documentation that meet the requirements of the Technical Statement of Requirements (TSOR) identified in this SOW Section 10.
 - 3.1.1.1.1 Shaker must originate from a single manufacturer, including all components and ancillary equipment described below and required for proper operation in both vertical and horizontal planes.
 - 3.1.1.1.2 The Shaker system must be compliant to the Canadian Electrical Code (CEC) from the Canadian Standards Association (CSA), see sections 2.1.2.6, 2.1.2.7, and 2.1.2.8.
 - 3.1.1.1.3 The Shaker and related documentation must not contain information which falls into the International Traffic in Arms Regulations (ITAR) as defined in the United States Munitions List (USML).
- 3.1.1.2 Provide NETE with all necessary instructions and guidance to coordinate, design and build the proper foundation for the installation of the new Shaker, if the foundation is an integral part of the Shaker design.
- 3.1.1.3 Carry out work required to design, deliver, install and commission the Shaker which meets the specifications of the TSOR.
- 3.1.1.4 The Contractor/Offeror must, at all times during the performance of the Contract/Standing Offer, hold a valid Designated Organization Screening (DOS), issued by the Contract Security Program (CSP), Public Works and Government Services Canada (PWGSC). The Contractor/Offeror personnel requiring access to sensitive site(s) must EACH hold a valid RELIABILITY STATUS, granted or approved by the CSP, PWGSC.
- 3.1.1.5 Be responsible for shipping and duty clearances up to the NETE facility.
- 3.1.1.6 Provide all technical details on Shaker including:
 - 3.1.1.6.1 Recommended installation layout and constraints (e.g. max distance between components);
 - 3.1.1.6.2 Individual component details and drawings including physical dimension and weight, connection points, mounting interface requirement, lifting points; and,
 - 3.1.1.6.3 Facility services requirements for installation (Electrical, Cooling Water, Compressed Air, etc.).
- 3.1.1.7 Provide the stamped engineering drawings for installation phases of the project.
- 3.1.1.8 Provide all Safety Data Sheets (SDS) for all parts, assemblies and components that contain Hazardous Materials (HAZMAT).
- 3.1.1.9 The Contractor must provide all required documentation in hardcopy and PDF format.
- 3.1.1.10 In addition, the Contractor must develop and deliver plans and procedures for:
 - 3.1.1.10.1 Maintenance;
 - 3.1.1.10.2 Acceptance;



- 3.1.1.10.3 Inspections;
- 3.1.1.10.4 Trials; and,
- 3.1.1.10.5 Safe Operation of the Shaker;
- 3.1.1.11 Contractor must deliver to NETE a maintenance TDP meeting all relevant requirements identified in this SOW.
- 3.1.1.12 Familiarization and maintenance training must be provided in accordance with the applicable Contract Deliverable Requirement Lists (CDRLs) and Data Item Descriptions (DIDs).

3.2 DATA REVIEWS AND REVISIONS

- 3.2.1 The Contractor must submit all deliverable data in draft form for NETE's review IAW the applicable CDRL.
- 3.2.2 The Contractor must ensure that submitted documents are complete and in compliance with the requirements of the SOW and the applicable CDRL and DID.
- 3.2.3 Unless otherwise noted, NETE's review will take no more than ten (10) business days from receipt of the data.
- 3.2.4 The provision of comments by NETE on draft deliverables must not be construed as approval of the data deliverable.
- 3.2.5 Unless otherwise noted, the Contractor must address NETE's comments and resubmit the document showing a new revision number, within five (5) business days of reaching agreement on the comments.
- 3.2.6 The Contractor must ensure that final documents consist of the draft document modified to include changes as authorized by NETE.
- 3.2.7 When revisions and amendments have been made to data deliverables required under this SOW, the Contractor must submit the revisions/amendments to NETE.



4 PROJECT MANAGEMENT

4.1 ORGANIZATION

- 4.1.1 Project Manager: The Contractor must assign a Project Manager responsible to carry out the work required for the Shaker delivery program. The Contractor's Project Manager must have the authority to plan, direct, control and make decisions for the Contractor as these pertain to the execution of this Contract.
- 4.1.2 Contractor's Point of Contact: The Contractor's Project Manager must be the main single point of contact with NETE.

4.2 PROJECT MANAGEMENT PLAN

- 4.2.1 The Contractor must prepare and deliver a Project Management Plan (PMP) IAW CDRL Item CDRL-PM-01 and DID-PM-01 to identify how the Contractor intends to fulfill the project management requirements of this SOW.
- 4.2.2 It is estimated that the delivery of the Shaker should be completed 12 months after Contract Award (CA) at the latest, followed by the installation and the set to work.
- 4.2.3 Once accepted by NETE, the PMP must be used by the Contractor to manage the activities of this Contract. Throughout the duration of the Contract, the Contractor must inform NETE of any changes that affect the execution of the PMP and submit a revised PMP for NETE's acceptance if requested.

4.3 ACCESS TO NETE LASALLE FACILITY

- 4.3.1.1 When required, and with the agreement of NETE, the Contractor may be provided access to NETE LaSalle facility, on an as required, escorted and non-interference basis, to allow the Contractor to carry out the tests, trials, delivery, and training requirements of this SOW. Virtual presence (Microsoft Teams) falls under the same category as escorted visit.

4.4 PROJECT MEETING SUPPORT

- 4.4.1 The Contractor must convene and co-chair project reviews and meetings as required by this SOW.
- 4.4.2 For all reviews and meetings the Contractor must:
 - 4.4.2.1 Arrange the venue, including parking, as appropriate, when a meeting is not taking place on NETE LaSalle premises;
 - 4.4.2.2 Coordinate with NETE as appropriate;
 - 4.4.2.3 Provide all administrative facilities and presentation equipment, when a meeting is not taking place on NETE LaSalle premises;
 - 4.4.2.4 Ensure that necessary and qualified Contractor and Subcontractor personnel attend the reviews or meetings;



- 4.4.2.5 Ensure and report that action items and decisions resulting from the various meetings and reviews are implemented where applicable;
- 4.4.2.6 Maintain, and provide to DND files, records, documents and records of all reviews and meetings; and,
- 4.4.2.7 NETE will provide the Contractor with the number of attendees representing NETE at each review and meeting not less than ten (10) business days before the respective review or meeting.

4.5 PROJECT MEETING ARRANGEMENTS, LOCATION AND FACILITIES

- 4.5.1 Unless otherwise stated for individual meetings, the Contractor must arrange and prepare for meetings IAW the following requirements.
- 4.5.2 The Contractor must prepare and submit supporting documents required (in native editable format) for a meeting at least five (5) business days in advance of each scheduled review or meeting.
- 4.5.3 The Contractor must prepare and submit an agenda IAW CDRL Item CDRL-PM-02 and DID-PM-02 at least five (5) business days in advance of each scheduled review or meeting. NETE will provide any comments on the agenda within two (2) business days of receipt.
- 4.5.4 In the event of unscheduled meetings the Contractor must submit an agenda 24 hours prior to the meeting.
- 4.5.5 NETE and the Contractor must mutually agree to the contents of the agenda.
- 4.5.6 Meetings must generally be conducted either at the Contractors facilities or at a third party location, arranged for by the Contractor, within a 50 km radius of the Contractors facilities.
- 4.5.7 With the mutual consent of NETE and the Contractor, and given current pandemic situation, meetings may be conducted by teleconference, web-conference or videoconference.
- 4.5.8 The cost associated with all identified meetings must be included in the total price identified in the Contract. The Contractor must cover all costs associated with the location and equipment required to conduct the meetings or review except for travel costs associated with the attendance of representatives from NETE.

4.6 PROJECT MEETING MINUTES

- 4.6.1 The Contractor must record, produce, deliver and revise, as required, minutes for all meetings.
- 4.6.2 The Contractor must prepare and distribute, within five (5) business days of the meeting, an electronic copy of the minutes to NETE's attendees IAW CDRL Item CDRL-PM-03 and DID-PM-03.



4.6.3 Meeting minutes are accepted once signed by the Contract Authority. NETE will advise the Contractor of any issues within two (2) business days of receiving the minutes at which point the Contractor will be responsible for revision and resubmittal within two (2) business days.

4.7 PROJECT MEETING CANCELLATIONS

4.7.1 Requests to reschedule reviews or meetings will, in general, be made at least five (5) business days in advance of the meeting date to facilitate and travel arrangements changes.

4.8 PROJECT KICK-OFF MEETING

4.8.1 Within ten (10) business days of Contract Award, the Contractor must convene and co-chair a project Kick Off Meeting, IAW CDRL item CDRL-PM-05 and DID-PM-05 at NETE LaSalle facility, via video or teleconference or elsewhere as agreed to between the Contractor and NETE.

4.8.2 The agenda must be delivered five (5) business days prior to the meeting for input from NETE and acceptance. The agenda of items to be reviewed at the meeting must include, without being limited to:

4.8.3 The PMP (in particular the Master Schedule) IAW CDRL Item CDRL-PM-01 and DID-PM-01:

4.8.3.1 Shaker technical requirements;

4.8.3.2 Non-construction deliverable requirements;

4.8.3.3 Critical path activities; and,

4.8.3.4 Any other contractual or programmatic issues associated with the project as mutually agreed between the NETE and the Contractor.

4.9 PROJECT REVIEW MEETINGS

4.9.1 The Contractor must convene and co-chair Progress Review Meetings (PRMs) at least monthly or as mutually agreed between NETE and the Contractor.

4.9.2 The list of mandatory PRM attendees must always include Project Manager.

4.9.3 PRMs must encompass total project status as of the review date.

4.9.4 The kick-off meeting may be assumed to be the first PRM.

4.10 PROGRESS REPORTS

4.10.1 The Contractor must monitor progress and deliver Project Status Reports (PSRs) IAW CDRL Item CDRL-PM-04 and DID-PM-04.



4.11 CRITICAL DESIGN REVIEW MEETING

- 4.11.1 The Contractor must convene and co-chair a Critical Design Review (CDR) Meeting for the purpose of reviewing the design deliverables identified as Critical Design Documents IAW CDRL-EN-01 and DID-EN-01.
- 4.11.2 The list of mandatory CDR attendees must always include Project Manager.
- 4.11.3 The intent of the CDR Meetings is for the Contractor to demonstrate to NETE that the Shaker specifications, and ancillary and auxiliary systems installation documentation are complete and that the design is in compliance with the technical and contractual requirements of the SOW. If compliance is proven by the Contractor, then the acceptance of the critical design package by NETE will mark the beginning of the phase that prepares the NETE LaSalle facility for construction. Following acceptance, any further changes to the design or the technical documents must be tracked any affected documents or drawings updated and re-submitted to NETE by the Contractor.
- 4.11.4 The Contractor must identify the CDR Meeting in the Master Schedule.

4.12 ACCEPTANCE REVIEW MEETING

- 4.12.1 The Contractor must convene and co-chair an Acceptance Review Meeting(s) for the purpose of reviewing the design deliverables identified in the Technical Data Package (TDP) in accordance with CDRL-EN-02 and DID-EN-02 for review of the results of inspections and tests required to verify compliance with the TSOR.
- 4.12.2 The list of mandatory Acceptance Review Meeting(s) attendees must always include Project Manager.
- 4.12.3 The intent of the Acceptance Review Meetings is for the Contractor to demonstrate to NETE that the site construction and all associated documentation have been completed and are in compliance with the technical and contractual requirements of the SOW. If compliance is proven by the Contractor then NETE will issue provisional acceptance of the Shaker. Following provisional acceptance, the Contractor may proceed with the delivery of the actual Shaker unit as specified.
- 4.12.4 The Contractor may perform an Acceptance Review Meeting and obtain provisional acceptance of each construction milestone (i.e. foundation, seismic mass installation, et cetera) following completion of construction. If there is more than one Acceptance Review Meeting, then the Contractor must ensure that all relevant documentation in the TDP is available for review prior to each meeting and any changes or updates between meetings are accurately addressed.
- 4.12.5 The Contractor must identify the Acceptance Review Meeting(s) in the Master Project schedule.
- 4.12.6 The final TDP will be accepted only after NETE is satisfied with the final TDP content that reflects the delivered Shaker and any errors, corrections or changes have been addressed.



4.13 ISSUE REPORTING

- 4.13.1 The Contractor must advise NETE by email within three (3) business days of the date the Contractor determines that there is an issue that will result in a schedule alteration or potential contractual change.
- 4.13.2 Upon such notification NETE will advise the Contractor whether an unscheduled meeting or other action is required.

4.14 ACTION ITEM LIST

- 4.14.1 The Contractor must maintain a historical, chronological and up-to-date electronic Action Item List resulting from reviews, meetings, or correspondence between NETE and the Contractor, for the duration of the Contract. The format for the Action Item List must be acceptable to NETE. Microsoft Excel is an acceptable tool for maintaining and distributing the Action Items List.
- 4.14.2 In the Action Items List the Contractor must record, as a minimum: identification number; title and/or description, date opened, action required, priority, organization responsible for taking action, brief statement of results in sufficient detail to clearly identify and track the action taken, date closed, and, status (open/closed). The Contractor must ensure that, once entered, no entry is deleted.
- 4.14.3 The Contractor must include a subset of the up-to-date Action Items List containing all open items as an attachment to any meeting agendas.
- 4.14.4 The Contractor must make a copy or reproduction of the most current Action Items List or any portion thereof available to NETE upon request.

4.15 HEALTH AND SAFETY

- 4.15.1 The Contractor must give the upmost importance to health and safety and the prevention of accidents. The Contractor must, at all times, conform to the DND and WME Health and Safety policies and be responsible for the health and safety of its employees and accident prevention.
- 4.15.2 The Contractor must be responsible for the health and safety of persons on site, safety of property on site and for protection of persons adjacent to site and environment to extent that they may be affected by the work.
- 4.15.3 The Contractor must comply with all national and provincial health policies pertaining to the COVID-19 pandemic.
- 4.15.4 The Contractor must submit all applicable Workplace Hazardous Material Information System (WHMIS) Safety Data Sheets (SDS) to a NETE representative.
- 4.15.5 The Contractor must submit, prior to the start of work on site, the Health and Safety (H&S) Plan for review, comment and acceptance by NETE. This H&S plan, at minimum, must include:



-
- 4.15.5.1 Result of site specific safety hazard assessment;
 - 4.15.5.2 Contractor's company Health and Safety Plan; and,
 - 4.15.5.3 Site specific Health and Safety Plan.
- 4.15.6 The Contractor must submit copies of health and safety incident and accident reports to NETE representative within 24 hours of occurrence.
- 4.15.7 The Contractor must be the Principal Contractor as defined in the Act Respecting Occupational Health and Safety of Quebec (section 2.1.2.10), and execute only the work within the scope and in the areas defined in this specification.
- 4.15.8 The Contractor must possess all necessary insurances to carry out the specified work, such as, but not limited to: civil liability, errors and omissions and any other required insurances.
- 4.15.9 The Contractor must comply with and enforce compliance by employees and sub-contractors with safety requirements of Contract Documents, all applicable federal, provincial, territorial and local statutes, regulations, and ordinances, and with the site-specific H&S Plan, as minimum:
- 4.15.9.1 Act Respecting Occupational Health and Safety (section 2.1.2.10);
 - 4.15.9.2 Act Respecting Industrial Accidents and Occupational Diseases (section 2.1.2.11);
 - 4.15.9.3 Safety Code for the Construction Industry (section 2.1.2.12);
 - 4.15.9.4 Canada Labour Code Part II Occupational Safety and Health (section 2.1.2.13)
 - 4.15.9.5 Canada Occupational Health and Safety Regulations (section 2.1.2.3); and,
 - 4.15.9.6 DND Fire Safety Requirements (section 2.1.2.14).



5 MAINTENANCE AND TRAINING

5.1 GENERAL

- 5.1.1 The maintenance and training plans must be provided by the Contractor to NETE to facilitate safe deployment of the Shaker.
- 5.1.2 Current shaker maintenance plan can be found in the Section 9 of this SOW for generic reference.

5.2 MAINTENANCE REQUIREMENTS

- 5.2.1 The Contractor must prepare and deliver, for acceptance by the TA, a recommended Maintenance Concept IAW CDRL item CDRL-MTN-01 and DID-MTN-01 and current industrial best practices.
- 5.2.2 The maintenance routine for the Shaker must assume nominal preventive maintenance cycles (i.e. monthly, yearly, bi-yearly, etc.). Maintenance activities must include, but not limited to:
 - 5.2.2.1 Amplifier verification;
 - 5.2.2.2 Visual inspection of the internals of the Shaker head;
 - 5.2.2.3 Inspection of slip table;
 - 5.2.2.4 Verification of resonance frequencies of the Shaker head and slip table;
 - 5.2.2.5 Inspection of heat exchanger, cooling pipes and other ancillary systems feeding into the Shaker; and,
 - 5.2.2.6 Inspection of air cushions below and above the seismic mass.
- 5.2.3 The maintenance concept must contain a maintenance manual detailing the required maintenance routines, the schedule of maintenance routines and instructions for the completion of each maintenance routine.
- 5.2.4 The maintenance manual must reference any construction standards that must be used to effect the required maintenance routines to the same quality as the original build.
- 5.2.5 Wherever possible for common industry components, the maintenance of the Shaker must use Repair by Replacement of defective components and sub-assemblies.

5.3 SPARES

- 5.3.1 The Contractor must provide a Recommended Spare Parts List (RPSL). The RSPL must contain the Contractor's recommendation for spares required to maintain the equipment for a 24-month period.



5.4 FAMILIARIZATION AND MAINTENANCE TRAINING

5.4.1 The Contractor must develop and deliver familiarization and maintenance training IAW this Section and CDRL item CDRL-TRG-01 and DID-TRG-01 and the current industrial best practice.

5.5 NUMBER TRAINING SESSIONS AND STUDENTS

5.5.1 The maintenance portion of the training must be based on the Maintenance Concept and Maintenance Manual developed by the Contractor.

5.5.2 The Contractor must prepare and produce a Training Plan and Maintenance and Familiarization Training Package. The Contractor must develop and conduct one (1) maintenance and familiarization training session on the Shaker before SATs.

5.5.3 The Contractor is to assume that the training session will be for ten (10) personnel from NETE.

5.6 TRAINING MATERIAL AND CONTENT

5.6.1 The training material and content must be reviewed and accepted by NETE.

5.6.2 The Contractor must provide the Shaker operator and maintainer training package, in MS Office format and PDF formats.

5.6.3 The Contractor must provide unrestricted rights for NETE to use and have use of all intellectual property associated with the training and maintenance package material provided.

5.7 LANGUAGE

5.7.1 All Contractor supplied training and the training material must be provided in both official languages in Canada (English and French).

5.7.2 If provision of French version, or vice versa, is not possible, the Contractor must provide the unrestricted rights for NETE to translate all material into French, or vice versa.

5.8 TECHNICAL DATA PACKAGE

5.8.1 The Contractor must provide the technical data package for the Shaker IAW CDRL-EN-02 and DID-EN-02.

5.9 ELECTRONIC LABELLING

5.9.1 All electronic media must be clearly labelled with the project number, project name, and date as prescribed by D Mar P and agreed upon with NETE.



5.9.2 If a complete listing of all files contained on a piece of electronic media exceeds the label size for that media, a “readme.txt” file in ASCII format must be provided. The “readme.txt” file must be store on the electronic media and a complete printout of the file provided. The “readme.txt” file must contain a complete listing of all filenames, drawing numbers, and other relevant data for all electronic files contained on the electronic media.

5.9.3 A printed copy of the Readme file must accompany each piece of electronic media.

5.10 ENGINEERING DATA ACCESS

5.10.1 In addition to any other specific documentation or engineering data identified as a deliverable in this SOW, the Contractor must provide NETE access to all engineering data during the period of the Contract, upon request.

5.11 ORIGINAL EQUIPMENT MANUFACTURER (OEM)

5.11.1 If applicable, the Contractor must make maximum use of existing OEM technical publications and provide OEM parts identification data.

5.11.2 For any such material the Contractor must obtain permission from the OEM to allow NETE to use the data and to have any unilingual data translate into the official languages of Canada.

5.12 ANNUAL SAFETY CHECKS AND SUPPORT

5.12.1 The Contractor must be available to conduct annual safety checks on the Shaker for at least a 24-month period.

5.12.2 The safety checks must include the nominal verifications and trials that confirm the proper operation of the Shaker and supporting systems.

5.12.3 The Contractor must be available to provide troubleshooting and support to NETE personnel in case of a catastrophic failure of any main, auxiliary and ancillary machinery necessary for the adequate Shaker operation for at least a 24-month period

5.12.4 The work must be conducted by the OEM or an authorized local representative.



6 ACCEPTANCE TESTING AND COMMISSIONING

6.1 GENERAL

- 6.1.1 The Contractor must produce and deliver an Inspection and Test Plan (ITP) that provides an overall outline of the entire spectrum of inspection, test and trial activities associated with the Shaker acceptance.
- 6.1.2 The ITP must contain all conditions, precautions, adjustments, expected test results, tolerances, and test equipment required to verify the proper design, fabrication, and verification of the Shaker. All inspections, test and trials must be witnessed and accepted by NETE, the Contractor and any required third party inspectors (i.e. members of DND).
- 6.1.3 The Contractor must produce an ITP that includes, but is not limited to the criteria in Section 10 of the SOW.
- 6.1.4 The ITP must be developed, reported on and delivered IAW CDRL item CDRL-AP-01 and DID-AP-01, and approved by the Project Manager.

6.2 POST-INSTALLATION INSPECTION AND SITE ACCEPTANCE TRIALS (SATs)

- 6.2.1 The purpose of the acceptance testing is to demonstrate that the performance and functional requirements of the Shaker at each integration step have been satisfactorily met.
- 6.2.2 The Contractor must perform an inspection of the installed system prior to initial power up.
- 6.2.3 The Contractor must perform all tests and trials necessary to demonstrate the Shaker meets all requirements identified in this SOW.
- 6.2.4 The Contractor must, with support from NETE, perform SATs for an expected minimum duration of one (1) week.
- 6.2.5 The Contractor must, with support from NETE, support the conduct of typical tests for an expected minimum duration of one (1) week to verify:
 - 6.2.5.1 D-03-003-019/SG-001 Sine Test (Horizontal & Vertical) with typical load;
 - 6.2.5.2 MIL-STD-167-1A Sine Test (Horizontal & Vertical) with typical load;
 - 6.2.5.3 MIL-STD-810H Method 514.8: Random Vibration, 5 to 50 Hz @ 0.0010 g²/Hz
 - 6.2.5.4 MIL-STD-810H Method 514.8: Sine on Random Vibration;
 - 6.2.5.5 MIL-STD-810H Method 514.8: Random (1 g²/Hz) on Random (0.030 g²/Hz) Vibration
 - 6.2.5.6 MIL-STD-810H Method 516.8 Procedure 1: Sawtooth Shock Test at 20g; and,
 - 6.2.5.7 MIL-STD-810H Method 516.8 Procedure 3: Trapezoidal Shock Test at 30g.
- 6.2.6 The Contractor must, with support from NETE, perform initial commissioning including a written statement report on:



- 6.2.6.1 Verification of all safety interlocks and limits;
- 6.2.6.2 Configuration of controller parameters for Shaker limits and scaling factors; and,
- 6.2.6.3 Define normal operating parameters.
- 6.2.7 Upon successful completion of the SATs, the Contractor must present NETE with a written statement report on:
 - 6.2.7.1 Validation that all TSOR parameters are met;
 - 6.2.7.2 Shaker Frequency Response (bare);
 - 6.2.7.3 Head Expander Frequency Response (bare); and,
 - 6.2.7.4 Slip Table Frequency Response (bare).

6.3 REPAIR AND RE-TESTING

- 6.3.1 If any of Shaker components or the system as whole fail any inspection or trial, the Contractor must rectify the issue, including any underlying causes, and re-test the repaired Shaker.
- 6.3.2 If it is determined that the test failure was the result of a design or construction issue, the Contractor must repair/rectify the defect. All associated technical documentation must be updated to reflect the repaired solution, if applicable.

6.4 PROVISIONAL ACCEPTANCE

- 6.4.1 Following the successful completion of all inspections, trial of the Shaker, and the delivery of the associated TDP, the Contractor must hold an Acceptance Review Meeting to review the deliverable package as a whole with NETE as per SOW Section 4.12.
- 6.4.2 Upon agreement by NETE that all associated deliverables and other Contractual obligations for the Shaker have been received / completed, all defects have been satisfactorily remedied and the Shaker has met all requirements in this SOW, NETE will issue a provisional acceptance for the Shaker.

6.5 ACCEPTANCE

- 6.5.1 Once the provisionally accepted Shaker has successfully perform a set of vibration tests for an arbitrary DND equipment, NETE will formally accept the Shaker system.



7 QUALITY ASSURANCE (QA)

7.1 GENERAL

- 7.1.1 The Contractor must implement and maintain a Quality Management System in accordance with the Contract Quality Assurance clauses.
- 7.1.2 The Contractor must make available to the National Defence Quality Assurance Representative (NDQAR) the Quality Assurance audits and inspection records upon request.
- 7.1.3 Canada reserves the right to conduct system verification to confirm product compliance with any or all of the performance requirements defined within the Appendix 1: Electrodynamic Shaker Technical Statement of Requirements to this SOW and all other referenced specifications.
- 7.1.4 NETE reserves the right to conduct QA inspections and audits to verify the Contractor's quality assurance procedures, practices, and methods during production and all other work associated with the Contract.



8 CONTRACT DELIVERABLE REQUIREMENTS LIST (CDRL) AND DATA ITEM DESCRIPTION (DID)

8.1 GENERAL

8.1.1 Document Changes/Updates

8.1.1.1 All the approved documents must be prepared, updated and delivered as required by the CDRL. All changes to updated versions of documents must be identified as follows:

8.1.1.2 On a change page indicating page numbers, paragraph numbers, date of change and reason for change:

8.1.1.2.1 Within the hard copy, by use of change bars in the side margins of the printed document; and,

8.1.1.2.2 Within the soft copy, using a method appropriate to the authoring tools that clearly differentiates old content from new or revised content.

8.1.1.3 Proposed amendments and the list of effective pages must be forwarded to NETE for acceptance as described in the CDRL.

8.1.2 Deliverable Format and Number of Copies:

8.1.2.1 The number of documentation copies required for each CDRL is defined within each CDRL.

8.1.2.2 All soft copies of documentation must be delivered in the original editable native source file format, (e.g. Microsoft Word, Excel, AutoCAD, SolidWorks, etc.) and in portable document format (PDF).

8.1.2.3 In the following CDRL tables '1 soft copy' means one (1) complete electronic copy comprised of the combination of the native format file and the pdf format file.

8.2 CDRL AND DID SUMMARIES

8.2.1 The CDRLs and summaries use the following abbreviations:

8.2.1.1 A: Acceptance

8.2.1.2 R: Review

8.2.1.3 CA: Contract Award

8.2.1.4 bd: Business day

8.2.1.5 PRM: Progress Review Meeting

8.2.1.6 PA: Provisional Approval (Acceptance Meeting) for Shaker

8.2.1.7 CDR: Critical Design Review Meeting

8.2.2 Project Management Summary

CDRL	DID	Deliverable	Review Level	Due	SOW Section
CDRL-PM-01	DID-PM-01	Project Management Plan	A	CA +10bd	4.2 4.15.4



CDRL	DID	Deliverable	Review Level	Due	SOW Section
					4.15.5
CDRL-PM-02	DID-PM-02	Meeting Agendas and Supporting Documents	A	Meeting Date -5bd	4.5
CDRL-PM-03	DID-PM-03	Meeting Minutes	A	Meeting Date +5bd	4.6
CDRL-PM-04	DID-PM-04	Project Status Reports	R	CA +30bd, every 3 rd PRM -5bd thereafter	4.10
CDRL-PM-05	DID-PM-05	Project Kick Off Meetings	R	CA +10bd	4.8

Table 2: Project Management Summary

8.2.3 Engineering Summary

CDRL	DID	Deliverable	Review Level	Due	SOW Section
CDRL-EN-01	DID-EN-01	Critical Design Documents	A	No later than CA +60bd and not less than CDR -10bd	4.11
CDRL-EN-02	DID-EN-02	Technical Data Package	A	PA -20bd	4.12

Table 3: Engineering Summary

8.2.4 Acceptance Testing Summary

CDRL	DID	Deliverable	Review Level	Due	SOW Section
CDRL-AP-01	DID-AP-01	Shaker Acceptance Plan and Procedures	R	CA +60bd	6

Table 4: Acceptance Testing Summary

8.2.5 Training and Maintenance Support Summary

CDRL	DID	Deliverable	Review Level	Due	SOW Section
CDRL-TRG-01	DID-TRG-01	Cadre Training Package	A	PA -20bd	5.4 5.5 5.6 5.7 5.8
CDRL-MTN-01	DID-MTN-01	Maintenance Concept	A	PA -20bd	5.2

Table 5: Training and Maintenance Support Summary



9 CURRENT SHAKER MAINTENANCE PLAN

9.1 GENERAL

9.1.1 The current Shaker maintenance plan is presented in the Table 6 below. The Contractor could use the presented plan to develop required Maintenance Concept IAW CDRL item CDRL-MTN-01 and DID-MTN-01 and current industrial best practices.

System	Sub-System	Components	Frequency, month(s)	Maintenance requirement
Shaker Amplifier Cabinet	Amplifier	Amplifiers	12m	Calibrate the amplifier.
		Fan Filter	1m	1) Lockout shaker as per procedure HSI001.
			1m	2) Gently remove all filters and store in a small box or bin to relocate.
			1m	3) Do not clean filters on the shaker near the unprotected cabinet. Use compressed air to blow through all screens and filters. Use caution: wear gloves.
			1m	4) Install all filters on the cabinets.
			1m	5) Remove lockout.
			1m	6) Sweep or mop area where filters were cleaned.
		Switch	12m	Inspect switches for sign of overheating or defect, replace as required.
Cables	12m	Review the condition of all attached cables routed between the shaker and power amplifier. Inspect cable insulation breach, repair or replacement if applicable.		



System	Sub-System	Components	Frequency, month(s)	Maintenance requirement
		Fans	12m	Inspect fans for sign of overheating or defect, replace as required.
		Relays	12m	Inspect relays for sign of overheating or defect, replace as required.
Vibration	C-150 Exciter Head (Shaker)	Dome (Upper Segment)	1m	1) Rotate the exciter head 90 degrees, torque should be less than 30 ft-lb during the rotation. Check hoses and cables to prevent kinking during rotation and confirm smooth rotation is obtained.
			1m	2) Rotate the exciter back to vertical position.
			Before each test	Visual inspection for cracks or any damage on the rubber boot.
		Linear Bearing	Depends on the performance test	If an issue with the alignment is found, the surfaces of the journal bearings should be inspected. Any bearing that exhibits damaged surface or excessive roughness needs to be replaced.
		Field Coils	Depends on the performance test	Measure current and voltage, compare with OEM specifications.
		Trunnion	1m	Grease the system and rotate the gear to 90 degrees clockwise, use the general purpose grease.
		Cooling Lines	1m	Check for oil leaks when system is running.
		Measurements	24m	Conduct a performance test IAW OEM specs.
		Bolts	6m	Perform a visual inspection on all retaining bolts on the shaker for cracks or insert integrity in particular those located in the base, replace as required.



System	Sub-System	Components	Frequency, month(s)	Maintenance requirement
		Electrical Wires	6m	Inspect wires for sign of overheating or any damages, replace as required.
		Cement Block Base	24m	Check the surface for cracks, blisters or other damage, inform the engineer if damages are found.
Cooling system	Unit: PHM-11 (Oil-Water)	Heat Exchanger	1m	Visual inspection for leaks or damage.
			12m	Clean/overhaul oil heat exchanger if required.
		Main Pump	12m	Visual inspection for damages and test functionality, replace as required.
		Water Flow Regulator	Before each test	Ensure that the valve, located beside to the MTS machine, should be closed during the test and then opened at the end of the test.
		Reservoir Tank	12m	Clean oil strainer located inside the tank (to remove strainer undo the four bolts located on the oil pump suction line cover).
			Before each test	Check oil level in sight glass. Use SHELL DIALA Oil AX to fill up.
		Oil (Use Only The SHELL DIALA AX Oil)	12m	Collect a sample for lab analysis. If the laboratory test indicates water content more than 1%, the oil should be replaced and cleaned the strainer tank.
		Scavenger Pump	12m	Visual inspection for damages and test functionality, any functional damage shall be reported to QPTG.
		Hoses And Pipes	1m	Start system and check for leaks. Coordinate with FTS instrumentation laboratory personnel to operate the system. (Unit PHM-11 and Unit PHS-4).



System	Sub-System	Components	Frequency, month(s)	Maintenance requirement
		'Y" Strainer	12m	Clean the strainer and run the system to check for leaks.
		Bypass Valve	12m	Inspect the bypass valve for leaks or damages, repair as required.
		Fittings	6m	Inspect all fittings for leaks or damages, replace as required.
	Unit: PHS-4 (Water-Water)	Heat Exchanger	1m	Visual inspection for leaks or damage.
		Main Pump	12m	Visual inspection for damages and test functionality, any functional damage shall be reported to QPTG.
		Solenoid Valve	12m	Remove, inspect and clean or replace if defective.
		'Y" Strainer	1m	Remove and clean "y" strainer of cooling water inlet located underneath platform near the cooling package.
		Drain	3m	Visual inspection for leaks, clean the drain.
	Distilled Water	Cartridge (Filter Deionizer)	12m	Change the demineralizing filter located underneath the platform on the cooling package (Barnstead cartridge No.D0803)
		Canister	3m	Examine the inside for any residual deposits. If any residual are observed, clean the system.
		Make-Up Tank	1m	1) Check water level to be 1/2 to 3/4 full, use distilled water to fill up. The tank is located on the backside of the medium weight shock test cell. 2) Adjust the pressure at the distilled water make-up tank to 15 psig.



System	Sub-System	Components	Frequency, month(s)	Maintenance requirement
		Water Quality	6m	Test water for resistivity, organic content and inorganic content. A minimum resistivity of 1000 ohm-inches is required. If result are not satisfactory, then flush the water and fill it with new distilled water.
	Sensors And Switches	Temperature Switch	12m	Test functionality and set points, replace if defective.
	Electrical Controller	Starter Relay	12m	Inspect relays for sign of overheating or defect, replace as required.
	Water Supply	Service Water	6m	Inspect all pipes for leaks, replace as required.
		City Water	6m	
Hydraulic	Hydraulic Power Pack	Filters	12m	1) Replace the oil strainer filter.
			12m	2) Replace the 25 micron return filter
			12m	3) Replace the 10 micron pressure filter
		Hydraulic Oil (Use Only The Mobil DTE 26)	1m	Check oil level in sight glass. Use Mobil DTE 26 to fill up.
			6m	Take oil sample, conduct visual color comparison, provide sample to chemistry lab to conduct a viscosity test at 100°C and 40°C, particle counter (ISO 4406), copper strip corrosion (ASTM D130), water content, wear metal, density and flash point. If results are not satisfactory, replace the oil.
			12m	Replace oil, use only the Mobil DTE 26.



System	Sub-System	Components	Frequency, month(s)	Maintenance requirement
		Hoses And Pipes	1m	1) Start hydraulic power supply and slowly set pressure to 2500-3000 psi.
			1m	2) Let the system run for five (5) minutes and verify that there are no leaks in the hoses and pipes.
			1m	3) Verify that the slip table can move freely.
			1m	4) Lower pressure setting to 0 psi, and wait 3 minutes to let the pump scavenge excess oil from bearings.
			1m	5) Stop the hydraulic power supply and wipe it down.
		Relief Valve	1m	Check pressure relief valve to be fully open (back-off all the way to 0 psi).
	Oil Cooler	12m	Clean oil cooler fins using compressed air.	
	Slip Table	Granite Inspection	Depending on the performance test	Inspect the granite table surface and the slip sliding surface. Verify the alignment with the interface adapter and level. Inspect the journal bearings for any damage and if they moves freely. Refer to the OEM maintenance.
		Hoses	Before each test	Inspect hoses for leaks or damages, replace as required.
		Slip Sliding Surface	6m	Inspect the surface finish and the helical coil holes for any damages.
Bolts		6m	Perform a visual inspection for cracks or insert integrity in particular those located on the interface adapter (bullnose), replace as required.	
Pneumatic	Suspension System For	Air Regulator	12m	Inspect and calibrate the gauges.



System	Sub-System	Components	Frequency, month(s)	Maintenance requirement	
	Exciter Head	Airbags	12m	Inspect the airbags and the valves for cracks or damaged, clean the airbags and apply a layer of silicone on the cracks, replace as required.	
		Hoses	6m	Inspect hoses for leaks or damages, replace as required.	
	Suspension System For Extension Table	Airbags	12m	Inspect the airbags and the valves for cracks or damaged, clean the airbags and apply a layer of silicone on the cracks, replace as required.	
		Surface	6m	Inspect the surface finish and the helicoil holes for any damage.	
		Bolts	6m	Inspect the bolts that fix the extension table with the shaker for sign of over-torque or any damage. Replace as required.	
		Hoses	Before each test	Inspect hoses for leaks or damages, replace as required.	
	Suspension System For Seismic Mass	Airbags	12m	Inspect the airbags and the valves for cracks or damaged, clean the airbags and apply a layer of silicone on the cracks, replace as required.	
		Level Switches	12m	Test functionality, replace if defective	
	Electrical	Power Breakers	Breakers	12m	Perform electrical maintenance on C-150 shaker in accordance with the quality instruction INS-0020
		Instrumentations	Accelerometers	12m	
Cooling Systems Temperature Monitor		Cable	12m		
Controls verification	Computer	Measurements	12m	Inspection to ensure that is working IAW OEM specifications.	



System	Sub-System	Components	Frequency, month(s)	Maintenance requirement
	Abacus	Measurements	12m	Inspection to ensure that is working IAW OEM specifications.
	Armature Position Control For Exciter Head	Position Control	12m	Inspection to ensure that is working IAW OEM specifications.
	Seismic Mass Control Panel	Gauge	12m	Replace if defective.
		Switch	12m	Replace if defective.
	Piezotronics	PCB	12m	Inspection to ensure that is working IAW OEM specifications.
Enclosure	Safety	Paints	12m	Painting where required.
		Protection & Security	12m	Ensure that all security and protection systems are functional
		Walk-In	12m	Clean below the test cell for any dirt or debris.

Table 6: Current Shaker Maintenance Plan



10 APPENDIX 1: ELECTRODYNAMIC SHAKER TECHNICAL STATEMENT OF REQUIREMENTS

10.1 GENERAL

10.1.1 Single Supplier

10.1.1.1 The Contractor must supply the Shaker from a single manufacturer, including all components and ancillary equipment described in SOW Section 10 and required for proper operation in both vertical and horizontal planes.

10.1.2 Proven design

10.1.2.1 The Contractor must demonstrate that the proposed solution is a proven and quality design by providing a list of references of similar systems (model and size) installations, preferably located in Montreal (QC) area or otherwise in Canada.

10.1.3 General Site Conditions

10.1.3.1 The Contractor must validate the current site conditions before the installation of the Shaker. These services include but may not be limited to:

10.1.3.1.1 Site Electrical, Water and Compressed air supply; and,

10.1.3.1.2 Physical location and identify any obstacles

10.1.3.2 The Contractor must ensure that the site is kept clean and free of debris during the execution of the work. Upon completion of work the Contractor must remove all waste, temporary installations and tools from the construction site leaving the area as it was before the work started.

10.1.4 Maintenance Support

10.1.4.1 All work must be conducted by the OEM or an authorized local representative.

10.1.4.2 The Contractor must be available to conduct annual safety checks on the Shaker for at least a 24-month period.

10.1.4.3 The safety checks must include, but not be limited to:

10.1.4.3.1 Nominal verifications of main, auxiliary and ancillary machinery necessary for the adequate Shaker operation; and,

10.1.4.3.2 Any trials that confirm the proper operation of the Shaker and supporting systems.

10.1.4.4 The Contractor must be available to provide troubleshooting and support to NETE personnel in case of a catastrophic failure of any main, auxiliary and ancillary machinery necessary for the adequate Shaker operation for at least a 24-month period.

10.1.4.5 The contractor must:

10.1.4.5.1 Provide services in the manner that will permit timely response and troubleshooting support; and,

10.1.4.5.2 Be on NETE LaSalle site within 24 to 48 hours' notice in case of a major emergency.

10.1.5 Commissioning & Training:



10.1.5.1 The Contractor must provide support during the installation and perform initial commissioning including demonstration of system performance.

10.1.5.2 The Contractor must provide training to NETE staff training for the safe operation and preventative maintenance expected by the manufacturer. The Contractor must support a Site Acceptance Test (SAT) as per NETE provided Test Plan, covering typical trials to be conducted with the Shaker as per Applicable Documents in SOW section 2. The SATs duration must be no less than one (1) week.

10.1.6 Documentation

10.1.6.1 The Contractor must provide NETE with:

10.1.6.1.1 A complete set of installation and equipment drawings, in both Hardcopy and Softcopy (.pdf).

10.1.6.1.2 All pertinent datasheets and manuals required to install, operate, calibrate and maintain the Shaker, in both Hardcopy and Softcopy (.pdf).

10.1.6.1.3 All relevant calibration and conformity certificates, in both Hardcopy and Softcopy (.pdf).

10.1.6.2 A complete listing of documents that will be provided at the completion of the project must be provided as part of the proposal.

10.1.6.3 All documents must be provided in English language as a minimum. If original documents are of French language origin, they must be provided in addition to their corresponding English translation(s).

10.1.7 Warranty

10.1.7.1 A warranty for parts and labour for a minimum duration of one (1) year after SAT completion must be included with the procurement.

10.1.7.2 An option for five (5) year warranty and/or maintenance plan must also be provided in the quotation.

10.2 TECHNICAL SPECIFICATIONS

10.2.1 Dimensions

10.2.1.1 Payload Weight (min): 4,536 kg (10,000 lbs) total, for all axis tests

10.2.1.2 Payload Size (min) (LxWxH): 1,500 x 1,500 x 2,140 mm (~60 x 60 x 84 inch), Center of Gravity (CG) at or below vertical midpoint

10.2.1.3 Shaker Height (max): 2,600 mm (~103 inch) max from concrete floor, including head expander in vertical plane

10.2.2 Exciter

10.2.2.1 Bandwidth (min): 3 to 1,700 Hz

10.2.2.2 Displacement (min): 63.5 mm (2.5 inch) pk-pk continuously

10.2.2.3 Velocity (min): 1.5 m/s (59 inch/s)

10.2.2.4 Force Sine Peak (min): 187 kN (42,000 lbf)



10.2.2.5	Armature Diameter (min):	600 mm (~24 inch) or 2.5 ratio to Head Expander size of 1,500 mm
10.2.2.6	Load Centering Capability:	Automatic at full load, compressed air available
10.2.2.7	Stray Magnetic Field limit (max):	1 mT (10 G) at 152 mm (6 inch) from Table Top
10.2.2.8	Cooling System:	Included with liquid to liquid heat exchanger, 15 l/min service water available at up to 30°C
10.2.2.9	Cooling System Acoustic Noise (max):	87 dBA at 1 m (as per SOR/86-304)
10.2.3 Head Expander		
10.2.3.1	Material:	Magnesium, Flat to ± 0.125 mm (5 mils)
10.2.3.2	Test Area Size (min) (LxW):	1,500 x 1,500 mm (~60 x 60 inch) working area with round or chamfer corners
10.2.3.3	Inserts:	3/8"-16UNC threads on 4 x 4 inch grid and radial pattern matching exciter head, centered
10.2.3.4	Support & Guidance:	As required for maximum payload capacity, compressed air available.
10.2.4 Slip Table		
10.2.4.1	Material:	Magnesium, Flat to ± 0.125 mm (5 mils)
10.2.4.2	Test Area Size (min) (LxW):	1,500 x 1,500 mm (~60 x 60 inch) working area with driver bar attached.
10.2.4.3	Inserts:	3/8"-16UNC threads on 4 x 4 inch grid and radial pattern matching exciter head at far end
10.2.4.4	Linear Bearings (min):	Hydrostatic linear bearings, including Hydraulic compressor
10.2.5 Power Amplifier		
10.2.5.1	Power Capacity (min):	Matching Exciter requirements and Impedance
10.2.5.1.1	The Contractor must demonstrate that the proposed amplifier shall be matching with the proposed Exciter (both to be provided by contractor).	



10.2.5.2	Controller:	Compatibility required with NETE-owned controller: DataPhysics SignalStar Vector
10.2.5.2.1	The Contractor must demonstrate that their proposed solution is fully compatible with the existing DataPhysics SignalStar Vector controller (provided by NETE)..	
10.2.5.3	Analog Control Input (max):	10 V full scale audio signal, Adjustable attenuator desirable for low range operations.
10.2.5.4	Total Harmonic Distortion (max):	0.5% from 3 Hz to 1.7 kHz at 100% capacity (for current) 0.8% from 3 Hz to 1.7 kHz at 1% capacity
10.2.5.5	Signal to Noise ratio (min):	65 dB below full output level
10.2.5.6	Alarm Indicators:	Local power, temperature, pressure, limits, and Remote interface (Panel and/or Ethernet)
10.2.5.7	Safeties:	Emergency Stop buttons and Limit Interlocks for over-travel, temperatures, pressures, and currents
10.2.5.8	Power Supply:	NETE installations provide 575V three-phase delta 60 Hz electrical power from Hydro-Québec with current fitted capacity of 300 kVA. The Contractor must supply the appropriate isolation and/or conversion transformer required for their proposed shaker system. The Contractor must also provide the total input power requirements.
10.2.5.9	Power Filters:	3 phases RFI/EMI filters for main power supply
10.2.5.10	Power Cables (min):	18 m (60 feet) between Amplifier Cabinets and Exciter
10.2.5.11	Acoustic Noise level (max):	87 dBA max at 1m (as per SOR/86-304)

10.3 FACILITY MODIFICATIONS

10.3.1 Seismic Mass

10.3.1.1 The Contractor must assist NETE with coordination, design and build of the proper foundation for the installation of the new Shaker, following instructions and guidance from the Shaker supplier and relevant technical experts.

10.3.1.2 If not integral to the Shaker design, a new sub-foundation reaction mass (seismic mass) for isolation with the building structure will be build. The reaction mass will be



sized to a weight of at least 10 times the system force capacity and fitted on pneumatic mounts providing a natural frequency of 3 Hz or less.

10.3.2 Embedded Pit

10.3.2.1 The Contractor must assist NETE with coordination, design and build of an embedded pit, so the Shaker can be positioned as close to the ground level as possible, without impeding any future operations and installations. This configuration will provide an easy access to the slip table and exciter head for test equipment installation, maintenance and monitoring.

10.3.2.2 The pit arrangement must provide a walking surface with 1.5 m minimum clearance between moving surfaces and be equipped with the removable guard rails of its outer perimeter. The entire structure must be enclosed in a protective barrier fitted with enough space to host the amplifier cabinet and a control station for three (3) people sitting.

10.3.3 Ancillary and Auxiliary Systems

10.3.3.1 The Contractor must assist NETE with coordination, design, build, set-to-work and installation of the proper facility services for the new Shaker, as per specifications, guidelines and instructions from the Shaker manufacturer.

10.3.3.2 The work must at minimum include integration of the equipment with the building services and related controls (HVAC, electric, cooling water, compressed air, fire suppression, et cetera). All of the necessary systems must be collocated as much as possible and be accessible from the embedded pit. Such layout will provide easy access to all components requiring maintenance (filter, reservoir, indicators).

10.4 ON-SITE INSTALLATION

10.4.1 Coordination

10.4.1.1 NETE will coordinate the installation of the Shaker following the supplier provided instructions, including provisions and connection to all facility services such as electricity, service water and compressed air. The Contractor must provide all services specific requirements and particularized installation drawings for all Shaker components.

10.4.1.2 NETE will coordinate, if not integral to the Shaker design, the design and construction of a new sub-foundation reaction mass (seismic mass) for isolation with the building structure and any environmental noise. The reaction mass will be sized to a weight of at least 10 times the system force capacity and fitted with pneumatic mounts providing a natural frequency of 3 Hz or less. The Contractor must provide guidance and all requirements to design a proper foundation and reaction mass.

10.4.1.3 NETE will coordinate the design and installation of the embedded pit. This configuration will provide an easy access to the slip table and exciter head for test equipment installation, maintenance and monitoring. The pit arrangement will provide a walking surface with 1.5 m minimum clearance between moving surfaces and be equipped with the removable guard rails of its outer perimeter. The entire structure will be enclosed in a protective barrier fitted with enough space to host the amplifier cabinet and a control station for three (3) people sitting.



10.4.2 Installation

- 10.4.2.1 NETE will coordinate the installation of the Shaker components and complete the services connections as per Contractor instructions and with his support. The Shaker may be lifted into position over the new foundation using the NETE overhead crane.
- 10.4.2.1.1 The Contractor must validate NETE overhead crane to ensure that it is adequate to lift the Shaker and any of its subsidiary components in place as described in the section 10.4.2.1. Otherwise, the Contractor must supply all necessary suitable lifting appliances to install the Shaker and all of its components.
- 10.4.2.2 The electrical power input will be fitted with a dedicated isolation transformer and inline EMI/RFI filters (or any OEM recommended filter components) to ensure both a clean power source to the Shaker and avoid contamination of the facility power network.
- 10.4.2.2.1 The Contractor must supply the necessary power input isolation transformer (if required) together with the inline EMI/RFI filters, including a minimum amount of filter spares.
- 10.4.2.3 The Shaker must have an electric grounding system (built-in or separate) providing electric isolation and stabilizing the voltage and current supplied to the Shaker. The Contractor must supply a compatible electric isolation system.
- 10.4.2.3.1 The Contractor must ensure and provide sufficient evidence to NETE that demonstrates the adequacy and the proper operation of the installed grounding system.
- 10.4.2.4 The Contractor must review the installation drawings provided by NETE, and perform a site inspection of the facility preparations before delivery of the system.



11 APPENDIX 2: LIST OF CDRLS

11.1 PROJECT MANAGEMENT CDRL DETAILS

11.1.1 CDRL-PM-01

1	Sequence Number	PM-01
2	Title or Description of Data	Project Management Plan
3	Data Item Description of Data	DID-PM-01
4	Reference	SOW 4.2, 4.15.4, 4.15.5
5	First Submission	CA +10bd
6	Number of Copies	1 soft copy
7	TA Acceptance Requirements	Yes
8	Acceptance Lead Times	
9	Subsequent Submission	As required, if changes needed.
10	Remarks	Deliver via email

Table 7: CDRL-PM-01

11.1.2 CDRL-PM-02

1	Sequence Number	PM-02
2	Title or Description of Data	Meeting Agendas and Supporting Documents
3	Data Item Description of Data	DID-PM-02
4	Reference	SOW 4.5
5	First Submission	Meeting Date -5bd
6	Number of Copies	1 soft copy
7	TA Acceptance Requirements	Yes
8	Acceptance Lead Times	2 bd
9	Subsequent Submission	N/A
10	Remarks	Deliver via email

Table 8: CDRL-PM-02

11.1.3 CDRL-PM-03

1	Sequence Number	PM-03
2	Title or Description of Data	Meeting Minutes
3	Data Item Description of Data	DID-PM-03
4	Reference	SOW 4.6
5	First Submission	Meeting Date +5bd
6	Number of Copies	1 soft copy
7	TA Acceptance Requirements	Yes
8	Acceptance Lead Times	2 bd
9	Subsequent Submission	N/A
10	Remarks	Deliver via email

Table 9: CDRL-PM-03



11.1.4 CDRL-PM-04

1	Sequence Number	PM-04
2	Title or Description of Data	Project Status Reports
3	Data Item Description of Data	DID-PM-04
4	Reference	SOW 4.10
5	First Submission	CA +30bd
6	Number of Copies	1 soft copy
7	TA Acceptance Requirements	No
8	Acceptance Lead Times	N/A
9	Subsequent Submission	Every 3rd PRM -5bd after 1 st submission
10	Remarks	Deliver via email

Table 10: CDRL-PM-04

11.1.5 CDRL-PM-05

1	Sequence Number	PM-05
2	Title or Description of Data	Project Kick Off Meeting
3	Data Item Description of Data	DID-PM-05
4	Reference	SOW 4.8
5	First Submission	CA +10bd
6	Number of Copies	N/A
7	TA Acceptance Requirements	No
8	Acceptance Lead Times	N/A
9	Subsequent Submission	N/A
10	Remarks	N/A

Table 11: CDRL-PM-05

11.2 ENGINEERING CDRL DETAILS

11.2.1 CDRL-EN-01

1	Sequence Number	EN-01
2	Title or Description of Data	Critical Design Documents
3	Data Item Description of Data	DID-EN-01
4	Reference	SOW 4.11
5	First Submission	No later than CA +60bd and not less than CDR -10bd
6	Number of Copies	1 soft copy + 1 hard copy (Drawings on 11x17 sized paper, Reports and other documents on 8 ½ x 11 sized paper, bound in a binder(s))
7	TA Acceptance Requirements	No
8	Acceptance Lead Times	N/A
9	Subsequent Submission	EN-02
10	Remarks	Deliver soft copy via email or FTP, hard copy by mail or courier

Table 12: CDRL-EN-01



11.2.1.1 CDRL-EN-02

1	Sequence Number	EN-02
2	Title or Description of Data	Technical Data Package
3	Data Item Description of Data	DID-EN-02
4	Reference	SOW 4.12
5	First Submission	PA -20bd
6	Number of Copies	1 soft copy + 1 hard copy (Drawings on 11x17 sized paper, Reports and other documents on 8 ½ x 11 sized paper, bound in a binder(s))
7	TA Acceptance Requirements	Yes
8	Acceptance Lead Times	10bd
9	Subsequent Submission	N/A
10	Remarks	Deliver soft copy via email or FTP, hard copy by mail or courier

Table 13: CDRL-EN-02

11.3 ACCEPTANCE CDRL DETAILS

11.3.1 CDRL-AP-01

1	Sequence Number	AP-01
2	Title or Description of Data	Shaker Acceptance Plan and Procedures
3	Data Item Description of Data	DID-AP-01
4	Reference	SOW 6
5	First Submission	CA +60bd
6	Number of Copies	1 soft copy
7	TA Approval Requirements	No
8	Acceptance Lead Times	5bd
9	Subsequent Submission	N/A
10	Remarks	Deliver via email or FTP

Table 14: CDRL-AP-01



11.4 TRAINING SUPPORT CDRL DETAILS

11.4.1 CDRL-TRG-01

1	Sequence Number	TRG-01
2	Title or Description of Data	Cadre Training and Training Package
3	Data Item Description of Data	DID-TRG-01
4	Reference	SOW 5.4, 5.5, 5.6, 5.7, 5.8
5	First Submission	PA -20bd
6	Number of Copies	First submission: 1 soft copy + 1 hard copy (Drawings on 11x17 sized paper, Reports and other documents on 8 ½ x 11 sized paper, bound in a binder(s)) Second submission: 10 hard copies (Drawings on 11x17 sized paper, Reports and other documents on 8 ½ x 11 sized paper, bound in a binder(s))
7	TA Acceptance Requirements	Yes
8	Acceptance Lead Times	10bd
9	Subsequent Submission	At time of Cadre Training Session
10	Remarks	First submission: Deliver soft copy via email or FTP, hard copy by mail or courier Second submission: Hand deliver hard copies to the cadre training session

Table 15: CDRL-TRG-01

11.4.2 CDRL-MTN-01

1	Sequence Number	MNT-01
2	Title or Description of Data	Maintenance Concept
3	Data Item Description of Data	DID-MTN-01
4	Reference	SOW 5.2
5	First Submission	PA -20bd
6	Number of Copies	1 soft copy + 1 hard copy (Drawings on 11x17 sized paper, Reports and other documents on 8 ½ x 11 sized paper, bound in a binder(s))
7	TA Acceptance Requirements	Yes
8	Acceptance Lead Times	10bd
9	Subsequent Submission	N/A
10	Remarks	Deliver via email

Table 16: CDRL-MTN-01



12 APPENDIX 3: LIST OF DIDS

12.1 PROJECT MANAGEMENT DIDS

12.1.1 DID-PM-01

1. TITLE Project Management Plan		2. IDENTIFICATION NUMBER DID-PM-01	
3. DESCRIPTION / PURPOSE The Contractor must develop, implement and maintain a Shaker Project Management Plan (PMP) in order to fulfill the project management requirements of this SOW.			
4. APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST (OPI) Technical Authority:		6. SPARE
7. APPLICATION / INTERRELATIONSHIP CDRL-PM-01 SOW Ref: Section 4.2			
8. ORIGINATOR		9. APPLICABLE FORMS	
10. PREPARATION INSTRUCTIONS			
10.1 The Project Management Plan (PMP) must be prepared in Contractor's format.			
10.2 Structure - The PMP must contain, as a minimum, the following sections: <ul style="list-style-type: none"> • Management Organization, Communications and Responsibilities; • Work Breakdown Structure (to at least a sub-assembly level of detail for the design and construction) and including development activities for all non-construction deliverables (i.e. training manual(s)); • Master Schedule (showing, at a minimum, all planned meetings, inspections, tests, trials, provisional acceptance(s), delivery(ies) and other major milestones); • The Contractor must provide a site specific Health and Safety (H&S) Plan before the start of work on site. This plan includes: <ul style="list-style-type: none"> ○ Contractor's company H&S Plan ○ Site specific H&S Plan ○ Submit applicable Workplace Hazardous Material Information System (WHMIS) Safety Data Sheets (SDS) • Quality Assurance Plan; • Inspections and Tests Plans; • Risk Register and Mitigation Strategy; and, • Cost Management Plan. 			

Table 17: DID-PM-01

12.1.2 DID-PM-02

1. TITLE Meeting Agendas and Supporting Documents		2. IDENTIFICATION NUMBER DID-PM-02	
3. DESCRIPTION / PURPOSE The purpose of the Meeting / Teleconference / Conference Supporting Documentation and			



Agenda is to provide the proposed subject items for review and discussion.		
4. APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST (OPI) Technical Authority:	6. SPARE
7. APPLICATION / INTERRELATIONSHIP CDRL-PM-02 SOW Ref: Section 4.5		
8. ORIGINATOR	9. APPLICABLE FORMS	
10. PREPARATION INSTRUCTIONS		
10.1 The Meeting Agendas and Supporting Documents must be prepared in Contractor's format.		
10.2 The Agenda must include the following: <ul style="list-style-type: none"> • Purpose of the meeting; • List of expected attendees; • Time, date, location and expected duration of the meeting; • Facilities and equipment to be provided for attending personnel; • List of data items and documents to be reviewed or provided to support the meeting; • Copies of all data and documentation to be reviewed, and, • A copy of the current Action Item List where appropriate. 		

Table 18: DID-PM-02

12.1.3 DID-PM-03

1. TITLE Meeting Minutes	2. IDENTIFICATION NUMBER DID-PM-03	
3. DESCRIPTION / PURPOSE The purpose of Meeting / Teleconference / Conference Minutes is to document discussions, agreements and action items identified (with the responsible parties and closure dates) reached during subject meetings.		
4. APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST (OPI) Technical Authority:	6.SPARE
7. APPLICATION / INTERRELATIONSHIP CDRL-PM-03 SOW Ref: Section 4.6		
8. ORIGINATOR	9. APPLICABLE FORMS	
10. PREPARATION INSTRUCTIONS		
10.1 Meeting / Teleconference / Conference Minutes must be prepared in the Contractor's format and must include the following information: <ul style="list-style-type: none"> • Date and location of meeting; and, • Name, organization, phone number, e-mail address and title of each person that attended the meeting. 		



10.2	In addition, the minutes must include the following: <ul style="list-style-type: none"> • Statement relating to the purpose and/or objective of the meeting; and, • The original agenda and any revisions to the agenda - this may be accomplished by reference to attachments or enclosures.
10.3	Minutes must include a record of each agenda item and any additional items raised, discussed or reviewed during the meeting, including: <ul style="list-style-type: none"> • A brief statement identifying the item or problem and their status; • A summary of pertinent information associated with the item; • Any decisions or recommendation associated with the item; • An action item - identifying the person or organization responsible for taking and/or co-ordinating required action with key dates; and, • An updated Action Item List with all open and closed items.
10.4	Meeting minutes should be distributed, where possible, at the end of the meeting and signed by the responsible parties before leaving. Otherwise the meeting minutes must be delivered as directed in CDRL.

Table 19: DID-PM-03

12.1.4 DID-PM-04

1. TITLE Project Status Reports		2. IDENTIFICATION NUMBER DID-PM-04	
3. DESCRIPTION / PURPOSE The project status reports provide a chronological update on the project progress in comparison to the project management plan and project schedule.			
4. APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST (OPI) Technical Authority:	6. SPARE	
7. APPLICATION / INTERRELATIONSHIP CDRL-PM-04 SOW Ref: Section 4.10			
8. ORIGINATOR		9. APPLICABLE FORMS	
10. PREPARATION INSTRUCTIONS 10.1 The Project Status Reports must be prepared in Contractor's format.			



10.2	<p>The project status report must indicate necessary amendments to the PMP, in particular the schedule, as appropriate.</p> <p>The Project Status Reports must include at least the following information:</p> <ul style="list-style-type: none"> • A narrative report providing sufficient detail to enable the Contracting and the Technical Authorities to evaluate the progress of the work to date; • Risk management activities. Significant problems or concerns encountered together with recommended course of action. Such running risk management table must be updated periodically; • Schedules status, schedule changes and planned activities for the next reporting period; • A summary of any issues for meeting requirements / specifications; • Running summary of observations and problems that have been opened, are in progress or have been resolved; and, • Subset of Action Item List containing all open action items.
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Table 20: DID-PM-04

12.1.5 DID-PM-05

1. TITLE Project Kickoff Meeting		2. IDENTIFICATION NUMBER DID-PM-05	
3. DESCRIPTION / PURPOSE The Project Kickoff Meeting is to review the project management plan and the project schedule.			
4. APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST (OPI) Technical Authority:	6. SPARE	
7. APPLICATION / INTERRELATIONSHIP CDRL-PM-05 SOW Ref: Section 4.8			
8. ORIGINATOR		9. APPLICABLE FORMS	
10. PREPARATION INSTRUCTIONS			
10.1 The Project kick off meeting must include as a minimum: <ul style="list-style-type: none"> • Meeting agenda; • A line by line review of the SOW (including in particular the Shaker Technical Requirements); • Overview of the project management plan; and, • Critical path activities. 			

Table 21: DID-PM-05

12.2 ENGINEERING DIDS

12.2.1 DID-EN-01

1. TITLE Critical Design Documents	2. IDENTIFICATION NUMBER DID-EN-01
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3. DESCRIPTION / PURPOSE. The Critical Design Documents must provide all of the review materials required for the Critical Design Review meeting.		
4. APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST (OPI) Technical Authority:	6. SPARE
7. APPLICATION / INTERRELATIONSHIP - APPLICATION / INTERDEPENDANCE CDRL-EN-01 SOW Ref: Section 4.11		
8. ORIGINATOR	9. APPLICABLE FORMS	
10. PREPARATION INSTRUCTIONS		
10.1 The following document must be provided to, but not be limited to, the Critical Design Review meeting: <ul style="list-style-type: none"> All data to prove that the Contractors solution meets all the technical and logistic requirements of the SOW. 		
10.2 Final documents provided by the Contractor must include (but are not limited to): <ul style="list-style-type: none"> All stamped final drawings, diagrams, designs, or plans related to the Shaker and required for installation and proper operation; All additional final drawings, diagrams, designs, or plans necessary to demonstrate compliance with the requirements of this SOW; Final Inspections and Tests Plans including all applicable information required to complete AT (DID-AP-01); Identification of all Classification Society Certifications and Approvals required during construction; Final Shaker and associated equipment General Arrangement and layout drawings. All layout drawings must be superimposed onto the NETE Floor plan (SOW Section 2.1.2.14) where applicable; and, Updated build and delivery schedule. 		
10.2 The Contractor must: <ul style="list-style-type: none"> Prepare the Critical Design Documents using metric units, unless the source of the original documentation is non-metric, and no changes to that original documentation are to be made; Prepare Critical Design Documents in the Contractors format; and, Present the Critical Design Documents to the TA prior to the design review meetings for review to check compliance with the SOW. 		

Table 22: DID-EN-01

12.2.2 DID-EN-02

1. TITLE Technical Data Package (TDP)	2. IDENTIFICATION NUMBER DID-EN-02
3. DESCRIPTION / PURPOSE The TDP is intended to provide the necessary data for NETE personnel to operate the Shaker.	



4. APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST (OPI) Technical Authority:	4. APPROVAL DATE
7. APPLICATION / INTERRELATIONSHIP - APPLICATION / INTERDEPENDANCE CDRL-EN-02 DID-AP-01 SOW Ref: Section 4.12		
8. ORIGINATOR	9. APPLICABLE FORMS	
10. PREPARATION INSTRUCTIONS		
10.1 The Contractor must supply a complete set of technical drawings, in native format as well as in scalable pdf, for the Shaker, to allow for full identification of all components, as well as the performance of preventative and corrective maintenance.		
10.2 The TDP must include each of the following but is not limited to: <ul style="list-style-type: none"> • Final Shaker, ancillary and auxiliary equipment General Arrangement and layout drawings; • Any additional Approved Drawings; • Updated versions of any drawings or reports submitted during CDR that are not otherwise included in this list; • Inspection Reports; • Final Inspections, Tests and Trials Report(s); • List of any relevant Certifications and Approvals; • Maintenance Documentation and or Manuals, where applicable; • Spare Parts List with OEM part numbers and supply details; • Any appropriate As-Fitted drawings/designs for the Shaker; and, • Outfit and As-Fitted Part List (List must include the following but is not limited to: detail type, size, material, location, manufacturer, OEM part numbers, and weight). 		

Table 23: DID-EN-02

12.3 ACCEPTANCE DIDS

12.3.1 DID-AP-01

1. TITLE Shaker Acceptance Plan and Procedures	2. IDENTIFICATION NUMBER DID-AP-01	
3. DESCRIPTION / PURPOSE Deliver the plan and procedures for the Acceptance program to be used to verify the compliance of the Shaker, its equipment, and components in operational conditions at NETE LaSalle.		
4. APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST (OPI) Technical Authority:	6. SPARE
7. APPLICATION / INTERRELATIONSHIP CDRL-AP-01 SOW Ref: Section 6		
8. ORIGINATOR	9. APPLICABLE FORMS	
10. PREPARATION INSTRUCTIONS		



10.1	Must be prepared by Contractor in Contractor's format.
10.2	<p>The Shaker Acceptance Plan and Procedures must include the following as a minimum:</p> <ul style="list-style-type: none"> • Details of the plans and procedures for all inspections, tests and trialtrials necessary to verify the Shaker meets the requirements specified in the SOW and related references, including as a minimum of verification of operation as described in Section 6.2.5; • The list of prerequisite mandatory inspection reports required to verify compliance with the requirements of this SOW, in order to proceed with the Acceptance Test and Trials; • The detailed list of supplies and systems required to complete the test and trialtrials; • The list of the personnel required for the inspection, test or trial (as a minimum representatives from NETE and the Contractor must attend all inspections, tests and trialtrials used to verify Contractual compliance); • The environmental and personnel safety requirements related to the Shaker operation during the trial; • The approved test plan and recording data sheets to be filled during the inspection, test or trialtrial; and, • The sequential order and type of trials to be conducted on the Shaker and performances metrics to be obtained.
10.3	<p>Contractor must develop and deliver an Acceptance schedule based on the Shaker Acceptance Plan and Procedures. The schedule must provide an estimated duration of each of the main activities where applicable.</p> <p>The schedule for all test activities must be integrated in the Master Schedule.</p>

Table 24: DID-AP-01

12.4 TRAINING SUPPORT DIDS

12.4.1 DID-TRG-01

1. TITLE Shaker Cadre Training and Training Package		2. IDENTIFICATION NUMBER DID-TRG-01	
3. DESCRIPTION / PURPOSE The Shaker cadre training agenda and plan will be for a cadre training session, provided at NETE LaSalle, QC, to provide NETE personnel with familiarization and maintenance training related to the operation of the Shaker.			
4. APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST (OPI) Technical Authority:	6. SPARE	
7. APPLICATION / INTERRELATIONSHIP CDRL-TRG-01 DID-MTN-01 SOW Ref: Sections 5.4, 5.5, 5.6, 5.7, 5.8			
8. ORIGINATOR		9. APPLICABLE FORMS	
10. PREPARATION INSTRUCTIONS			



10.1	The Contractor must provide a Shaker familiarization and maintenance training package, in electronic format, to allow subsequent training of the equipment at NETE facility. One hard copy of the training package must be provided to each student at the cadre training
10.2	A Cadre training sessions will be held in LaSalle, Quebec. A maximum of 10 students will attend the training session. The Shaker familiarization and maintenance training will include, as a minimum: <ul style="list-style-type: none">• Familiarization with the overall Shaker arrangements and any limits associated with each of these;• An overview of the maintenance manual developed for the Shaker;• Description of the preventative maintenance requirements, in particular those required on monthly basis duration;• Demonstrations the repair procedures where applicable;• Demonstrations of accessing the Shaker components with and without removing the major sub-assemblies;• Demonstrations of the repair procedures for replacing a sub-assembly; and,• Any other processes and/or procedures that the Contractor identifies as helpful to NETE for the ongoing maintenance and operation of the Shaker.
10.3	The Contractor will provide a Cadre training package which must include but is not limited to the following: <ul style="list-style-type: none">• Outline;• Training materials;• Workbook/Manual/Text etc.; and,• Appropriate training aids. The Contractor must provide NETE the right to reproduce, translate and use all provided training material. This includes the right to have third parties use this material on behalf of NETE.

Table 25: DID-TGR-01



12.4.2 DID-MTN-01

1. TITLE Shaker Maintenance Concept		2. IDENTIFICATION NUMBER DID-MTN-01							
3. DESCRIPTION / PURPOSE The Shaker Maintenance Concept must provide a complete set of maintenance plans that identify the required maintenance tasks and identify the logistics support resources needed to perform tasks.									
4. APPROVAL DATE		5. OFFICE OF PRIMARY INTEREST (OPI) Technical Authority:	6. SPARE						
7. APPLICATION / INTERRELATIONSHIP CDRL-MTN-01 DID-TRG-01 SOW Ref: Section 5.2									
8. ORIGINATOR		9. APPLICABLE FORMS							
10. PREPARATION INSTRUCTIONS									
10.1 Must be prepared in the Contractor's format.									
10.2 The submission must identify the required maintenance for each component including Repair By Replacement requirements. The data must be consolidated into one									
10.3 The data must be grouped into tables listing routine, calendar based and operating hour based tasks. An example of rudimentary breakout is shown below. Each interval within a category will be a column in its respective table.									
		<table border="1"> <thead> <tr> <th>Scheduled Task</th> <th>Interval</th> </tr> </thead> <tbody> <tr> <td>Routine Shop Floor Tasks</td> <td>Monthly or Yearly</td> </tr> <tr> <td>Monthly Maintenance Tasks</td> <td>e.g. 1, 3, 4, 6, 12, 18, 24, 36, 48 or 60 months</td> </tr> </tbody> </table>		Scheduled Task	Interval	Routine Shop Floor Tasks	Monthly or Yearly	Monthly Maintenance Tasks	e.g. 1, 3, 4, 6, 12, 18, 24, 36, 48 or 60 months
Scheduled Task	Interval								
Routine Shop Floor Tasks	Monthly or Yearly								
Monthly Maintenance Tasks	e.g. 1, 3, 4, 6, 12, 18, 24, 36, 48 or 60 months								
10.4 The Shaker Maintenance Concept must include a section presenting maintenance task data sheets that contain the following information for each maintenance task:									
<ul style="list-style-type: none"> • Maintenance identification number; • Asset (equipment); • Description (brief, of maintenance item); • Steps/Process (including safety considerations, special tools required, applicable standards); • Frequency (number, i.e. 1, 500); • Frequency units (i.e. Hours, Months, Year); • Parts Required; and, • Estimated LOE (Level of Effort). 									

Table 26: DID-MTN-01

ANNEX “B”

1.1 BASIS OF PAYMENT

Bidders must indicate for each of the following Items, their Firm Unit Bid prices, excluding taxes.

Table 1

Item	Description	Unit Price CAN\$ (a)	Quantity (b)	Total Price (a)x(b)
1	Shaker, Seismic Mass and Auxiliary systems Delivery and Installation in accordance with Annex A, SOW and TSOR	\$		\$
2	Optional additional 5 year warranty period*	\$		\$
Total Evaluated Price (Sum item 1)				\$
Grand Total Price (Sum item 1,2)				\$

*Item 2 and the following **Unscheduled Work Rates** and optional spare parts list will be included in the Basis of Payment, however they will not form part of the bid evaluation.*

2. Unscheduled Work Rates and Optional Spare Parts Price List:

Bidders must provide the following requested rates:

A. The Charge-out Rate specified below includes all classes of labor, engineering and foreperson, and all overheads, supervision and profit. The Charge-out Rate will be used for pricing unscheduled work that results in an increase or decrease in the Work Period, except as noted in the clause entitled "Overtime."
Charge-out Rate - \$..... /person/hour.

B. Overtime:

Occasionally, Canada may elect to authorize overtime, for **Unscheduled Work** only. If this is the case, and the rate is greater than the Charge-out Rate, cost of labor hours will be determined on the following basis;

Time and one-half rate: \$..... /person/hour
Double Time Rate: \$..... /person/hour

3. The cost of material must be the net laid-down cost of the material to which must be added a mark-up of 10% of the net laid-down cost of the material. For the purposes of pricing, **Unscheduled Work** and material must be deemed to include subcontracts.

4. Recommended Spare Parts Price List

All firm prices for the recommended spare parts must be **Delivered Duty Paid (DDP)** Incoterms 2000 to the Naval Engineering Test Establishment (NETE), LaSalle QC.

Table 2 – Spare Parts Price List

Item	Spare Part Description	Part Number	Unit Price CAN\$	Recommended Quantity
			\$	
			\$	
			\$	
			\$	

1.2 Schedule of Milestones

The schedule of milestones for which payments will be made in accordance with the Contract is as:

Item No.	Milestone/Progress	Description	Percentage of total contract	Milestone/Progress Value (populated at contract award)
1	Project kickoff meeting/ Minutes	Successful completion of project kickoff meeting in accordance with SOW 4.8 through SOW 4.8.4.3 as well as delivery and acceptance of meeting minutes.	5%	
2	Acceptance Plan	Delivery and acceptance of acceptance plan in accordance CDRL-AP-01 and DID-AP-01.	5%	
3	Critical Design Review	Delivery and acceptance of CDR documents in accordance CDRL-EN-01 and DID-EN-01.	5%	
4	Inspection and Test Plan	Delivery and acceptance of ITP in accordance with SOW 6.1 through SOW 6.1.4	5%	
5	Shaker, Seismic Mass and Auxiliary systems	Successful delivery and installation of Shaker, Seismic Mass and Auxiliary systems in accordance with section 10 of the SOW inclusive.	30%	
6	Post-installation inspection and site acceptance trials (SATs)	Successful completion of SAT and delivery and acceptance of required documents in accordance with SOW section 6.2 through SOW 6.2.7.4	10%	
7	Technical Data Package	Delivery and acceptance of TDP in accordance with CDRL-EN-02 and DID-EN-02.	10%	
8	Provisional Acceptance	Successful completion of provisional acceptance in accordance with SOW 6.4 through SOW 6.4.2	10%	
9	Training Documents	Delivery and acceptance of Cadre Training Package documents in accordance with CDRL-TRG-01 and DID-TRG-01.	5%	
10	Training	Successful completion of training sessions to the identified NETE personnel outlined in the SOW Section 6 and CDRL-TRG-01 and DID-TRG-01.	10%	
11	Warranty Period	Successful completion of warranty in accordance with SOW 10.1.7.1	5%	
Total:		%100		%100

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ANNEX "C"

SRCL

W8472-215850



Contract Number / Numéro du contrat W8472-215850/A
Security Classification / Classification de sécurité Unclassified

**SECURITY REQUIREMENTS CHECK LIST (SRCL)
LISTE DE VÉRIFICATION DES EXIGENCES RELATIVES À LA SÉCURITÉ (LVERS)**

PART A - CONTRACT INFORMATION / PARTIE A - INFORMATION CONTRACTUELLE

1. Originating Government Department or Organization / Ministère ou organisme gouvernemental d'origine	Department of National Defence	2. Branch or Directorate / Direction générale ou Direction DGMEPM / Naval Engineering Test Establishment
3. a) Subcontract Number / Numéro du contrat de sous-traitance	3. b) Name and Address of Subcontractor / Nom et adresse du sous-traitant	

4. Brief Description of Work / Brève description du travail
To install and commission a new Vibration Test Bed (Shaker) along with all ancilliary equipment at the Naval Engineering Test Establishment (NETE).

5. a) Will the supplier require access to Controlled Goods? / Le fournisseur aura-t-il accès à des marchandises contrôlées? No / Non Yes / Oui

5. b) Will the supplier require access to unclassified military technical data subject to the provisions of the Technical Data Control Regulations? / Le fournisseur aura-t-il accès à des données techniques militaires non classifiées qui sont assujetties aux dispositions du Règlement sur le contrôle des données techniques? No / Non Yes / Oui

6. Indicate the type of access required / Indiquer le type d'accès requis

6. a) Will the supplier and its employees require access to PROTECTED and/or CLASSIFIED information or assets? / Le fournisseur ainsi que les employés auront-ils accès à des renseignements ou à des biens PROTÉGÉS et/ou CLASSIFIÉS? (Specify the level of access using the chart in Question 7. c) / (Préciser le niveau d'accès en utilisant le tableau qui se trouve à la question 7. c) No / Non Yes / Oui

6. b) Will the supplier and its employees (e.g. cleaners, maintenance personnel) require access to restricted access areas? No access to PROTECTED and/or CLASSIFIED information or assets is permitted. / Le fournisseur et ses employés (p. ex. nettoyeurs, personnel d'entretien) auront-ils accès à des zones d'accès restreintes? L'accès à des renseignements ou à des biens PROTÉGÉS et/ou CLASSIFIÉS n'est pas autorisé. No / Non Yes / Oui

6. c) Is this a commercial courier or delivery requirement with no overnight storage? / S'agit-il d'un contrat de messagerie ou de livraison commerciale sans entreposage de nuit? No / Non Yes / Oui

7. a) Indicate the type of information that the supplier will be required to access / Indiquer le type d'information auquel le fournisseur devra avoir accès

Canada <input type="checkbox"/>	NATO / OTAN <input type="checkbox"/>	Foreign / Étranger <input type="checkbox"/>
---------------------------------	--------------------------------------	---

7. b) Release restrictions / Restrictions relatives à la diffusion		
No release restrictions / Aucune restriction relative à la diffusion <input type="checkbox"/>	All NATO countries / Tous les pays de l'OTAN <input type="checkbox"/>	No release restrictions / Aucune restriction relative à la diffusion <input type="checkbox"/>
Not releasable / À ne pas diffuser <input type="checkbox"/>		
Restricted to: / Limité à: <input type="checkbox"/>	Restricted to: / Limité à: <input type="checkbox"/>	Restricted to: / Limité à: <input type="checkbox"/>
Specify country(ies): / Préciser le(s) pays:	Specify country(ies): / Préciser le(s) pays:	Specify country(ies): / Préciser le(s) pays:

7. c) Level of information / Niveau d'information		
PROTECTED A / PROTÉGÉ A <input type="checkbox"/>	NATO UNCLASSIFIED / NATO NON CLASSIFIÉ <input type="checkbox"/>	PROTECTED A / PROTÉGÉ A <input type="checkbox"/>
PROTECTED B / PROTÉGÉ B <input type="checkbox"/>	NATO RESTRICTED / NATO DIFFUSION RESTREINTE <input type="checkbox"/>	PROTECTED B / PROTÉGÉ B <input type="checkbox"/>
PROTECTED C / PROTÉGÉ C <input type="checkbox"/>	NATO CONFIDENTIAL / NATO CONFIDENTIEL <input type="checkbox"/>	PROTECTED C / PROTÉGÉ C <input type="checkbox"/>
CONFIDENTIAL / CONFIDENTIEL <input type="checkbox"/>	NATO SECRET / NATO SECRET <input type="checkbox"/>	CONFIDENTIAL / CONFIDENTIEL <input type="checkbox"/>
SECRET / SECRET <input type="checkbox"/>	COSMIC TOP SECRET / COSMIC TRÈS SECRET <input type="checkbox"/>	SECRET / SECRET <input type="checkbox"/>
TOP SECRET / TRÈS SECRET <input type="checkbox"/>		TOP SECRET / TRÈS SECRET <input type="checkbox"/>
TOP SECRET (SIGINT) / TRÈS SECRET (SIGINT) <input type="checkbox"/>		TOP SECRET (SIGINT) / TRÈS SECRET (SIGINT) <input type="checkbox"/>





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PART A (continued) / PARTIE A (suite)

8. Will the supplier require access to PROTECTED and/or CLASSIFIED COMSEC information or assets?
Le fournisseur aura-t-il accès à des renseignements ou à des biens COMSEC désignés PROTÉGÉS et/ou CLASSIFIÉS? No / Non Yes / Oui
If Yes, indicate the level of sensitivity:
Dans l'affirmative, indiquer le niveau de sensibilité :

9. Will the supplier require access to extremely sensitive INFOSEC information or assets?
Le fournisseur aura-t-il accès à des renseignements ou à des biens INFOSEC de nature extrêmement délicate? No / Non Yes / Oui

Short Title(s) of material / Titre(s) abrégé(s) du matériel :
Document Number / Numéro du document :

PART B - PERSONNEL (SUPPLIER) / PARTIE B - PERSONNEL (FOURNISSEUR)

10. a) Personnel security screening level required / Niveau de contrôle de la sécurité du personnel requis

<input checked="" type="checkbox"/> RELIABILITY STATUS COTE DE FIABILITÉ	<input type="checkbox"/> CONFIDENTIAL CONFIDENTIEL	<input type="checkbox"/> SECRET SECRET	<input type="checkbox"/> TOP SECRET TRÈS SECRET
<input type="checkbox"/> TOP SECRET- SIGINT TRÈS SECRET - SIGINT	<input type="checkbox"/> NATO CONFIDENTIAL NATO CONFIDENTIEL	<input type="checkbox"/> NATO SECRET NATO SECRET	<input type="checkbox"/> COSMIC TOP SECRET COSMIC TRÈS SECRET
<input type="checkbox"/> SITE ACCESS ACCÈS AUX EMBLEMES			

Special comments:
Commentaires spéciaux : _____

NOTE: If multiple levels of screening are identified, a Security Classification Guide must be provided.
REMARQUE : Si plusieurs niveaux de contrôle de sécurité sont requis, un guide de classification de la sécurité doit être fourni.

10. b) May unscrined personnel be used for portions of the work?
Du personnel sans autorisation sécuritaire peut-il se voir confier des parties du travail? No / Non Yes / Oui
If Yes, will unscrined personnel be escorted?
Dans l'affirmative, le personnel en question sera-t-il escorté? No / Non Yes / Oui

PART C - SAFEGUARDS (SUPPLIER) / PARTIE C - MESURES DE PROTECTION (FOURNISSEUR)

INFORMATION / ASSETS / RENSEIGNEMENTS / BIENS

11. a) Will the supplier be required to receive and store PROTECTED and/or CLASSIFIED information or assets on its site or premises?
Le fournisseur sera-t-il tenu de recevoir et d'entreposer sur place des renseignements ou des biens PROTÉGÉS et/ou CLASSIFIÉS? No / Non Yes / Oui

11. b) Will the supplier be required to safeguard COMSEC information or assets?
Le fournisseur sera-t-il tenu de protéger des renseignements ou des biens COMSEC? No / Non Yes / Oui

PRODUCTION

11. c) Will the production (manufacture, and/or repair and/or modification) of PROTECTED and/or CLASSIFIED material or equipment occur at the supplier's site or premises?
Les installations du fournisseur serviront-elles à la production (fabrication et/ou réparation et/ou modification) de matériel PROTÉGÉ et/ou CLASSIFIÉ? No / Non Yes / Oui

INFORMATION TECHNOLOGY (IT) MEDIA / SUPPORT RELATIF À LA TECHNOLOGIE DE L'INFORMATION (TI)

11. d) Will the supplier be required to use its IT systems to electronically process, produce or store PROTECTED and/or CLASSIFIED information or data?
Le fournisseur sera-t-il tenu d'utiliser ses propres systèmes informatiques pour traiter, produire ou stocker électroniquement des renseignements ou des données PROTÉGÉS et/ou CLASSIFIÉS? No / Non Yes / Oui

11. e) Will there be an electronic link between the supplier's IT systems and the government department or agency?
Disposera-t-on d'un lien électronique entre le système informatique du fournisseur et celui du ministère ou de l'agence gouvernementale? No / Non Yes / Oui



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PART C - (continued) / PARTIE C - (suite)

For users completing the form **manually** use the summary chart below to indicate the category(ies) and level(s) of safeguarding required at the supplier's site(s) or premises.

Les utilisateurs qui remplissent le formulaire **manuellement** doivent utiliser le tableau récapitulatif ci-dessous pour indiquer, pour chaque catégorie, les niveaux de sauvegarde requis aux installations du fournisseur.

For users completing the form **online** (via the Internet), the summary chart is automatically populated by your responses to previous questions.

Dans le cas des utilisateurs qui remplissent le formulaire **en ligne** (par Internet), les réponses aux questions précédentes sont automatiquement saisies dans le tableau récapitulatif.

SUMMARY CHART / TABLEAU RÉCAPITULATIF

Category / Catégorie	PROTECTED / PROTÉGÉ			CLASSIFIED / CLASSIFIÉ			NATO				COMSEC					
	A	B	C	CONFIDENTIAL / CONFIDENTIEL	SECRET	TOP SECRET / TRÈS SECRET	NATO RESTRICTED / NATO DIFFUSION RESTREINTE	NATO CONFIDENTIAL / NATO CONFIDENTIEL	NATO SECRET	COSMIC TOP SECRET / COSMIC TRÈS SECRET	PROTECTED / PROTÉGÉ			CONFIDENTIAL / CONFIDENTIEL	SECRET	TOP SECRET / TRÈS SECRET
											A	B	C			
Information / Assets / Renseignements / Biens / Production																
IT Media / Support TI																
IT Link / Lien électronique																

12. a) Is the description of the work contained within this SRCL PROTECTED and/or CLASSIFIED?
La description du travail visé par la présente LVERS est-elle de nature PROTÉGÉE et/ou CLASSIFIÉE?

No / Non Yes / Oui

If Yes, classify this form by annotating the top and bottom in the area entitled "Security Classification".
Dans l'affirmative, classifiez le présent formulaire en indiquant le niveau de sécurité dans la case intitulée « Classification de sécurité » au haut et au bas du formulaire.

12. b) Will the documentation attached to this SRCL be PROTECTED and/or CLASSIFIED?
La documentation associée à la présente LVERS sera-t-elle PROTÉGÉE et/ou CLASSIFIÉE?

No / Non Yes / Oui

If Yes, classify this form by annotating the top and bottom in the area entitled "Security Classification" and indicate with attachments (e.g. SECRET with Attachments).
Dans l'affirmative, classifiez le présent formulaire en indiquant le niveau de sécurité dans la case intitulée « Classification de sécurité » au haut et au bas du formulaire et indiquer qu'il y a des pièces jointes (p. ex. SECRET avec des pièces jointes).



Government of Canada

Gouvernement du Canada

Contract Number / Numéro du contrat

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Security Classification / Classification de sécurité
Unclassified

PART D - AUTHORIZATION / PARTIE D - AUTORISATION

13. Organization Project Authority / Chargé de projet de l'organisme

Name (print) - Nom (en lettres moulées) MENEGOZ, Tim		Title - Titre Facilities Manager	Signature MENEGOZ, TIM @310	Digitally signed by MENEGOZ, TIM @310 Date: 2021.05.06 15:21:27 -04'00'
Telephone No. - N° de téléphone 514-366-4310x6633470	Facsimile No. - N° de télécopieur 514-365-0262	E-mail address - Adresse courriel Tim.Menegoz@nete.dnd.ca		Date

14. Organization Security Authority / Responsable de la sécurité de l'organisme

Name (print) - Nom (en lettres moulées) Sasa Medjovic		Title - Titre Senior security analyst	Signature MEDJOVIC SASHA 234	Digitally signed by MEDJOVIC, SASHA 234 DN: cn=CA, o=DND, ou=IND-MEN, ou=Personnel, ou=INTERN, cn=MEDJOVIC, SASHA 234 Reason: I am the author of this document Location: your signing location here Date: 2021.05.07 18:29:45-04'00' Foxit PhantomPDF Version: 10.1.3
Telephone No. - N° de téléphone 613-996-0286	Facsimile No. - N° de télécopieur	E-mail address - Adresse courriel sasa.medjovic@forces.gc.ca		Date

15. Are there additional instructions (e.g. Security Guide, Security Classification Guide) attached?
Des instructions supplémentaires (p. ex. Guide de sécurité, Guide de classification de la sécurité) sont-elles jointes?

No / Non Yes / Oui

16. Procurement Officer / Agent d'approvisionnement

Name (print) - Nom (en lettres moulées)		Title - Titre	Signature SICARD, DALTON 930	Digitally signed by SICARD, DALTON 930 Date: 2021.05.06 15:40:15 -04'00'
Telephone No. - N° de téléphone	Facsimile No. - N° de télécopieur	E-mail address - Adresse courriel		Date

17. Contracting Security Authority / Autorité contractante en matière de sécurité

Name (print) - Nom (en lettres moulées)		Title - Titre	Signature Lecompte, Denis	Digitally signed by Lecompte, Denis Date: 2021.05.27 14:34:34 -04'00'
Telephone No. - N° de téléphone	Facsimile No. - N° de télécopieur	E-mail address - Adresse courriel		Date

Denis Lecompte
 Contract Security Program / Programme de la sécurité des contrats
 Industrial Organization Security Services / Services de la sécurité industrielle des organisations
 Industrial Security Sector / Secteur de la sécurité industrielle
 Public Service and Procurement Canada / Service public et de l'approvisionnement
 943-852-1830
 Denis.Lecompte@ctisec-mesec.gc.ca

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ANNEX "D" to PART 3 OF THE BID SOLICITATION

ELECTRONIC PAYMENT INSTRUMENTS

The Bidder accepts to be paid by any of the following Electronic Payment Instrument(s):

- Direct Deposit (Domestic and International);
- Electronic Data Interchange (EDI);
- Wire Transfer (International Only);

ANNEX “E” to PART 5 OF THE BID SOLICITATION

FEDERAL CONTRACTORS PROGRAM FOR EMPLOYMENT EQUITY – CERTIFICATION

I, the Bidder, by submitting the present information to the Contracting Authority, certify that the information provided is true as of the date indicated below. The certifications provided to Canada are subject to verification at all times. I understand that Canada will declare a bid non-responsive, or will declare a contractor in default, if a certification is found to be untrue, whether during the bid evaluation period or during the contract period. Canada will have the right to ask for additional information to verify the Bidder's certifications. Failure to comply with any request or requirement imposed by Canada may render the bid non-responsive or constitute a default under the Contract.

For further information on the Federal Contractors Program for Employment Equity visit [Employment and Social Development Canada \(ESDC\) – Labour's](#) website.

Date: _____ (YYYY/MM/DD) (If left blank, the date will be deemed to be the bid solicitation closing date.)

Complete both A and B.

A. Check only one of the following:

- A1. The Bidder certifies having no work force in Canada.
- A2. The Bidder certifies being a public sector employer.
- A3. The Bidder certifies being a [federally regulated employer](#) being subject to the [Employment Equity Act](#).
- A4. The Bidder certifies having a combined work force in Canada of less than 100 permanent full-time and/or permanent part-time employees.

A5. The Bidder has a combined workforce in Canada of 100 or more employees; and

- A5.1. The Bidder certifies already having a valid and current [Agreement to Implement Employment Equity](#) (AIEE) in place with ESDC-Labour.

OR

- A5.2. The Bidder certifies having submitted the [Agreement to Implement Employment Equity \(LAB1168\)](#) to ESDC-Labour. As this is a condition to contract award, proceed to completing the form Agreement to Implement Employment Equity (LAB1168), duly signing it, and transmit it to ESDC-Labour.

B. Check only one of the following:

- B1. The Bidder is not a Joint Venture.

OR

- B2. The Bidder is a Joint venture and each member of the Joint Venture must provide the Contracting Authority with a completed annex Federal Contractors Program for Employment Equity - Certification. (Refer to the Joint Venture section of the Standard Instructions)

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ANNEX "F"

Mandatory Evaluation Criteria

W8472-215850



**MANDATORY EVALUATION CRITERIA
FOR PROCUREMENT OF
ELECTRODYNAMIC SHAKER SYSTEM**



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LIST OF ACRONYMS AND ABBREVIATIONS

Acronyms or Abbreviations	Definition
CA	Contract Award (in CDRL and DIDs)
CDR	Critical Design Review (meeting)
CDRL	Contract Deliverable Requirement List
CFTO	Canadian Forces Technical Order
CG	Centre of Gravity
CISD	Canadian Industrial Security Directorate
COTS	Commercial Off The Shelf
CSP	Contract Security Program
CTP	Cadre Training Package
dB	Decibels
dBA	A-weighted Decibels
DID	Data Item Description
DND	Department of National Defence
D Mar P	Director of Maritime Procurement
DOS	Designated Organization Screening
EMI	Electromagnetic Interference
FPM	Final Project Meeting
G	Acceleration of Gravity (9.82 m/s ²)
GOC	Government of Canada
GOCO	Government-Owned-Contractor-Operated
Hz	Hertz
IAW	In Accordance With
in/s	inches per second
ISO	International Organization for Standardization
ITAR	International Traffic in Arms Regulations
ITP	Inspection and Test Plan
km	kilometre
kN	kilo Newton
kVA	Kilo-Volt-Ampere
lbf	pound-force
l/min	liter per minute
m	metre
mil	Thousandth of an inch
mm	millimetre
mT	millitesla
m ²	square metres
m/s	meters per second
NETE	Naval Engineering Test Establishment
OEM	Original Equipment Manufacturer
PDF	Portable Document Format
PM	Project Manager



PMP	Project Management Plan
PRM	Project Review Meeting
PSPC	Public Services and Procurement Canada
PSR	Project Status Reports
PWGSC	Public Works and Government Services Canada
RCN	Royal Canadian Navy
RFI	Radio Frequency Interference
RFP	Request for Proposal
RSPL	Recommended Spare Parts List
SOW	Statement Of Work
SPT	Special Purpose Tools
TA	Technical Authority
TDP	Technical Data Package
THD	Total Harmonic Distortion
tonne(s)	Metric Tonne(s)
TSOR	Technical Statement of Requirements
UNC	Unified National Coarse (applicable to threads)
USA	United States of America
USML	Unites States Munitions List
V	Volt
VCR	Visit Clearance Request
WME	Weir Marine Engineering

Table 1: Acronyms and Abbreviations



1 COMPLIANCE AND TECHNICAL REQUIREMENTS EVALUATION MATRICES

1.1 GENERAL

1.1.1 This Annex contains the Compliance and Technical Requirements evaluation matrices.

1.2 PHASE 1 - MANDATORY BIDDERS COMPLIANCE CHECK

1.2.1 Mandatory Bidders Compliance check must be submitted together with the Bid.

1.2.2 Mandatory Bidders Compliance check uses the following abbreviations:

1.2.2.1 “A” – The Bidder must provide a compliance statement to clearly “Agree (A)” that the stated work will be completed, or that the stated requirement will be met; and,

1.2.2.2 “I” – The Bidder must include the requested “Information (I)” with the bid.

1.2.3 Bidder must be fully compliant with all of the mandatory requirements in the Phase 1 as outlined in the Table 2 below in order to be evaluated in Phase 2 (Section 1.3).

No.	SOW Ref	Requirement	Test Method	Bidders Response	Associated Definition(s)
GENERAL					
1.0	10.1.1	Single Supplier The Contractor must agree to supply the Shaker from a single manufacturer, including all components and ancillary equipment described in SOW Section 10 and required for proper operation in both vertical and horizontal planes.	Compliance statement. <u>Evaluation:</u> Pass/Fail		“A”

Table 2: Mandatory Bidders Compliance Check



No.	SOW Ref	Requirement	Test Method	Bidders Response	Associated Definition(s)
1.1	10.1.2	<p>Proven Design</p> <p>The Contractor must demonstrate that the proposed solution is a proven and quality design by providing a list of references of similar systems (model and size) installations.</p>	<p>Provide list of references for at least two (2) similar systems (model and size) that were installed and set to work within the last 10 years.</p> <p><u>Evaluation:</u> Pass/Fail</p>		“T”
1.2	10.1.6	<p>Documentation (Initial)</p> <p>The Contractor must agree to make available a complete listing of documents that will be provided at the completion of the project as part of the proposal.</p>	<p>Compliance statement</p> <p><u>Evaluation:</u> Pass/Fail</p>		“A”
1.3	10.1.6	<p>Documentation (Final)</p> <p>The Contractor must agree to provide NETE with following documentation following provisional acceptance as per SOW 6.5.1:</p> <ul style="list-style-type: none"> • A complete set of installation and equipment drawings, in both Hardcopy and Softcopy (.pdf). • All pertinent datasheets and manuals required to install, operate, calibrate and maintain the Shaker, in both Hardcopy and Softcopy (.pdf). • All relevant calibration and conformity certificates, in both Hardcopy and Softcopy (.pdf). <p>All documents must be provided in English language as a minimum. If original documents are of French language origin, they must be provided in addition to their corresponding English translation(s).</p>	<p>Compliance statement</p> <p><u>Evaluation:</u> Pass/Fail</p>		“A”

Table 2: Mandatory Bidders Compliance Check



No.	SOW Ref	Requirement	Test Method	Bidders Response	Associated Definition(s)
1.4	3.1.1.1.2	The Contractor must demonstrate that the Shaker system is compliant with the Canadian Electrical Code (CEC) from the Canadian Standards Association (CSA) (see sections 2.1.2.6, 2.1.2.7, and 2.1.2.8.).	Provide Certification. <u>Evaluation:</u> Pass/Fail		“T”
1.5	3.1.1.4	The Contractor and Subcontractor must hold or be eligible to hold a valid security clearance to the level of Confidential or higher issued by the Canadian Industrial Security Directorate (CISD) in order to perform work in NETE Operational Zone. A Visit Clearance Request (VCR) approved by CISD and Public Services and Procurement Canada (PSPC) is required for all Contractor or sub-Contractor personnel prior to conducting work at the NETE site.	Provide evidence of current certification or provide compliance statement of eligibility. <u>Evaluation:</u> Pass/Fail		“A” or “T”
PROCUREMENT					
1.6	3.1.1.1.3	The Shaker and its related documentation must not contain information which falls into the International Traffic in Arms Regulations (ITAR) as defined in the Unites States Munitions List (USML).	Compliance statement. <u>Evaluation:</u> Pass/Fail		“A”

Table 2: Mandatory Bidders Compliance Check



No.	SOW Ref	Requirement	Test Method	Bidders Response	Associated Definition(s)
1.7	4.1.1	<p>Project Manager The Contractor must assign a Project Manager responsible to carry out the work required for the Shaker delivery program. The Contractor’s Project Manager must have the authority to plan, direct, control and make decisions for the Contractor as these pertain to the execution of this Contract.</p> <p>Notes: The Contractor does not need to have the individual identified on-staff staff at time of bidding. However, Bidder must ensure that the proposed individual, or an equivalently qualified individual, is retained for the duration of the Contract.</p>	<p>Compliance statement. Demonstrate experience of the proposed PM by providing a portfolio that contains at least two (2) successfully completed projects of comparable scope to that described in the Statement of Work (Annex A) including activities such as planning, organization, and implementation, within the last 10 years.</p> <p><u>Evaluation:</u> Pass/Fail</p>		“T”

Table 2: Mandatory Bidders Compliance Check



No.	SOW Ref	Requirement	Test Method	Bidders Response	Associated Definition(s)
1.8	4.2 4.2.2 CDRL-PM-01 DID-PM-01	<p>Project Management Plan</p> <p>It is estimated that the delivery of the Shaker should be completed 12 months after Contract Award (CA) at the latest, followed by the installation and the set to work.</p> <p>The Contractor must agree to develop, implement and maintain a Shaker Project Management Plan (PMP) in order to fulfill the project management requirements of this SOW. At minimum, the PMP must contain:</p> <ul style="list-style-type: none"> • Work Breakdown Structure (to at least a sub- assembly level of detail for the design and construction) and including development activities for all non-construction deliverables (i.e. training manual(s)); • Master Schedule (showing, at a minimum, all planned meetings, inspections, tests, trials, provisional acceptance(s), delivery(ies) and other major milestones); • Quality Assurance Plan; • Inspections and Tests Plans; • Risk Register and Mitigation Strategy; and, • Cost Management Plan. <p>The Contractor must agree deliver the PMP for NETE review within ten (10) business days after Contract Award.</p>	<p>Compliance statement.</p> <p><u>Evaluation:</u> Pass/Fail</p>		"A"

Table 2: Mandatory Bidders Compliance Check



No.	SOW Ref	Requirement	Test Method	Bidders Response	Associated Definition(s)
1.9	4.8 CDRL-PM-05 DID-PM-05	<p>Kick-Off Meeting</p> <p>The Contractor must agree that within ten (10) business days after Contract Award, the Contractor will convene and co-chair a project Kick Off Meeting, IAW CDRL item CDRL-PM-05 and DID-PM-05 at NETE LaSalle facility, via video or teleconference or elsewhere as agreed to between the Contractor and NETE.</p>	<p>Compliance statement.</p> <p><u>Evaluation:</u> Pass/Fail</p>		“A”
1.10	3.1.1.6	<p>The Contractor must agree that at the moment of submission, the proposal will include the following Shaker technical details:</p> <ul style="list-style-type: none"> • Recommended installation layout and constraints (e.g. max distance between components); • Individual component details and drawings including physical dimension and weight, connection points, mounting interface requirement, lifting points; • Facility services requirements for installation (Electrical, Cooling Water, Compressed Air, etc.). 	<p>Provide required technical documents.</p> <p><u>Evaluation:</u> Pass/Fail</p>		“I”
FACILITY MODIFICATIONS					
1.11	10.3.1.1	<p>The Contractor must agree to provide guidance and relevant technical requirements to NETE for the foundation design.</p>	<p>Compliance statement.</p> <p><u>Evaluation:</u> Pass/Fail</p>		“A”

Table 2: Mandatory Bidders Compliance Check



No.	SOW Ref	Requirement	Test Method	Bidders Response	Associated Definition(s)
1.12	10.3.1.1	The Contractor must agree to provide guidance and relevant technical requirements to NETE for the sub-foundation (seismic mass) design.	Compliance statement. Demonstrate experience of the proposed sub-foundation (seismic mass) by providing a portfolio that contains at least two (2) successfully completed projects of similar capacity (meeting technical specifications in SOW 10.2). One (1) of the projects must be in North America. <u>Evaluation:</u> Pass/Fail		“A” and “T”
1.13	10.3.2.1	The Contractor must agree to provide guidance and concurrence of embedded pit design and installation.	Compliance statement. <u>Evaluation:</u> Pass/Fail		“A”
INSTALLATION					
1.14	10.4.2.4	The Contractor must agree to review the installation drawings provided by NETE, and to perform a site inspection of the facility preparations before delivery of the system.	Compliance statement. <u>Evaluation:</u> Pass/Fail		“A”
1.15	3.1.1.1.2	The Contractor must agree to provide a CSA compliant system, to be inspected and certified on-site. Any corrections or upgrade required for CSA compliance are at the expense of the Contractor.	Compliance statement. <u>Evaluation:</u> Pass/Fail		“A”

Table 2: Mandatory Bidders Compliance Check



No.	SOW Ref	Requirement	Test Method	Bidders Response	Associated Definition(s)
1.16	10.4.2.2 10.4.2.3	The Contractor must agree to provide the required power input isolation transformer (if required) and inline EMI/RFI filters to ensure both a clean power source to the Shaker and avoid contamination of the facility power network by the Shaker amplifier. A dedicated and common reference ground connection will be provided for the Shaker.	Compliance statement. <u>Evaluation:</u> Pass/Fail		“A”
COMMISSIONING					
1.17	6.2.2	The Contractor must agree to perform an inspection of the installed system prior to the initial power up.	Compliance statement. <u>Evaluation:</u> Pass/Fail		“A”
1.18	6.2.6	The Contractor must agree to perform initial commissioning of the Shaker (with support from NETE), including a written statement report on: <ul style="list-style-type: none"> • Verification of all safety interlocks and limits; • Configuration of controller parameters for Shaker limits and scaling factors; and, • Define normal operating parameters. 	Compliance statement. <u>Evaluation:</u> Pass/Fail		“A”
1.19	6.2.7	The Contractor must agree that upon successful completion of the SATs, the Contractor will present NETE with a written statement report on: <ul style="list-style-type: none"> • Validation that all TSOR parameters are met; • Shaker Frequency Response (bare); • Head Expander Frequency Response (bare); and, • Slip Table Frequency Response (bare). 	Compliance statement. <u>Evaluation:</u> Pass/Fail		“A”
1.20	5.1 5.2 5.4	The Contractor must agree to provide local staff training for safe operation and preventative maintenance of the system. This can be concurrent to SAT activities.	Compliance statement. <u>Evaluation:</u> Pass/Fail		“A”

Table 2: Mandatory Bidders Compliance Check



No.	SOW Ref	Requirement	Test Method	Bidders Response	Associated Definition(s)
1.21	6.2.5	The Contractor must agree to conduct (with support from NETE) the following typical tests for an expected minimum duration of one (1) week to verify: <ul style="list-style-type: none"> • D-03-003-019/SG-001 Sine Test (Horizontal & Vertical) with typical load; • MIL-STD-167-1A Sine Test (Horizontal & Vertical) with typical load; • MIL-STD-810H Method 514.8: Random Vibration, 5 to 50 Hz @ 0.0010 g²/Hz • MIL-STD-810H Method 514.8: Sine on Random Vibration; • MIL-STD-810H Method 514.8: Random (1 g²/Hz) on Random (0.030 g²/Hz) Vibration • MIL-STD-810H Method 516.8 Procedure 1: Sawtooth Shock Test at 20g; • MIL-STD-810H Method 516.8 Procedure 3: Trapezoidal Shock Test at 30g. 	Compliance statement. <u>Evaluation:</u> Pass/Fail		“A”
1.22	5.3 10.4.2.2.1	Spares The Contractor must agree to provide a Recommended Spare Parts List (RPSL). The RSPL must contain the Contractor's recommendation for spares required to maintain the equipment for a 60-month period. This list must include the necessary spares for the inline EMI/RFI filters.	Compliance statement. <u>Evaluation:</u> Pass/Fail		“A”

Table 2: Mandatory Bidders Compliance Check



No.	SOW Ref	Requirement	Test Method	Bidders Response	Associated Definition(s)
1.23	5.1 5.4 5.5 5.6 5.7 CDRL-TRG-01 DID-TRG-01	Training The Contractor must agree to provide necessary training sessions and training materials to the identified NETE personnel and outlined in the SOW Section 5 and CDRL-TRG-01 together with DID-TRG-01. All training materials must be in English language minimum.	Compliance statement. <u>Evaluation:</u> Pass/Fail		"A"

Table 2: Mandatory Bidders Compliance Check



1.3 PHASE 2 - MANDATORY TECHNICAL REQUIREMENTS CHECK

1.3.1 This phase evaluates Bidder's specifications and supporting documents.

1.3.2 Evaluation Methodology:

1.3.2.1 A check mark will be placed in either "Pass" or "Fail" column in the Table 3 against each listed technical requirements entry.

1.3.2.2 Bidder must meet all mandatory technical requirements in order to be deemed compliant.

1.3.2.3 Bidders must not fill out "Pass" and "Fail" columns. Bidders are required to reference where in their bid the required technical data can be found in "Bidder's proposal reference" column.

No.	SOW Ref	Mandatory Technical Requirement	Bidder's Proposal Ref	Pass	Fail
DIMENSIONS					
2.1	10.2.1.1	Payload Weight (min): 4,536 kg (10,000 lbs) total, for all axis tests.			
2.2	10.2.1.2	Payload Size (min) (LxWxH): 1,500 x 1,500 x 2,140 mm (~60 x 60 x 84 inch), Center of Gravity (CG) at or below vertical midpoint			
2.3	10.2.1.3	Shaker Height (max): 2,600 mm (~103 inch) max from concrete floor, including head expander in vertical plane			
EXCITER					
2.4	10.2.2.1	Bandwidth (min): 3 to 1,700 Hz			
2.5	10.2.2.2	Displacement (min): 63.5 mm (2.5 inch) pk-pk continuously			
2.6	10.2.2.3	Velocity (min): 1.5 m/s (59 inch/s)			
2.7	10.2.2.4	Force Sine Peak (min): 187 kN (42,000 lbf)			
2.8	10.2.2.5	Armature Diameter (min): 600 mm (~24 inch) or 2.5 ratio to Head Expander size of 1,500 mm			
2.9	10.2.2.6	Load Centering Capability: Automatic at full load, compressed air available.			
2.10	10.2.2.7	Stray Magnetic Field limit (max): 1 mT (10 G) at 152 mm (6 inch) from Table Top			

Table 3: Mandatory Technical Requirements Check



No.	SOW Ref	Mandatory Technical Requirement	Bidder's Proposal Ref	Pass	Fail
2.11	10.2.2.8	Cooling System: Included with liquid to liquid heat exchanger, 15 l/min service water available at up to 30°C			
2.12	10.2.2.9	Cooling System Acoustic Noise (max): 87 dBA at 1 m (as per SOR/86-304)			
HEAD EXPANDER					
2.13	10.2.3.1	Material: Magnesium, Flat to ±0.125 mm (5 mils)			
2.14	10.2.3.2	Test Area Size (min) (LxW): 1,500 x 1,500 mm (~60 x 60 inch) working area with round or chamfer corners			
2.15	10.2.3.3	Inserts: 3/8"-16UNC threads on 4 x 4 inch grid and radial pattern matching exciter head, centered			
2.16	10.2.3.4	Support & Guidance: As required for maximum payload capacity, compressed air available			
SLIP TABLE					
2.17	10.2.4.1	Material: Magnesium, Flat to ±0.125 mm (5 mils)			
2.18	10.2.4.2	Test Area Size (min) (LxW): 1,500 x 1,500 mm (~60 x 60 inch) working area with driver bar attached			
2.19	10.2.4.3	Inserts: 3/8"-16UNC threads on 4 x 4 inch grid and radial pattern matching exciter head at far end.			
2.20	10.2.4.4	Linear Bearings (min): Hydrostatic linear bearings, including Hydraulic compressor.			
POWER AMPLIFIER					
2.21	10.2.5.1 10.2.5.1.1	Power Capacity (min): The Contractor must demonstrate that the proposed amplifier shall be matching with the proposed Exciter (both to be provided by Contractor).			
2.22	10.2.5.2 10.2.5.2.1 2.2.2.4	Controller: The Contractor must demonstrate that their proposed solution is fully compatible with the existing DataPhysics SignalStar Vector controller (provided by NETE).			
2.23	10.2.5.3	Analog Control Input (max): 10 V full scale audio signal, Adjustable attenuator desirable for low range operations.			

Table 3: Mandatory Technical Requirements Check



No.	SOW Ref	Mandatory Technical Requirement	Bidder's Proposal Ref	Pass	Fail
2.24	10.2.5.4	Total Harmonic Distortion (max): 0.5% from 3 Hz to 1.7 kHz at 100% capacity (for current) 0.8% from 3 Hz to 1.7 kHz at 1% capacity			
2.25	10.2.5.5	Signal to Noise ratio (min): 65 dB below full output level			
2.26	10.2.5.6	Alarm Indicators: Local power, temperature, pressure, limits, and Remote interface (Panel and/or Ethernet)			
2.27	10.2.5.7	Safeties: Emergency Stop buttons and Limit Interlocks for over-travel, temperatures, pressures, and currents			
2.28	10.2.5.8	Power Supply: NETE installations provide 575V three-phase delta 60 Hz electrical power from Hydro-Québec with current fitted capacity of 300 kVA. The Contractor must supply the appropriate isolation and/or conversion transformer required for their proposed shaker system. The Contractor must also provide the total input power requirements.			
2.29	10.2.5.9	Power Filters: 3 phases RFI/EMI filters for main power supply			
2.30	10.2.5.10	Power Cables (min): 18 m (60 feet) between Amplifier Cabinets and Exciter			
2.31	10.2.5.11	Acoustic Noise level (max): 87 dBA max at 1m (as per SOR/86-304)			
PNEUMATIC MOUNTS					
2.32	10.3.1.2	Shaker Mounts: The Shaker must be fitted with pneumatic mounts for isolation with the building structure and environmental noise, providing a natural frequency of 3 Hz or less			

Table 3: Mandatory Technical Requirements Check

Solicitation No. - N° de l'invitation

W8472-215850/A

Client Ref. No. - N° de réf. du client

W8472-215850/A

Amd. No. - N° de la modif.

File No. - N° du dossier
W8472-215850

Buyer ID - Id de l'acheteur

Q08

CCC No./N° CCC - FMS No./N° VME

ANNEX "G"

Design change/Deviation Form DND 672

W8472-215850

Request for Design Change or Deviation Demande de modification de conception ou dérogation

<input type="checkbox"/> Design Change Modification de conception	<input type="checkbox"/> Deviation Dérogation
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For guidance see D-02-006-008/SG-001 - Pour des conseils voir D-02-006-008/SG-001

Design Change/Deviation Serial No. N° d'ordre de la demande de modification de conception ou dérogation
Contract Demand No. N° de la demande de contrat
Contract Serial No. N° d'ordre du contrat
File No. N° du dossier
Design Authority Serial No. N° d'ordre du bureau technique responsable

Part - Partie - I

1. Item Affected - Article touché

2. Main Equipment(s) Affected - Matériel touché

3. Description of Departure from Original Technical Data - Description des points qui diffèrent des données techniques

4. Reason for Request - Motif de la demande

5. Will interchangeability be affected? L'interchangeabilité est-elle réduite?	Component Parts: - Organes: -	<input type="checkbox"/> Yes Oui	<input type="checkbox"/> No Non	Assemblies: Ensembles:	<input type="checkbox"/> Yes Oui	<input type="checkbox"/> No Non
6. Will spare parts schedule be affected? Le tableau en pièces de rechange est-il modifié?		<input type="checkbox"/> Yes Oui	<input type="checkbox"/> No Non	(If "YES" state details (Le cas échéant, donner les détails)		

7. Production Data - Renseignements sur la production

7.1 Cost and Delivery
Coût et livraison

7.1.1 Estimated Effect of Delivery
Effet prévu sur la livraison _____

7.1.2 Estimated Added Tooling Cost \$
Coût supplémentaire prévu de l'usinage \$ _____

7.1.3 Estimated Surplus Material Value \$
Valeur prévu des matériaux supplémentaires \$ _____

7.1.4 Estimated Change in Contract Cost
Including Sales Tax and 7.1.2 and 7.1.3
above. (Indicate + or -) \$
Variation prévu du coût stipulé dans le contrat
(y compris la taxe de vente et les montants
prévu en 7.1.2 et 7.1.3). (Indiquer + ou -) \$ _____

7.3 Recommendations for Prior Built Units in Service
Recommandations quant aux unités déjà en service

7.3.1 Should prior - built units be modified?
Les unités déjà en service devraient-elles
être modifiées? Yes
Oui No
Non

7.3.2 Estimated Cost Per Unit - Coût prévu par unité

Cost of Kit Coût du lot	\$ _____
Cost of Rework Coût du réusinage	\$ _____

7.3.3 Government Held Spare Parts
Pièces de rechange appartenant à l'État

Use
Utilisez Rework
Réusinage Scrap
Mise au rebut

Estimated Cost to Each to Rework or Replace \$
Coût prévu du réusinage ou de remplacement \$ _____

7.2 Production Change Point
Introduction de la modification

7.2.1 Estimated Starting Date and Serial No.
Date d'introduction et N° de série prévue _____

7.2.2 Total Number of Units Involved
Nombre total d'unités touchées _____

8. Originator - Auteur de la demande

Date (yyaa-mm-dj)	Signature (if other than Prime Contractor - autre que l'entrepreneur principal)	Date (yyaa-mm-dj)	Signature (Prime Contractor - Entrepreneur principal)
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Part - Partie - II

9. Recommendations of Quality Assurance Representative - Recommandations du représentant de l'assurance de la qualité

Date (yyaa-mm-dj)	Designation - Désignation	Signature
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10. Recommendations of Design Authority - Recommandations du Responsable de la conception

Approved: Design Change Deviation or Not Approved
Approuvé : Modification de conception Dérogation ou Rejetée

Date (yyaa-mm-dj)	Designation - Désignation	Signature
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11. Approval of Procurement Authority - Approbation du pouvoir d'achat

Date (yyaa-mm-dj)	Designation - Désignation	Signature
-------------------	---------------------------	-----------

12. References - Documents de référence (Departmental file numbers etc. - Numéros de dossier ministère etc.)

13. Authorized Production Action on this Contract (for Contracting Authority) - Mesure de production autorisée pour le présent contrat (pour autorité contractante)

a. Design Change Modification de conception	Existing Stock Stock actuel	Complete Units Unités entières	Assemblies Ensembles	Component Parts Organes
	Use Utilisez	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
When to take effect: Prise d'effet : _____	Rework Réusinage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Scrap Mise au rebut	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Deviation Dérogation <input type="checkbox"/>	Total Number of Units Involved Nombres d'unités touchées _____	Serial No.(s) N°(s) de série _____		

14. Form DND 678 Required from Manufacturer Yes No
DND 678 exigée du fabricant Oui Non

15. Action on Equipment in Stock and Use - Mesure à prendre à l'égard du matériel en stock et en service

16. Action on Spares in Stock - Mesure à prendre à l'égard des pièces de rechange en stock

17. Date (yyaa-mm-dj)	Signature (for Department of National Defence pour le ministère de la Défense Nationale)	18. Date (yyaa-mm-dj)	Signature (for Contracting Authority pour l'Autorité contractante)
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19. Distribution List - Liste de diffusion	Copies Exemplaires	Distribution List - Liste de diffusion	Copies Exemplaires

Solicitation No. - N° de l'invitation
W8472-215850/A
Client Ref. No. - N° de réf. du client
W8472-215850/A

Amd. No. - N° de la modif.
File No. - N° du dossier
W8472-215850

Buyer ID - Id de l'acheteur
Q08
CCC No./N° CCC - FMS No./N° VME

ANNEX "H"

DND 626

W8472-215850

**TASK AUTHORIZATION
AUTORISATION DES TÂCHES**

All invoices/progress claims must show the reference Contract and Task numbers. Toutes les factures doivent indiquer les numéros du contrat et de la tâche.		Contract no. – N° du contrat
		Task no. – N° de la tâche
Amendment no. – N° de la modification	Increase/Decrease – Augmentation/Réduction	Previous value – Valeur précédente
To – À	<p>TO THE CONTRACTOR</p> <p>You are requested to supply the following services in accordance with the terms of the above reference contract. Only services included in the contract shall be supplied against this task.</p> <p>Please advise the undersigned if the completion date cannot be met. Invoices/progress claims shall be prepared in accordance with the instructions set out in the contract.</p> <p>À L'ENTREPRENEUR</p> <p>Vous êtes prié de fournir les services suivants en conformité des termes du contrat mentionné ci-dessus. Seuls les services mentionnés dans le contrat doivent être fournis à l'appui de cette demande.</p> <p>Prière d'aviser le signataire si la livraison ne peut se faire dans les délais prescrits. Les factures doivent être établies selon les instructions énoncées dans le contrat.</p>	
Delivery location – Expédié à		
Delivery/Completion date – Date de livraison/d'achèvement		
_____ Date		_____ for the Department of National Defence pour le ministère de la Défense nationale
Contract item no. N° d'article du contrat	Services	Cost Prix
		GST/HST TPS/TVH
		Total
<p>APPLICABLE ONLY TO PWGSC CONTRACTS: The Contract Authority signature is required when the total value of the DND 626 exceeds the threshold specified in the contract.</p> <p>NE S'APPLIQUE QU'AUX CONTRATS DE TPSGC : La signature de l'autorité contractante est requise lorsque la valeur totale du formulaire DND 626 est supérieure au seuil précisé dans le contrat.</p>		
_____ for the Department of Public Works and Government Services pour le ministère des Travaux publics et services gouvernementaux		

**Instructions for completing
DND 626 - Task Authorization**

Contract no.

Enter the PWGSC contract number in full.

Task no.

Enter the sequential Task number.

Amendment no.

Enter the amendment number when the original Task is amended to change the scope or the value.

Increase/Decrease

Enter the increase or decrease total dollar amount including taxes.

Previous value

Enter the previous total dollar amount including taxes.

To

Name of the contractor.

Delivery location

Location where the work will be completed, if other than the contractor's location.

Delivery/Completion date

Completion date for the task.

for the Department of National Defence

Signature of the DND person who has delegated **Authority** for signing DND 626 (level of authority based on the dollar value of the task and the equivalent signing authority in the PAM 1.4). **Note:** the person signing in this block ensures that the work is within the scope of the contract, that sufficient funds remain in the contract to cover this task and that the task is affordable within the Project/Unit budget.

Services

Define the requirement briefly (attach the SOW) and identify the cost of the task using the contractor's quote on the level of effort. The Task must use the basis of payment stipulated in the contract. If there are several basis of payment then list here the one(s) that will apply to the task quote (e.g. milestone payments; per diem rates/labour category hourly rates; travel and living rates; firm price/ceiling price, etc.). All the terms and conditions of the contract apply to this Task Authorization and cannot be ignored or amended for this task. Therefore it is not necessary to restate these general contract terms and conditions on the DND 626 Task form.

Cost

The cost of the Task broken out into the individual costed items in **Services**.

GST/HST

The GST/HST cost as appropriate.

Total

The total cost of the task. The contractor may not exceed this amount without the approval of DND indicated on an amended DND 626. The amendment value may not exceed 50% (or the percentage for amendments established in the contract) of the original value of the task authorization. The total cost of a DND 626, including all amendments, may not exceed the funding limit identified in the contract.

Applicable only to PWGSC contracts

This block only applies to those Task Authorization contracts awarded by PWGSC. The contract will include a specified threshold for DND sole approval of the DND 626 and a percentage for DND to approve amendments to the original DND 626. Tasks that will exceed these thresholds must be passed to the PWGSC Contracting Authority for review and signature prior to authorizing the contractor to begin work.

Note:

Work on the task may not commence prior to the date this form is signed by the DA Authority - for tasks within the DND threshold; and by both DND and PWGSC for those tasks over the DND threshold.

**Instructions pour compléter le formulaire
DND 626 - Autorisation des tâches**

N° du contrat

Inscrivez le numéro du contrat de TPSGC en entier.

N° de la tâche

Inscrivez le numéro de tâche séquentiel.

N° de la modification

Inscrivez le numéro de modification lorsque la tâche originale est modifiée pour en changer la portée.

Augmentation/Réduction

Inscrivez le montant total de l'augmentation ou de la diminution, y compris les taxes.

Valeur précédente

Inscrivez le montant total précédent, y compris les taxes.

À

Nom de l'entrepreneur.

Expédiez à

Endroit où le travail sera effectué, si celui-ci diffère du lieu d'affaires de l'entrepreneur.

Date de livraison/d'achèvement

Date d'achèvement de la tâche.

pour le ministère de la Défense nationale

Signature du représentant du MDN auquel on a délégué le **pouvoir d'approbation** en ce qui a trait à la signature du formulaire DND 626 (niveau d'autorité basé sur la valeur de la tâche et le signataire autorisé équivalent mentionné dans le MAA 1.4). **Nota :** la personne qui signe cette attache de signature confirme que les travaux respectent la portée du contrat, que suffisamment de fonds sont prévus au contrat pour couvrir cette tâche et que le budget alloué à l'unité ou pour le projet le permet.

Services

Définissez brièvement le besoin (joignez l'ET) et établissez le coût de la tâche à l'aide de la soumission de l'entrepreneur selon le niveau de difficulté de celle-ci. Les modalités de paiement stipulées dans le contrat s'appliquent à la tâche. Si plusieurs d'entre elles sont prévues, énumérez ici celle/celles qui s'appliquera/ront à la soumission pour la tâche à accomplir (p.ex. acompte fondé sur les étapes franchies; taux quotidien ou taux horaire établi selon la catégorie de main-d'œuvre; frais de déplacement et de séjour; prix fixe ou prix plafond; etc.). Toutes les modalités du contrat s'appliquent à cette autorisation de tâche et ne peuvent être négligées ou modifiées quant à la tâche en question. Il n'est donc pas nécessaire de répéter ces modalités générales afférentes au contrat sur le formulaire DND 626.

Prix

Mentionnez le coût de la tâche en le répartissant selon les frais afférents à chaque item mentionné dans la rubrique **Services**.

TPS/TVH

Mentionnez le montant de la TPS/TVH, s'il y a lieu.

Total

Mentionnez le coût total de la tâche. L'entrepreneur ne peut dépasser ce montant sans l'approbation du MDN, formulaire DND 626 modifié à l'appui. Le coût de la modification ne peut pas être supérieur à 50 p. 100 du montant initial prévu dans l'autorisation de tâche (ou au pourcentage prévu dans le contrat pour les modifications). Le coût total spécifié dans le formulaire DND 626, y compris toutes les modifications, ne peut dépasser le plafond de financement mentionné dans le contrat.

Ne s'applique qu'aux contrats de TPSGC

Le présent paragraphe s'applique uniquement aux autorisations de tâche accordées par TPSGC. On inscrira dans le formulaire DND 626 un plafond précis qui ne pourra être approuvé que par le MDN et un pourcentage selon lequel le MDN pourra approuver des modifications au formulaire DND 626 original. Les tâches dont le coût dépasse ces plafonds doivent être soumises à l'autorité contractante de TPSGC pour examen et signature avant qu'on autorise l'entrepreneur à débiter les travaux.

Nota :

Les travaux ne peuvent commencer avant la date de signature de ce formulaire par le responsable du MDN, pour les tâches dont le coût est inférieur au plafond établi par le MDN, et par le MDN et TPSGC pour les tâches dont le coût dépasse le plafond établi par le MDN.

Solicitation No. - N° de l'invitation
W8472-215850/A
Client Ref. No. - N° de réf. du client
W8472-215850/A

Amd. No. - N° de la modif.
File No. - N° du dossier
W8472-215850

Buyer ID - Id de l'acheteur
Q08
CCC No./N° CCC - FMS No./N° VME

ANNEX "I"

PWGSC-1111

W8472-215850



Claim for Progress Payment Demande de paiement progressif

If necessary, use form PWGSC-TPSGC 1112 to record detail costs
Si nécessaire, utiliser le formulaire PWGSC-TPSGC 1112 pour inscrire les coûts détaillés

Contractor's Name and Address Nom et adresse de l'entrepreneur	Claim No. N° de la demande	Date YYYY-MM-DD / AAAA-MM-JJ	Contract Price - Prix contractuel
	File No. - N° du dossier		Contract Serial No. N° de série du contrat
Contractor's Procurement Business Number (PBN) Numéro d'entreprise-appvisionnement (NEA) de l'entrepreneur		Financial Code(s) - Code(s) financier(s)	

Contractor's Report of Work Progress (if needed, use additional sheets)
Compte rendu de l'avancement des travaux par l'entrepreneur (si nécessaire, utiliser des feuilles supplémentaires)

Period of work covered by the claim Période des travaux visée par la demande ▶	Current Claim Demande courante		Previous Claims Demandes précédentes		Total to Date Total à date (A + B)
	(A)	Tax Rate Taux de taxe	(B)	Tax Rate Taux de taxe	
Description: (Expenditures must be claimed in accordance with the basis and/or method of payment of the contract) Description : (Les dépenses doivent être réclamées conformément à la base de paiement et (ou) à la méthode de paiement du contrat).		%		%	
		%		%	
		%		%	
		%		%	
		%		%	
		%		%	
		%		%	
		%		%	
		%		%	
		%		%	
		%		%	
		%		%	

Contractor's GST No. N° de TPS de l'entrepreneur	Subtotal Sous-total			
Contractor's QST No. No. de TVQ de l'entrepreneur	Applicable taxes Taxes applicables			
	Total			
Less holdbacks on expenditures only (Applicable taxes excluded) Moins les retenues sur les dépenses uniquement (Taxes applicables en sus)				

Total Amount of Claim (including applicable taxes)
Montant total de la demande (incluant les taxes applicables)

Percentage of the work completed Pourcentage des travaux achevés	%	Current Claim Demande courante	▶	Amount due Montant dû
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Claim No.
N° de la demande

Contract Serial No.
N° de série du contrat

CERTIFICATE OF CONTRACTOR

ATTESTATION DE L'ENTREPRENEUR

I certify that:

- All authorizations required under the contract have been obtained. The claim is consistent with the progress of the work and is in accordance with the contract.
- Indirect costs have been paid for or accrued in the accounts.
- Direct materials and the subcontracted work have been received, accepted and either paid for or accrued in the accounts following receipt of invoice from supplier/subcontractor, and have been or will be used exclusively for the purpose of the contract.
- All direct labour costs have been paid for or accrued in the accounts and all such costs were incurred exclusively for the purpose of the contract;
- All other direct costs have been paid for or accrued in the accounts following receipt of applicable invoice or expense voucher and all such costs were incurred exclusively for the purpose of the contract; and
- No liens, encumbrances, charges or other claims exist against the work except those which may arise by operation of law such as a lien in the nature of an unpaid contractor's lien and in respect of which a progress payment and/or advance payment has been or will be made by Canada.

J'atteste que :

- Toutes les autorisations exigées en vertu du contrat ont été obtenues. La demande correspond à l'avancement des travaux et est conforme au contrat.
- Les coûts indirects ont été réglés ou portés aux livres.
- Les matières directes et les travaux de sous-traitance ont été reçus, et le tout a été accepté et payé, ou encore porté aux livres après réception de factures envoyées par le fournisseur ou le sous-traitant; ces matières et ces travaux ont été ou seront utilisés exclusivement aux fins du contrat.
- Tous les coûts de la main-d'oeuvre directe ont été réglés ou portés aux livres et tous ces coûts ont été engagés exclusivement aux fins du contrat.
- Tous les autres coûts indirects ont été réglés ou portés aux livres après réception des factures ou pièces justificatives pertinentes et tous ces coûts ont été engagés exclusivement aux fins du contrat.
- Il n'existe aucun privilège ni demande ou imputation à l'égard de ces travaux sauf ceux qui pourraient survenir par effet de la loi, notamment le privilège d'un entrepreneur non payé à l'égard duquel un paiement progressif et(ou) un paiement anticipé a été ou sera effectué par le Canada.

Contractor's Signature - Signature de l'entrepreneur

Title - Titre

Date (YYYY-MM-DD / AAAA-MM-JJ)

Check the box if the claim is being made with respect to advance payment provisions included in the basis of payment of the contract.

Cocher la case si la demande est faite en rapport avec les dispositions relatives aux paiements anticipés qui se trouvent dans la base de paiement du contrat.

Cette demande, ou une partie de cette demande, est pour un paiement anticipé.

This claim, or a portion of this claim, is for an advance payment.

I certify that:

- The funds received will be used solely for the purpose of the contract and attached is a complete description of the purpose to which the advance payment will be applied.
- The amount of the payment is established in accordance with the conditions of the contract.
- The contractor is not in default of its obligations under the contract.
- The payment is related to an identifiable part of the contractual work.

J'atteste que :

- Les fonds reçus ne serviront uniquement qu'aux fins du contrat; ci-joint est une description complète des fins auxquelles le paiement anticipé sera utilisé.
- Le montant du paiement est établi conformément aux conditions du contrat.
- L'entrepreneur n'a pas manqué à ses obligations en vertu du contrat.
- Le paiement porte sur une partie identifiable des travaux précisés dans le contrat.

Contractor's Signature - Signature de l'entrepreneur

Title - Titre

Date (YYYY-MM-DD / AAAA-MM-JJ)

CERTIFICATES OF DEPARTMENTAL REPRESENTATIVES

Scientific/Project/Inspection Authority: I certify that the work meets the quality standards required under the contract, and its progress is in accordance with the conditions of the contract.

Inspection Authority (all other contracts): I certify that the quality of the work performed is in accordance with the standards required under the contract.

ATTESTATIONS DES REPRÉSENTANTS DU MINISTÈRE

Autorité scientifique ou responsable du projet / de l'inspection : J'atteste que les travaux sont conformes aux normes de qualité exigées en vertu du contrat et que leur avancement est conforme aux conditions du contrat.

Responsable de l'inspection (tous les autres contrats) : J'atteste que la qualité des travaux exécutés est conforme aux normes exigées en vertu du contrat.

Signature of Scientific / Project / Inspection Authority
Signature de l'autorité scientifique ou responsable du projet / de l'inspection

Date (YYYY-MM-DD / AAAA-MM-JJ)

PWGSC Contracting Authority: I certify that, to the best of my knowledge, the claim is consistent with the progress of the work and is in accordance with the contract. This claim, however, may be subject to further verification and any necessary adjustment before final settlement.

Autorité contractante de TPSGC : J'atteste, au meilleur de ma connaissance, que la demande correspond à l'avancement des travaux et est conforme au contrat. Toutefois, cette demande pourrait faire l'objet d'une autre vérification et de tout rajustement nécessaire avant le règlement final.

Contracting Authority Signature de l'autorité contractante

Title - Titre

Date (YYYY-MM-DD / AAAA-MM-JJ)

Client's Authorized Signing Officer - (must sign the interim claim): I certify that the claim is in accordance with the contract.

Signataire autorisé du client - (doit signer la demande provisoire) : J'atteste que la demande est conforme au contrat.

Client Signature du client

Title - Titre

Date (YYYY-MM-DD / AAAA-MM-JJ)

Client's Authorized Signing Officer - (must sign the final claim): I certify that all goods have been received and all services have been rendered, that the work has been properly performed and that the claim is in accordance with the contract.

Signataire autorisé du client - (doit signer la demande finale) : J'atteste que tous les biens ont été reçus, que tous les services ont été rendus, que tous les travaux ont été exécutés convenablement, et que la demande est conforme au contrat.

Client Signature du client

Title - Titre

Date (YYYY-MM-DD / AAAA-MM-JJ)