



RETURN BIDS TO:

RETOURNER LES SOUMISSIONS À:

Public Works and Government Services Canada
ATB Place North Tower
10025 Jasper Ave./10025 ave. Jasper
5th floor/5e étage
Edmonton
Alberta
T5J 1S6
Bid Fax: (780) 497-3510

**SOLICITATION AMENDMENT
MODIFICATION DE L'INVITATION**

The referenced document is hereby revised; unless otherwise indicated, all other terms and conditions of the Solicitation remain the same.

Ce document est par la présente révisé; sauf indication contraire, les modalités de l'invitation demeurent les mêmes.

Comments - Commentaires

Vendor/Firm Name and Address
Raison sociale et adresse du
fournisseur/de l'entrepreneur

Issuing Office - Bureau de distribution
Public Works and Government Services Canada
ATB Place North Tower
10025 Jasper Ave./10025 ave Jasper
5th floor/5e étage
Edmonton
Alberta
T5J 1S6

Title - Sujet Blast Injury Research	
Solicitation No. - N° de l'invitation W7702-186056/A	Amendment No. - N° modif. 002
Client Reference No. - N° de référence du client W7702-186056	Date 2018-03-27
GETS Reference No. - N° de référence de SEAG PW-\$EDM-607-11335	
File No. - N° de dossier EDM-7-40202 (607)	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2018-04-18	Time Zone Fuseau horaire Mountain Daylight Saving Time MDT
F.O.B. - F.A.B. Plant-Usine: <input type="checkbox"/> Destination: <input type="checkbox"/> Other-Autre: <input type="checkbox"/>	
Address Enquiries to: - Adresser toutes questions à: Jenkinson, Lorraine	Buyer Id - Id de l'acheteur edm607
Telephone No. - N° de téléphone (780) 497-3593 ()	FAX No. - N° de FAX (780) 497-3510
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction:	

Instructions: See Herein

Instructions: Voir aux présentes

Delivery Required - Livraison exigée	Delivery Offered - Livraison proposée
Vendor/Firm Name and Address Raison sociale et adresse du fournisseur/de l'entrepreneur	
Telephone No. - N° de téléphone Facsimile No. - N° de télécopieur	
Name and title of person authorized to sign on behalf of Vendor/Firm (type or print) Nom et titre de la personne autorisée à signer au nom du fournisseur/ de l'entrepreneur (taper ou écrire en caractères d'imprimerie)	
Signature	Date

TITLE: BLAST INJURY RESEARCH ENGINEERING SUPPORT – TASK AUTHORIZATION CONTRACT

This solicitation amendment is to provide clarifications to the Solicitation.

PART A: QUESTIONS/ANSWERS

- Q1. The travel clauses in the Statement of Work (SOW) and price sheet are somewhat inconsistent, please clarify whether travel costs can be claimed for travel between the contractor's office and Suffield Corridor or just for travel outside that boundary if required and approved by the Technical Authority?
- A1. There will be no reimbursement for travel expenses between the Medicine Hat to Suffield corridor. Travel expenses will only be reimbursed for travel outside that boundary if required and approved by the Technical Authority.
- Q2. What is the expected level of onsite support required to support the work being done for the sample TA? Does the contractor need to be onsite and actively involved with the testing and verification of the new / modified ABS components with the Technical Authority or only to responds to deficiencies if the come up?
- A2. The contractor does not need to be on-site for this task. However, other potential tasks may require significant on-site participation.
- Q3. With respect to Task 6.1 in the Sample TA (scheduled for a 3 month duration) is there a requirement to model the structure and shock wave propagation to prove theory prior to finalizing specifications or will the exact specifications be determined by the Technical Authority. This would effect level of effort and/or expertise required.
- A3. All modeling will be the responsibility of the Technical Authority. Specifications will be provided to the contractor.
- Q4. What will be the maximum operation pressure? Breach end and test section?
- A4. The required maximal driver pressure is to be determined. The maximal test section overpressure will approximately 50 psi.
- Q5. What kind of instrumentation will be required or provided, also how many customized ports which will effect cost due to amount of machining/fabrication involved.
- A5. Specific instrumentation types are to be determined. However, the instrumentation for this sample task will be provided. We anticipate the sample ports to be spaced every 0.25 meters.

PART B: REVISION TO SOLICITATION DOCUMENT

1. At ANNEX "B" - BASIS OF PAYMENT
- DELETE: ANNEX "B" - BASIS OF PAYMENT, in its entirety.
INSERT: ANNEX "B" - BASIS OF PAYMENT (Revised 2018-03-23), herein.
2. At ANNEX "H" - EVALUATION CRITERIA
- DELETE: ANNEX "H" - EVALUATION CRITERIA, in its entirety.
INSERT: ANNEX "H" - EVALUATION CRITERIA (Revised 2018-03-23), herein.

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If your bid has already been submitted, you may wish to revise it. Revisions to your bid must be submitted in a sealed envelope or by facsimile on which the content is clearly written. Any revisions to your bid must be received by the Bid Receiving Unit on or before the time and date stated on page 1 of this document. Any revisions to your bid received after the closing date and time will be considered late and will be returned unopened.

ANNEX "B" - BASIS OF PAYMENT
(Revised 2018-03-23)

Payment will be paid for time expended and other costs reasonably and properly incurred from the date of contract to contract completion in accordance with the following:

(Note: line items listed below are considered "as applicable")

Contract Period : Option Period:
date of award to 2020-04-01 to
2020-03-31 2021-03-31

1. Labour at firm (daily/hourly) rates. One day consists of 7.5 hours. The rates will be prorated for any period of more or less than one day.

Title / Name	Firm Daily/Hourly Rate	Firm Daily/Hourly Rate
a)	\$	\$
b)	\$	\$
c)	\$	\$
d)	\$	\$
e)		
f)		

2. Material and supplies at laid down cost without mark-up, including (list items).
3. Purchased equipment at laid down cost without mark-up, including (list items).
4. Travel and Living: the Contractor will be reimbursed its authorized travel and living expenses reasonably and properly incurred in the performance of the Work, at cost, without any allowance for profit and/or administrative overhead, in accordance with the meal, private vehicle and incidental expenses provided in Appendices B, C and D of the Treasury Board Travel Directive (http://www.tbs-sct.gc.ca/pubs_pol/hrpubs/TBM_113/td-dv_e.asp), and with the other provisions of the directive referring to "travelers", rather than those referring to "employees" are applicable.

All travel must have prior authorization of the Technical Authority. All payments are subject to government audit.

There will be no reimbursement for travel expenses between the Medicine Hat to Suffield corridor.

OR

5. Authorized travel and living expenses in accordance with the University's Standard Travel Policy. Claims for travel expenses must include an explanation of who, where, when duration and purpose of travel.

There will be no reimbursement for travel expenses between the Medicine Hat to Suffield corridor.

(Applicable to Universities only)

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6. Other direct charges at actual cost incurred without mark-up, including (list any other costs which may be applicable, giving an estimated cost for each e.g. computing costs, long distance telephone/facsimile charges, reproduction, shipping).
7. Computing charges at standard university rates.
(Applicable to Universities only)
8. Standard University Overhead as follows:
(Applicable to Universities only)
 - a) at a maximum 65% of on-campus labor (item 1)
 - b) at a maximum 30% of off-campus labour (item 1)
 - c) at a maximum 2% of travel expenses (item 6)

Total Estimated Overhead:

9. Profit at a firm ____% of items __, __, __, __ above, not to exceed.

Total Estimated Cost to a Limitation of Expenditure:

With the exception of the firm rate(s) and price(s), the amounts shown in the various items specified above are estimates only. Minor changes to these estimates will be accepted for billing purposes as the Work proceeds, provided that these changes have the prior approval of the Technical Authority, and provided that the estimated cost does not exceed the aforementioned Limitation of Expenditure.

APPLICABLE TAXES: The applicable taxes are not included in the amounts above. The applicable taxes are to be shown as a completely separate item on each invoice.

F.O.B. Point: Defence Research and Development Canada – Suffield Research Centre

ANNEX "H" - EVALUATION CRITERIA
(Revised 2018-03-23)

1. Mandatory Technical Criteria

The Bidder must demonstrate they meet the following mandatory technical criteria. Failure to meet any of the following mandatory technical criteria at bid closing will render the bid non-responsive and it will be given no further consideration.

Curriculum vitae must be included to demonstrate compliance to the mandatory technical criteria.

If the supporting documentation is not provided at bid closing, the Contracting Authority will notify the Bidder that they must provide supporting documentation within two (2) business days following notification. Failure to comply with the request of the Contracting Authority within that time period, will deem the bid non-responsive and the bid will be given no further consideration.

	Mandatory Technical Criteria	YES	NO
M1	Education: The proposed team must include personnel with a technical diploma (e.g. SAIT), graduate (Bachelor or post-graduate (Master or Ph.D.) in mechanical or aerospace engineering from a recognized institution.		
M2	Certification: The proposed team must include a Project Manager that is a registered Professional Engineer. Proof of certification is required.		

2. Point-Rated Evaluation Criteria

- a) Each evaluation criterion has a number allotment ("weight") that reflects its importance within the bid. The degree to which the bid satisfies the requirement of each criterion will be assessed and a rating will be assigned ranging from 0 to 4, as described below. A score will be assessed by multiplying the weight by the rating.
- b) Each bid must achieve a minimum score of 70% of the maximum points available in EACH category subject to point rating. Bids that fail to achieve this score will be considered technically unacceptable and will be given no further consideration.

2.0	POINT RATED CRITERIA (Rating: 4=excellent, 3=very good, 2=good, 1=limited, 0=nothing)
2.1	Sample Task Authorization Evaluation 4 – Excellent: The understanding is beyond expectations. The text is concise, without any confusion. All key issues are raised and some are beyond expectations. 3 – Very Good: The text is concise, without any confusion. All expected key issues are raised. 2 – Good: The text is relatively concise, without any major confusion. Most of the expected key issues are raised. 1 – Limited: The text is not concise enough, there is some major confusion, or most of the expected key issues are missing.

		WEIGHT	RATING	SCORE
2.1.1	Understanding of scope and objectives. The Bidder should include a short introduction with a brief evaluation of the need for the project, the objectives of the proposed Work, the reasons for carrying it out as proposed and the benefits to be derived. In particular, there should be an obvious appreciation of blast physics, blast testing, and blast simulation.	2.0		
2.1.2	Proposed work feasibility, approach and methodology. The Bidder should clearly outline its approach and proposed methodology to meet the requirement, as well as the degree of success expected. The proposed technical approach must be compliant with the requirements of the Statement of Work provided as part of the bid solicitation. Sufficient detail should be provided to demonstrate the Bidder's grasp of the requirement and the Bidder's competence to meet it.	2.0		
2.1.3	Work plan, schedule and deliverables. The Bidder should include a list of specific tasks and deliverables and the proposed schedule for completion of the work or delivery.	1.0		
2.1.4	Recognition of problems and solutions proposed. The Bidder should state any major difficulties that are anticipated and explain how it would address these difficulties.	2.0		
2.1.5	Demonstrated original and innovative ideas. The Bidder should propose modern solutions for completion of the work	1.0		
	Maximum points available	32.0		
	Minimum points acceptable	22.0		
	Points awarded			
2.2	Technical/Management Bid 4 – Excellent: 15 years or more experience. 3 – Very Good: 10 years or more experience 2 – Good: 5 years or more experience. 1 – Limited: 1 year or more experience.			
		WEIGHT	RATING	SCORE
2.2.1	Project Manager - qualifications as a Professional Engineer and relevant experience in blast related research, including his/her position within the organization. The Bidder should provide the name of the Project Manager who will be assigned and prove his/her education, qualifications and years of experience.	3.0		

2.2.2	<p>Two additional key personnel (i.e. other than the Project Manager) - relevant qualifications (professional engineer or technologist) and combined experience (in blast related research) proven by similar or related work.</p> <p>The Bidder should provide the names of all other key personnel who will be assigned to this requirement, demonstrating their education, qualifications and experience. Their curriculum vitae should also be included.</p>	8.0		
2.2.3	<p>Specialized training and experience in numerical simulation: years of experience in usage of Finite Element Analysis Codes and Computational Fluid Dynamics Codes.</p> <p>The Bidder should provide the name of the personnel who will be assigned to this requirement, demonstrating their education, qualifications and years of relevant experience. Their curriculum vitae should also be included.</p>	4.0		
2.2.4	<p>Specialized training and experience in mechanical design: years of experience in drafting and producing engineering drawings for fabrication.</p> <p>The Bidder should provide the name of the personnel who will be assigned to this requirement, demonstrating their education, qualifications and years of relevant experience. Their curriculum vitae should also be included.</p>	4.0		
2.2.5	<p>Bidder's organization – its relevant experience and competence proven by similar or related work in Design and Fabrication.</p> <p>The bidder must should demonstrate experience in designing and fabrication of test equipment for shock wave experiments. At least two years of experience must be demonstrated in each of the following areas: 1) shock tube and associated instrumentation design and fabrication; and 2) non-shock/blast tube design and fabrication studies.</p> <p>Rating: 0 points - No experience 1 points - less than 2 years in each area 2 points - 2 years in each area 3 points - 5 years in each area 4 points - greater than 5 years in each area</p>	6.0		

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2.2.6	<p>Bidder's organization - its relevant experience and competence proven by similar or related work in Field Trials.</p> <p>The bidder must demonstrate experience in designing and conducting field experiments in the area of explosion phenomenology. At least two years of practical experience must be demonstrated in each of the following areas: 1) blast effects on structures, 2) blast / shock wave measurements, 3) explosion dynamics, 4) data reduction and analysis of blast data, and 5) use of numerical modeling using Finite Element and/or Computational Fluid Dynamics codes.</p> <p>Rating:</p> <ul style="list-style-type: none"> - less than 2 years in each area: 0 points - 2 years in each area: 1 point - 5 years in each area: 2 points - 8 years in each area: 3 points - 10 or more years in each area: 4 points 	8.0		
	Maximum points available	132.0		
	Minimum points available	92.0		
	Points awarded			
	MAXIMUM TOTAL POINTS AVAILABLE	164.0		
	TOTAL POINTS AWARDED			

APPENDIX 1 TO ANNEX "H" - SAMPLE TASK AUTHORIZATION

A. Sample Task Authorization Statement of Work

1. TA-X – Design, Fabrication and Development of a Variable Duration ABS

2. Validation of Scope of Contract

The tasks indicated in the statement of work for this task authorization are within the scope of the following tasks in the main contract W7702-186056:

- This task falls under the scope of work of the contract described in Section 5-2 "Specialized Design and Manufacture of Experimental Apparatus".

3. Background

Many laboratories utilize shock tubes to simulate blast for studies investigating the effects of blast on the body. DRDC SRC has developed an Advanced Blast Simulator (ABS30) that simulates free-field blast with high fidelity. Although this ABS represents a vast improvement over shock tubes utilized by the majority of the blast injury research community, the shock wave durations are too long for the relatively small targets utilized.

There is a requirement to develop the capability to generate shock waves with significantly shorter durations so as to facilitate studies that i) don't introduce scaling issues with small targets and ii) investigate the relative importance of the different components of a shock wave (i.e. overpressure, duration, impulse) in producing brain injury.

The development of the apparatus (ABS) with which to create short duration (~0.5-4.0 msec) shock waves requires Contractor support in the design, fabrication and testing its various components (i.e. driver, transition section, test section, end wave eliminator).

It is anticipated that this effort will be conducted over a three month period, and that the effort will involve the equivalent of two technologists working 1/2 time over this time.

4. Acronyms

CG	Controlled good
DRDC	Defence Research and Development Canada
EPG	Experimental Proving Ground
GFE	Government furnished equipment
GSM	Government supplied material
SRC	Suffield Research Centre
SOW	Statement of Work
TA	Technical Authority
ABS	Advanced Blast Simulator

5. Applicable Documents & References

None

6. Tasks to be Performed

- 6.1 The contractor will consult with the Technical Authority with respect to the specification parameters and requirements.
- 6.2 The contractor will produce engineering drawings of the proposed ABS for Technical Authority review and consultation.

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- 6.3 The contractor will fabricate the required experimental apparatus.
- 6.4 The contractor will assemble the complete ABS in Bldg 19, DRDC-SRC.
- 6.5 If required, and based on experimental findings using the ABS, the contractor will modify components to satisfy the task requirements.
- 6.6 The contractor must supply engineering drawings of the final iteration of the experimental apparatus.

7. Deliverables

Number	Task reference	Description of the Deliverables	Quantity and Format
7.1	6.1	Discussions with TA.	1
7.2	6.2	Production of engineering drawings of ABS components.	1
7.3	6.3	Fabrication of ABS components.	1 lot
7.4	6.4	Installation of ABS components.	1 lot
7.5	6.5	Alteration of ABS components and subsequent installation (if required).	1 lot
7.6	6.6	Completed final engineering drawings of final EWE components.	1 (electronic format compatible with DRDC software)

8. Date of Delivery

All work must be completed by 2018-06-30

9. Language of Work

English

10. Location of Work

The work must be performed at the contractor site and at DRDC:

Defence Research and Development Canada – Suffield Research Centre
Experimental Proving Ground and Building 19
Suffield area, AB.
Canada

11. Travel

The Contractor is required to travel to the following location under the following tasks:

Task: 6.1-6.5

Location: DRDC Suffield

Address:

Defence Research and Development Canada – Suffield Research Centre
Bldg 19 and Experimental Proving Ground
CFB Suffield, Ralston Alberta T0J 2N0
Canada

Duration: from award of task to 30 June 2018

Frequency: As needed within task duration to perform tasks.

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There will be no reimbursement for travel expenses between the Medicine Hat to Suffield corridor.
There is no requirement for travel outside the Medicine Hat to Suffield area.

12. Meetings

Weekly meetings in person or phone/email communications are required to keep the TA informed of progress.

13. Government Supplied Material (GSM)

All trial/test related equipment and supplies.

14. Government Furnished Equipment (GFE)

GFE1: Tools and equipment on location

15. Special Considerations

None

16. Security

REQUIRED SECURITY CLEARANCE FOR PERSONNEL

Minimum: Reliability Status.

17. Intellectual Property (IP) Ownership

Intellectual Property will be developed or created in relation to the Work under this task authorization.
Canada to Own Intellectual Property Rights in Foreground Information.

18. Controlled Goods

Applicable

19. Basis of Payment Requested

- ☐ Firm price
- ☐ Ceiling price
- ☒ Limitation of expenditure

20. Method of Payment Requested

- ☐ Single payment
- ☐ Milestone payments
- ☒ Progress payments

21. Technical Authority Information

To be named upon contract award.

B. Basis of Payment for Sample Task Authorization

Payment will be made for time expended and other costs reasonably and properly incurred from the date of Task Authorization initiation to its completion in accordance with the following:

Rates provided in this Sample Task Authorization must be firm and the same as the rates provided in the Financial Bid, Part One - Annex "B", Basis of Payment. The Bidder must identify all labour rates that may be required throughout the duration of the Sample Task Authorization. Labour rates that are not identified will not be approved and will not be included in the Basis of Payment of the Resulting Contract.

For the labour rates that apply specifically to the Sample Task Authorization, identify the level of effort (i.e. number of days) that will be required to complete the work for this Sample Task Authorization. The labour rate will then be multiplied by the level of effort to reach an estimated total for that particular person. These totals will then be used to reach the total estimated labour for the Sample Task Authorization which will be added to the estimates for items 2-7 below to arrive at a total limitation of expenditure for the Sample Task Authorization. This value will then be used for evaluation purposes only.

Maximum Task Value of \$100,000.00 including GST.

(Note: line items listed below are considered "as applicable")

1.		Labour at firm (daily/hourly) rates. One day consists of 7.5 hours. The rates will be prorated for any period of more or less than one day.			
	Title / Name	Firm Daily/Hourly Rate	Est. Days/Hours		
	a)	@		(est.)	\$
	b)	@		(est.)	\$
	c)	@		(est.)	\$
	d)	@		(est.)	\$
	Total Estimated Labour:				
For this Sample Task Authorization, identify:					
2.	Material and supplies at laid down cost without mark-up, including (list items).			(est.)	\$
3.	Purchased equipment at laid down cost without mark-up, including (list items).			(est.)	\$
4.	Subcontracting at actual cost incurred without mark-up, (subcontractor name)			(est.)	\$
5.	The Contractor will be reimbursed its authorized travel and living expenses reasonably and properly incurred in the performance of the Work, at cost, without any allowance for profit and/or administrative overhead, in accordance with the meal, private vehicle and incidental expenses provided in Appendices B, C and D of the Treasury Board Travel Directive (http://www.tbs-sct.gc.ca/pubs_pol/hrpubs/TBM_113/td-dv_e.asp),			(est.)	\$

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	and with the other provisions of the directive referring to "travellers", rather than those referring to "employees" are applicable. All travel must have prior authorization of the Technical Authority. All payments are subject to government audit. <i>There will be no reimbursement for travel expenses between the Medicine Hat to Suffield corridor.</i>		
OR			
5.	Authorized travel and living expenses in accordance with the University's Standard Travel Policy. Claims for travel expenses must include an explanation of who, where, when duration and purpose of travel. <i>There will be no reimbursement for travel expenses between the Medicine Hat to Suffield corridor.</i> <i>(Applicable to Universities only)</i>	(est.)	\$
6.	Other direct charges at actual cost incurred without mark-up, including (list any other costs which may be applicable, giving an estimated cost for each e.g. computing costs, long distance telephone/facsimile charges, reproduction, shipping).	(est.)	\$
7.	Computing charges at standard university rates. <i>(Applicable to Universities only)</i>	(est.)	\$
8.	Standard University Overhead as follows: <i>(Applicable to Universities only)</i>	(est.)	\$
	<i>a) at a maximum 65% of on-campus labour (item 1)</i>	(est.)	\$
	<i>b) at a maximum 30% of off-campus labour (item 1)</i>	(est.)	\$
	<i>c) at a maximum 2% of travel expenses (item 6)</i>	(est.)	\$
	<i>Total Estimated Overhead:</i>	(est.)	\$
9	Profit at a firm ___% of items __, __, __ above, not to exceed.	(est.)	\$
	Total Limitation of Expenditure for Sample Task Authorization:		\$

With the exception of the firm rate(s) and price(s), the amounts shown in the various items specified above are estimates only. Minor changes to these estimates will be accepted for billing purposes as the Work proceeds, provided that these changes have the prior approval of the Technical Authority, and provided that the estimated cost does not exceed the aforementioned Limitation of Expenditure.

APPLICABLE TAXES: The applicable taxes are not included in the amounts above. The applicable taxes are to be shown as a completely separate item on each invoice.

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