



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

REQUEST FOR PROPOSAL DEMANDE DE PROPOSITION

Proposal To: Public Works and Government Services 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, services, and construction listed herein and on any attached sheets at the price(s) set out therefor.

Proposition aux: Travaux Publics et Services Gouvernementaux 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, services et construction énumérés ici sur toute feuille ci-annexée, au(x) prix indiqué(s).

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 Test Frame for Blast Trials		
Solicitation No. - N° de l'invitation W7702-165797/A	Date 2016-06-15	
Client Reference No. - N° de référence du client W7702-165797		
GETS Reference No. - N° de référence de SEAG PW-\$EDM-607-10793		
File No. - N° de dossier EDM-5-38369 (607)	CCC No./N° CCC - FMS No./N° VME	
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2016-07-07		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: DEPARTMENT OF NATIONAL DEFENCE PO BOX 4000, STN MAIN MEDICINE HAT Alberta T1A8K6 Canada		

Instructions: See Herein

Instructions: Voir aux présentes

Delivery Required - Livraison exigée See Herein	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

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edm607
CCC No./N° CCC - FMS No./N° VME

TITLE: FINAL DESIGN AND ASSEMBLY OF TEST FRAME FOR BLAST TRIALS

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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 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, Security Requirements, the Security Requirements Checklist, the Electronic Payment Instruments, the Insurance Requirements, DND 626 Task Authorization Form and any other annexes.

1.2 Summary

- 1.2.1 Defence Research and Development Canada (DRDC) Suffield Research Centre (SRC) anticipates testing large historic masonry walls against blast loads at a test site on the DRDC Suffield Research Centre Experimental Proving Ground (EPG) near Ralston, Alberta. To facilitate this work, a test frame will be required which will be used to (i) act as a base for a section of masonry wall, and (ii) act as a 'rigid', non-responding, frame around the sides, base and top of the masonry wall during the blast. The test frame is expected to support in excess of 90 cubic metres of reinforced concrete.

The intent of the tests is to create a blast scenario which damages the masonry walls (targets). It is anticipated that the test frame will be required to survive up to six separate large blasts (TNT or equivalent) without significant damage. To allow for the possibility of damage to the test frame, the proposed contract will contain options which may be exercised at SRC's discretion for the repair of the test frame after one or more of the blast tests. There is no requirement for any work associated with designing or building the historic masonry test walls.

It is anticipated the contract will be effective from date of award to 2020-12-31.

- 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 Industrial Security Program (ISP) of Public Works and Government Services Canada (<http://ssi-iss.tpsgc-pwgsc.gc.ca/index-eng.html>) website.

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1.2.3 The requirement is subject to the provisions of the Agreement on Internal Trade (AIT).

1.2.4 The requirement is subject to a preference for Canadian goods and/or services.

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 \(2016-04-04\)](#), Standard Instructions - Goods or Services - Competitive Requirements, are incorporated by reference into and form part of the bid solicitation.

Subsection 5.4 of [2003](#), Standard Instructions - Goods or Services - Competitive Requirements, is amended as follows:

Delete: 60 days
Insert: 120 days

2.2 Submission of Bids

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

Due to the nature of the bid solicitation, bids transmitted by facsimile to PWGSC will not be accepted.

2.3 Former Public Servant

Contracts awarded to former public servants (FPS) in receipt of a pension or of a lump sum payment must bear the closest public scrutiny, and reflect fairness in the spending of public funds. In order to comply with Treasury Board policies and directives on contracts awarded to FPSs, bidders must provide the information required below before contract award. If the answer to the questions and, as applicable the information required have not been received by the time the evaluation of bids is completed, Canada will inform the Bidder of a time frame within which to provide the information. Failure to comply with Canada's request and meet the requirement within the prescribed time frame will render the bid non-responsive.

2.3.1 Definitions

For the purposes of this clause,

"former public servant" is any former member of a department as defined in the [Financial Administration Act](#), R.S., 1985, c. F-11, a former member of the Canadian Armed Forces or a former member of the Royal Canadian Mounted Police. A former public servant may be:

- a. an individual;
- b. an individual who has incorporated;
- c. a partnership made of former public servants; or
- d. a sole proprietorship or entity where the affected individual has a controlling or major interest in the entity.

"lump sum payment period" means the period measured in weeks of salary, for which payment has been made to facilitate the transition to retirement or to other employment as a result of the implementation of various programs to reduce the size of the Public Service. The lump sum payment period does not include the period of severance pay, which is measured in a like manner.

"pension" means a pension or annual allowance paid under the [Public Service Superannuation Act](#) (PSSA), R.S., 1985, c. P-36, and any increases paid pursuant to the [Supplementary Retirement Benefits Act](#), R.S., 1985, c. S-24 as it affects the PSSA. It does not include pensions payable pursuant to the [Canadian Forces Superannuation Act](#), R.S., 1985, c. C-17, the [Defence Services Pension Continuation Act](#), 1970, c. D-3, the [Royal Canadian Mounted Police Pension Continuation Act](#), 1970, c. R-10, and the [Royal Canadian Mounted Police Superannuation Act](#), R.S., 1985, c. R-11, the [Members of Parliament Retiring Allowances Act](#), R.S. 1985, c. M-5, and that portion of pension payable to the [Canada Pension Plan Act](#), R.S., 1985, c. C-8.

2.3.2 Former Public Servant in Receipt of a Pension

As per the above definitions, is the Bidder a FPS in receipt of a pension? **Yes () No ()**

If so, the Bidder must provide the following information, for all FPSs in receipt of a pension, as applicable:

- a. name of former public servant;
- b. date of termination of employment or retirement from the Public Service.

By providing this information, Bidders agree that the successful Bidder's status, with respect to being a former public servant in receipt of a pension, will be reported on departmental websites as part of the published proactive disclosure reports in accordance with [Contracting Policy Notice: 2012-2](#) and the [Guidelines on the Proactive Disclosure of Contracts](#).

2.3.3 Work Force Adjustment Directive

Is the Bidder a FPS who received a lump sum payment pursuant to the terms of the Work Force Adjustment Directive? **Yes () No ()**

If so, the Bidder must provide the following information:

- a. name of former public servant;
- b. conditions of the lump sum payment incentive;
- c. date of termination of employment;

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- d. amount of lump sum payment;
 - e. rate of pay on which lump sum payment is based;
 - f. period of lump sum payment including start date, end date and number of weeks;
 - g. number and amount (professional fees) of other contracts subject to the restrictions of a work force adjustment program.

For all contracts awarded during the lump sum payment period, the total amount of fees that may be paid to a FPS who received a lump sum payment is \$5,000, including Applicable Taxes.

2.4 Enquiries - Bid Solicitation

All enquiries must be submitted in writing to the Contracting Authority no later than THREE (3) 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.

2.5 Applicable Laws

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

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.

2.6 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 FIVE (5) days before the bid closing date. Canada will have the right to accept or reject any or all suggestions.

2.9 Basis for Canada's Ownership of Intellectual Property

The Defence Research and Development Canada has determined that any intellectual property rights arising from the performance of the Work under the resulting contract will belong to Canada, for the following reasons, as set out in the [Policy on Title to Intellectual Property Arising Under Crown Procurement Contracts](#): an exemption has been granted through a Treasury Board submission.

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 (2 hard copies)
- Section II: Financial Bid (1 hard copy)
- Section III: Certifications (1 hard copy)

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

Canada requests that Bidders follow the format instructions described below in the preparation 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](http://www.tpsgc-pwgsc.gc.ca/ecologisation-greening/achats-procurement/politique-policy-eng.html) (<http://www.tpsgc-pwgsc.gc.ca/ecologisation-greening/achats-procurement/politique-policy-eng.html>). To assist Canada in reaching its objectives, Bidders should:

- 1) 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
- 2) 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, duotangs or binders.

3.2 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 and describe their approach 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.

3.3 Section II: Financial Bid

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

- a) PART A: Schedule of Milestones: The Bidder is to quote a firm price for each milestone indicated.

-
- b) PART B – Task Authorization Requirements: The Bidder is requested to provide firm labour rates, and identify any cost elements it anticipates will be required to perform the tasks listed under Statement of Work, section 5.5 Test Frame (Task Authorization requirements).

3.3.2 Electronic Payment of Invoices – Bid

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

If Annex “F” 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.

3.4 Section III: Certifications

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

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 and financial evaluation criteria.
- (b) An evaluation team composed of representatives of Canada will evaluate the bids.
- (c) The evaluation team will determine first if there are two or more bids with a valid Canadian Content certification. In that event, the evaluation process will be limited to the bids with the certification; otherwise, all bids will be evaluated. If some of the bids with a valid certification are declared non-responsive, or are withdrawn, and less than two responsive bids with a valid certification remain, the evaluation will continue among those bids with a valid certification. If all bids with a valid certification are subsequently declared non-responsive, or are withdrawn, then all the other bids received will be evaluated.

4.1.1 Technical Evaluation

Mandatory and point rated technical evaluation criteria are included in Annex “G”.

4.1.2 Financial Evaluation

Financial evaluation criteria are included in Annex “G”.

4.2 Basis of Selection - Highest Combined Rating of Technical Merit and Price

4.2.1 To be declared responsive, a bid must:

- a. comply with all the requirements of the bid solicitation; and
- b. meet all mandatory technical criteria.

4.2.2 Bids not meeting choose (a) or (b) will be declared non-responsive.

4.2.3 The selection will be based on the highest responsive combined rating of technical merit and price. The ratio will be 20% for the technical merit and 80% for the price.

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- 4.2.4 To establish the technical merit score, the overall technical score for each responsive bid will be as follows: total number of points obtained / maximum number of points available multiplied by the ratio of 20%.
- 4.2.5 To establish the pricing score, each responsive bid will be prorated against the lowest evaluated price and the ratio of 80%.
- 4.2.6 For each responsive bid, the technical merit score and the pricing score will be added to determine its combined rating.
- 4.2.7 Neither the responsive bid obtaining the highest technical score nor the one with the lowest evaluated price will necessarily be accepted. The responsive bid with the highest combined rating of technical merit and price will be recommended for award of a contract.

The table below illustrates an example where all three bids are responsive and the selection of the contractor is determined by a 60/40 ratio of technical merit and price, respectively. The total available points equals 135 and the lowest evaluated price is \$45,000 (45).

Basis of Selection - Highest Combined Rating Technical Merit (60%) and Price (40%)				
		Bidder 1	Bidder 2	Bidder 3
Overall Technical Score		115/135	89/135	92/135
Bid Evaluated Price		\$55,000.00	\$50,000.00	\$45,000.00
Calculations	Technical Merit Score	$115/135 \times 60 = 51.11$	$89/135 \times 60 = 39.56$	$92/135 \times 60 = 40.89$
	Pricing Score	$45/55 \times 40 = 32.73$	$45/50 \times 40 = 36.00$	$45/45 \times 40 = 40.00$
Combined Rating		83.84	75.56	80.89
Overall Rating		1st	3rd	2nd

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 *Ineligibility and Suspension Policy* (<http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html>), the Bidder must provide with its bid the required documentation, as applicable, to be given further consideration in the procurement process.

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 [Inteligibility 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](http://www.esdc.gc.ca/en/jobs/workplace/human_rights/employment_equity/federal_contractor_program.page?&_ga=1.229006812.1158694905.1413548969#afed) website (http://www.esdc.gc.ca/en/jobs/workplace/human_rights/employment_equity/federal_contractor_program.page?&_ga=1.229006812.1158694905.1413548969#afed).

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.

5.2.3 Additional Certifications Precedent to Contract Award

5.2.3.1 Canadian Content Certification

5.2.3.1.1 SACC Manual clause [A3050T \(2014-11-27\)](#), Canadian Content Definition

5.2.3.1.2 Certification

This procurement is limited to Canadian services.
The Bidder certifies that:

() The service offered is a Canadian service as defined in paragraph 2 of clause [A3050T](#).

PART 6 - SECURITY, FINANCIAL AND OTHER REQUIREMENTS

6.1 Security Requirements

6.1.1. 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;
- (b) the Bidder's proposed individuals requiring access to classified or protected information, assets or sensitive work sites must meet the security requirements as indicated in Part 7 - Resulting Contract Clauses;

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- (c) the Bidder must provide the name of all individuals who will require access to classified or protected information, assets or sensitive work sites;

6.1.2. Bidders are reminded to obtain the required security clearance promptly. Any delay in the award of a contract to allow the successful Bidder to obtain the required clearance will be at the entire discretion of the Contracting Authority.

6.1.3. For additional information on security requirements, Bidders should refer to the [Industrial Security Program \(ISP\)](http://ssi-iss.tpsgc-pwgsc.gc.ca/index-eng.html) of Public Works and Government Services Canada (<http://ssi-iss.tpsgc-pwgsc.gc.ca/index-eng.html>) website.

6.2 Insurance - Proof of Availability Prior to Contract Award

The Bidder must provide a letter from an insurance broker or an insurance company licensed to operate in Canada stating that the Bidder, if awarded a contract as a result of the bid solicitation, can be insured in accordance with the Insurance Requirements specified in Annex "D".

If the information is not provided in the bid, the Contracting Authority will so inform the Bidder and provide the Bidder with a time frame within which to meet the requirement. Failure to comply with the request of the Contracting Authority and meet the requirement within that time period will render the bid non-responsive.

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" and the Contractor's technical bid entitled _____, dated _____.

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

- a) The Procurement Authority will provide the Contractor with a description of the task using the "DND 626, Task Authorization Form" specified in Annex "F".
- b) 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.
- c) The Contractor must provide the Procurement Authority, within five (5) 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.

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- d) The Contractor must not commence work until a TA authorized by the Procurement 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 Procurement Authority may authorize individual task authorizations up to a limit of \$35,000.00, Applicable Taxes included, inclusive of any revisions.

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

7.1.2.4 Canada's Obligation - Portion of the Work - Task Authorizations

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.

7.1.2.5 Periodic Usage Reports - Contracts with Task Authorizations

The Contractor must compile and maintain records on its provision of services to the federal government under authorized Task Authorizations issued under the Contract.

The Contractor must provide this data in accordance with the reporting requirements detailed below or in Annex "G". If some data is not available, the reason must be indicated. If services are not provided during a given period, the Contractor must still provide a "nil" report.

The data must be submitted on a quarterly basis to the Contracting Authority.

The quarterly periods are defined as follows:

- 1st quarter: April 1 to June 30;
- 2nd quarter: July 1 to September 30;
- 3rd quarter: October 1 to December 31; and
- 4th quarter: January 1 to March 31.

The data must be submitted to the Contracting Authority no later than 15 calendar days after the end of the reporting period.

Reporting Requirement- Details

A detailed and current record of all authorized tasks must be kept for each contract with a task authorization process. This record must contain:

For each authorized task:

- i. the authorized task number or task revision number(s);
- ii. a title or a brief description of each authorized task;
- iii. the total estimated cost specified in the authorized Task Authorization (TA) of each task, exclusive of Applicable Taxes;
- iv. the total amount, exclusive of Applicable Taxes, expended to date against each authorized task;
- v. the start and completion date for each authorized task; and
- vi. the active status of each authorized task, as applicable.

For all authorized tasks:

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- i. the amount (exclusive of Applicable Taxes) specified in the contract (as last amended, as applicable) as Canada's total liability to the contractor for all authorized TAs; and
 - ii. the total amount, exclusive of Applicable Taxes, expended to date against all authorized TAs.

7.1.2.6 Task Authorization - Department of National Defence

The administration of the Task Authorization process will be carried out by Defence Research and Development Canada – Suffield Research Station (DRDC-SRC). 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

[2040 \(2016-04-04\)](#), General Conditions - Research & Development, apply to and form part of the Contract.

7.2.2 SACC Manual Clauses

K3410C (2015-02-25), Canada to Own Intellectual Property Rights in Foreground Information

7.3 Security Requirements

7.3.1 The following security requirements apply and form part of the Contract.

SECURITY REQUIREMENT FOR CANADIAN SUPPLIER: PSPC FILE #: W7702-165797

7.3.1.1 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 Canadian Industrial Security Directorate (CISD), Public Services and Procurement Canada (PSPC).

7.3.1.2 The Contractor/Offeror personnel requiring access to sensitive work site(s) must EACH hold a valid RELIABILITY STATUS, granted or approved by CISD/PSPC.

7.3.1.3 Subcontracts which contain security requirements are NOT to be awarded without the prior written permission of CISD/PSPC.

7.3.1.4 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) Industrial Security Manual (Latest Edition).

7.4 Term of Contract

7.4.1 Period of the Contract

The period of the Contract is from **date of Contract to** _____ inclusive (*fill in end date of the period*).

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7.5 Authorities

7.5.1 Contracting Authority

The Contracting Authority for the Contract is:

Lorraine Jenkinson
Procurement Specialist
Public Works and Government Services Canada
Procurement and Compensation Branch, Western Region
ATB Place, North Tower, 5th Floor
10025 Jasper Avenue NW
Edmonton, AB T5J 1S6

Telephone: 780-497-3593

Facsimile: 780-497-3510

Email: lorraine.jenkinson@pwgsc-tpsgc.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:

(To be named in the Contract)

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 Procurement Authority

The Procurement Authority for the Contract is:

(To be named in the Contract)

The Procurement Authority is the representative of the department or agency for whom the Work is being carried out under the Contract. The Procurement Authority is responsible for the implementation of tools and processes required for the administration of the Contract. The Contractor may discuss administrative matters identified in the Contract with the Procurement Authority however the Procurement Authority has no authority to authorize changes to the scope of the Work. Changes to the scope of Work can only be made through a contract amendment issued by the Contracting Authority.

7.5.4 Contractor's Representative

Name: _____

Title: _____

Organization: _____

Telephone: ____-____-____

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Facsimile: ____ - ____ - ____

E-mail address: _____

7.6 Proactive Disclosure of Contracts with Former Public Servants

By providing information on its status, with respect to being a former public servant in receipt of a [Public Service Superannuation Act](#) (PSSA) pension, the Contractor has agreed that this information will be reported on departmental websites as part of the published proactive disclosure reports, in accordance with [Contracting Policy Notice: 2012-2](#) of the Treasury Board Secretariat of Canada.

7.7 Payment

7.7.1 Basis of Payment

7.7.1.2 Part A: Schedule of Milestones

In consideration of the Contractor satisfactorily completing all of its obligations under the Contract, the Contractor will be paid firm milestones as specified in Annex "B" for a cost of \$ _____ [insert the amount at contract award](#)). 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.

7.7.1.3 Part B – Task Authorization Requirements

The Contractor will be reimbursed for the costs reasonably and properly incurred in the performance of the Work specified in the authorized Task Authorization (TA), as determined in accordance with the Basis of Payment in Annex "B", to the limitation of expenditure specified in the authorized TA.

Canada's liability to the Contractor under the authorized TA must not exceed the limitation of expenditure specified in the authorized TA. Customs duties are included and Applicable Taxes are extra.

No increase in the liability of Canada or in the price of the Work specified in the authorized TA resulting from any design changes, modifications or interpretations of the Work will be authorized or paid to the Contractor unless these design changes, modifications or interpretations have been authorized, in writing, by the Contracting Authority before their incorporation into the Work.

7.7.2 Limitation of Expenditure

7.7.2.1 Canada's total liability to the Contractor under the Contract must not exceed \$ _____. Customs duties are included and Applicable Taxes are extra.

7.7.2.2 No increase in the total liability of Canada or in the price of the Work resulting from any design changes, modifications or interpretations of the Work, will be authorized or paid to the Contractor unless these design changes, modifications or interpretations have been approved, in writing, by the Contracting Authority before their incorporation into the Work. The Contractor must not perform any work or provide any service that would result in Canada's total liability being exceeded before obtaining the written approval of the Contracting Authority. The Contractor must notify the Contracting Authority in writing as to the adequacy of this sum:

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- 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 contract funds provided are inadequate for the completion of the Work,
whichever comes first.

7.7.2.3 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.

7.7.3 Progress Payments

7.7.3.1 For **Part A: Schedule of Milestones** of the Basis of Payment:

7.7.3.1.1 Canada will make milestone payments in accordance with the Schedule of Milestones detailed in Annex "B" and the payment provisions of the Contract, up to 90 percent of the amount claimed and approved by Canada if:

- (a) an accurate and complete claim for payment using form PWGSC-WR01, 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 total amount for all milestone payments paid by Canada does not exceed 100 percent of the total amount to be paid under the Contract;
- (c) all the certificates appearing on form PWGSC-WR01 have been signed by the respective authorized representatives;
- (d) all work associated with the milestone and as applicable any deliverable required have been completed and accepted by Canada.

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

7.7.3.2 For **Part B – Task Authorization Requirements** of the Basis of Payment:

7.7.3.2.1 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 90 percent of the amount claimed and approved by Canada if:

- (a) an accurate and complete claim for payment using form PWGSC-WR01, 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 100 percent of the total amount to be paid under the Contract;

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- (d) all certificates appearing on form PWGSC-WR01 have been signed by the respective authorized representatives.

7.7.3.2.2 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 Task Authorization if the Work has been accepted by Canada and a final claim for the payment is submitted.

7.7.3.3 Progress payments are interim payments only. Canada may conduct a government audit and interim time and cost verifications and reserves the right 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.

7.7.4 SACC Manual Clauses

A9117C (2007-11-30), T1204 - Direct Request by Customer Department

C0711C (2008-05-12), Time Verification

C0710C (2007-11-30), Time and Contract Price Verification

7.7.5 Electronic Payment of Invoices – Contract

(Contracting officers must reproduce below, the information from Annex "H" Electronic Payment Instruments, in which were identified electronic payment instruments accepted by the Contractor and renumber accordingly.)

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

- a. Visa Acquisition Card;
- b. MasterCard Acquisition Card;
- c. Direct Deposit (Domestic and International);
- d. Electronic Data Interchange (EDI);
- e. Wire Transfer (International Only);
- f. Large Value Transfer System (LVTS) (Over \$25M)

7.8 Invoicing Instructions

7.8.1 The Contractor must submit a claim for payment using form PWGSC-WR01, Claim for Progress Payment. Each claim must show:

7.8.1.1 For **Part A: Schedule of Milestones** of the Basis of Payment:

- a. all information required on form PWGSC-WR01;
- 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.

7.8.1.2 For **Part B – Task Authorization Requirements** of the Basis of Payment:

- a. all information required on form PWGSC-WR01;
- b. all applicable information detailed under the section entitled "Invoice Submission" of the general conditions;
- c. a list of all expenses;
- d. expenditures plus pro-rated profit or fee;
- e. a copy of time sheets to support the time claimed;
- f. a copy of the invoices, receipts, vouchers for all direct expenses, travel and living expenses;

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g. a copy of the monthly progress report, if applicable.

7.8.2 Applicable Taxes 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 Applicable Taxes payable as it was claimed and payable under the previous claims for progress payments.

7.8.3 The Contractor must prepare and certify one original and two (2) copies of the claim on form PWGSC-WR01, and forward

a) the **original and one (1) copy** of the claim to the Procurement Authority identified under the section entitled "Authorities" of the Contract for appropriate certification after inspection and acceptance of the Work takes place; and

b) **one (1) copy** of the progress claim to the Contracting Authority identified under the section entitled "Authorities" of the Contract.

7.8.4 The Procurement Authority will then forward the original and one (1) copy of the claim to the Payment Office for the remaining certification and payment action.

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

7.9 Certifications and Additional Information

7.9.1 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.

7.9.2 SACC Manual Clauses

[A3060C \(2008-05-12\)](#), Canadian Content Certification

7.9.3 Disclosure Certification

On completion of the Work, the Contractor must submit to the Procurement Authority and to the Contracting Authority a copy of the Disclosure Certification attached as Annex "E" stating that all applicable disclosures were submitted or that there were no disclosures to submit under section 27 and 28 of general conditions [2040](#).

7.10 Applicable Laws

The Contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in _____. (*Insert the name of the province or territory as specified by the Bidder in its bid, if applicable.*)

7.11 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 general conditions [2040 \(2016-04-04\)](#), General Conditions - Research & Development;
- (c) Annex A, Statement of Work;

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- (d) Annex B, Basis of Payment;
 - (e) Annex C, Security Requirements Check List;
 - (f) Annex D, Insurance Requirements;
 - (g) the signed Task Authorizations (including all of its annexes, if any) (*if applicable*);
 - (h) the Contractor's bid dated _____, (*insert date of bid*) (*If the bid was clarified or amended, insert at the time of contract award:* ", as clarified on _____ " **or** ", as amended on _____ " *and insert date(s) of clarification(s) or amendment(s)*).

7.12 Defence Contract

SACC Manual clause [A9006C \(2012-07-13\)](#), Defence Contract

7.13 SACC Manual clauses

[A2000C \(2006-06-16\)](#), Foreign Nationals (Canadian Contractor)

OR

[A2001C \(2006-06-16\)](#), Foreign Nationals (Foreign Contractor)

[A9062C \(2011-05-16\)](#), Canadian Forces Site Regulations

7.14 Insurance – Specific Requirements

The Contractor must comply with the insurance requirements specified in Annex "D". The Contractor must maintain the required insurance coverage for the duration of the Contract. Compliance with the insurance requirements does not release the Contractor from or reduce its liability under the Contract.

The Contractor is responsible for deciding if additional insurance coverage is necessary to fulfill its obligation under the Contract and to ensure compliance with any applicable law. Any additional insurance coverage is at the Contractor's expense, and for its own benefit and protection.

The Contractor must forward to the Contracting Authority within ten (10) days after the date of award of the Contract, a Certificate of Insurance evidencing the insurance coverage and confirming that the insurance policy complying with the requirements is in force. For Canadian-based Contractors, coverage must be placed with an Insurer licensed to carry out business in Canada, however, for Foreign-based Contractors, coverage must be placed with an Insurer with an A.M. Best Rating no less than "A-". The Contractor must, if requested by the Contracting Authority, forward to Canada a certified true copy of all applicable insurance policies.

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ANNEX "A" - STATEMENT OF WORK

1. TITLE

FINAL DESIGN AND ASSEMBLY OF TEST FRAME FOR BLAST TRIALS

2. BACKGROUND

Defence Research and Development Canada Suffield (DRDC) Research Centre (SRC) anticipates testing large historic masonry walls against blast loads at a test site on the DRDC Suffield Research Centre Experimental Proving Ground (EPG) near Ralston, Alberta. To facilitate this work, a test frame will be required which will be used to (i) act as a base for a section of masonry wall, and (ii) act as a 'rigid', non-responding, frame around the sides, base and top of the masonry wall during the blast. The test frame is expected to support in excess of 90 cubic metres of reinforced concrete.

The intent of the tests is to create a blast scenario which damages the masonry walls (targets). It is anticipated that the test frame will be required to survive up to six separate large blasts (TNT or equivalent) without significant damage. To allow for the possibility of damage to the test frame, the proposed contract will contain options which may be exercised at SRC's discretion for the repair of the test frame after one or more of the blast tests.

A blast design for the foundation and test frame has been obtained from a third party. This is referred to as the preliminary design. Excerpts are included in Appendix 1. This design was based on a similar device used to blast test wall sections at a different test facility. Computer modelling has been used to verify the design elements of the new preliminary design will resist blast loads during explosive testing. This leads to a high level of confidence that the proposed design will be structurally up to the task of supporting the target masonry wall sections and to providing a near-rigid structure against which the test walls will be loaded during the explosive blast tests. The preliminary design only considered blast loading from the explosive tests and did not consider any other structural design requirements

There is no requirement for any work associated with designing or building the historic masonry test walls.

3. ACRONYMS

EPG	(DRDC Suffield Research Centre) Experimental Proving Ground
PDF/A-1	Portable Document Format for long term document storage. Also PDF 1.4. See ISO 19005-1:2005
SOW	Statement of Work
SRC	(Defence Research and Development Canada) Suffield Research Centre
TA	(DRDC Suffield Research Centre) Technical Authority

4. APPLICABLE DOCUMENTS & REFERENCES

None.

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5. TASKS

5.1 Preliminary Design Review

The preliminary design at Appendix 1 contains several assumptions about the manufacture and assembly of the test frame components. It also contains sketches of some of the key assembly elements such as cast-in steel flanges. It does not contain sufficient detail for the manufacture and assembly of the test frame.

In Task 5.1, the Contractor must evaluate the preliminary design information, including the concerns expressed in Appendix 1 and advise the Technical Authority (TA) regarding ways to achieve the desired final end result.

A meeting will be held at the conclusion of Task 5.1 at which the Contractor must present the preliminary design details as established or modified to a state that is mutually agreeable to the Contractor and the Technical Authority.

It is expected that Task 1 will take less than one month.

5.2 Final Design Documentation

Task 5.2 is the preparation of the drawings and instructions needed for the manufacture and assembly of the test frame. The Contractor must have the necessary expertise to perform this work with minimal involvement by the TA.

The Contractor must present and explain the final design documentation at a meeting at the conclusion of Task 5.2.

It is expected that Task 5.2 will take less than two months.

5.3 Manufacture and Assembly

Task 5.3 is the manufacture of the test frame components as precast items or as cast-on-site as defined in the previous Tasks, and the assembly of the components into the complete test frame. The Contractor must provide all necessary materials, transportation, materials handling, and subcontracting in Task 5.3.

The TA will be responsible for the excavation of a base for the foundation slab as defined in Task 5.1 and/or 5.2. Except for the excavation work, the Contractor will be responsible for the complete installation including the foundation base as defined in Task 5.1 and/or 5.2.

Task 5.3 will be complete when the test frame has been completely assembled, cured, inspected and accepted by the Technical Authority. This must include a demonstration of the installation and removal of the loading assembly without the presence of the target masonry wall.

It is expected that Task 5.3 will take approximately one month for manufacture and assembly of the components, and one month for a complete cure of the concrete, for a total of two months.

5.4 Site Remediation

Up to six individual blast tests are anticipated with up to 2 tests in each calendar year 2017, 2018 and 2019, although the schedule may shift depending on weather, the effects of each blast test, and other factors. At the conclusion of the final test there is a requirement to rehabilitate the site to its previous

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condition. This must include work by the Contractor to disassemble the test frame and remove the components to the sanitary landfill on the EPG.

The Contractor must supply all trucking, materials handling and labour. Excluded from this task is the excavation and removal of the subgrade gravel foundation, which will be the responsibility of the TA. Refilling the excavation and reseeding with native vegetation will be the responsibility of the TA, and is not considered part of Task 5.4. Task 5.4 will be completed when all components of the test frame have been removed to the sanitary landfill.

It is expected that Phase 4 will take approximately two weeks.

5.5 Test Frame (Task Authorization requirements)

Several activities may or may not be required depending on the final design details and the level of damage done to the test frame during each of the blast tests. It is impossible at this time to predict these costs or details of these options until the final design has been completed and any blast damage has been assessed. For planning purposes, it is assumed that tasks totaling up to \$35,000 before or after each of the first five tests may be exercised, for a possible total of up to \$175,000. It must be noted, however, that there is the possibility that no repairs or additional work will be necessary. In this case, the TAC would be zero.

In any of the following cases the TA will contact the Contractor with a request for a quotation based on the specific work needed. The TA will then formulate the necessary Statement of Work based on the quotation provided, and the Contractor must effect the work described. Essentially, the Options in Task 5.5 will be treated as if they were separate Tasks in a Task Authorization requirements.

- (a) Installation or removal of the loading assembly: Depending on the final design of the loading assembly it may be necessary to have a heavy-lift crane lift the loading assembly onto the finished target wall, or to have the crane remove the loading assembly after a test, or both – see Appendix 1. In this event the Contractor must (i) provide a quotation for the necessary services, and (ii) on approval by the TA, execute the services.
- (b) Post blast repairs to the test frame: In the event that the test frame shows damage after a blast test, the TA may elect to investigate having repairs made and will request that the Contractor inspect the test frame and provide a quotation for necessary repairs. In this event the Contractor must (i) inspect the damage, (ii) advise the Technical Authority and provide a quotation for any necessary repairs, and (iii) on approval by the TA, execute the repairs.
- (c) Target wall demolition and removal: Following a blast test, the TA may request a quotation from the Contractor for the demolition of the target wall, and removal of the target wall remains to the onsite landfill. In this event the Contractor must (i) provide a quotation for the necessary services, and (ii) on approval by the TA, execute the services.

6. DELIVERABLES

6.1 Deliverables for Task 5.1

The Contractor shall provide the following deliverables in PDF/A-1 format at the Task 5.1 completion meeting.

- (a) List of proposed modifications to the existing Preliminary Design, and a narrative discussion of the reasons/merits of the modifications.
- (b) Complete description of any necessary excavation required for the installation of the test frame.

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6.2 Deliverables for Task 5.2

The Contractor shall provide the following deliverables in PDF/A-1 format at the Task 5.2 completion meeting.

- (a) Manufacturing drawings including materials lists as approved by a Professional Engineer
- (b) Assembly instructions
- (c) Manufacture & assembly schedule

Milestone payment: An invoice may be submitted for Tasks 5.1 and 5.2 at the conclusion of Task 5.2.

6.3 Deliverables for Task 5.3

Deliverables for Task 5.3 include the completely assembled and cured test frame, and a demonstration of the installation and removal of the loading assembly.

Milestone payment: An invoice may be submitted for Task 5.3 at the conclusion of Task 5.3.

6.4 Deliverables for Task 5.4

Task 5.4 will be considered complete when the Contractor has removed all materials from the test frame to the sanitary landfill on the DRDC EPG.

Milestone payment: An invoice may be submitted for Task 5.4 at the conclusion of Task 5.4.

6.5 Deliverables for Task 5.5

If tasks are exercised by the TA, the necessary scope of work and deliverables will be documented by the TA.

Payments: An invoice may be submitted for each task issued under Task 5.5 at the conclusion of that Task.

7. DATE OF DELIVERY

Deliverable 6.1: The Task 5.1 completion meeting must be held not less than 4 weeks after contract award. The associated deliverables must be delivered at that time.

Deliverable 6.2: The Task 5.2 completion meeting must be held not less than 8 weeks after the Task 5.1 completion meeting. The associated deliverables must be delivered at that time.

Deliverable 6.3: Weather conditions and ground/road conditions restrict access to the EPG at certain times of the year, particularly in the spring and autumn. In general it may be assumed that the onsite work on the EPG cannot commence before early May, although circumstances sometimes permit access in April. The deliverable for Task 5.3 is the completed and cured test frame which must be available for inspection and acceptance by the TA not later than November 2016.

Deliverable 6.4: The Task 5.4 deliverable is the complete removal of all parts of the test frame except the gravel foundation base. This activity cannot begin until the final blast test has been completed, and will necessarily be restricted by the same weather and ground condition considerations described above for Deliverable 6.3. In addition, the actual number of tests may be less than six, and the scheduling of the tests will also be restricted by the weather and ground conditions. It is expected that the earliest start for Task 5.4 will be 01 June 2019, and the latest start will be 01 May 2020. The schedule for Task 5.4 and deliverable 6.4 will therefore be scheduled jointly by the Contractor and the TA.

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Deliverable 6.5: Delivery date(s) for each task exercised by the TA will be specified in each Statement of Work for the task as issued by the TA. For planning purposes, it is anticipated that two tests will be completed in each of the calendar years 2017, 2018 and 2019.

8. LANGUAGE OF WORK

English.

9. LOCATION OF WORK

The design work of Task 5.1 and 5.2 must be performed at the Contractor site, although the TA will arrange for a site visit by the Contractor. Certain aspects of the manufacture may be performed at the Contractor site as defined during Task 5.2

Except for the possibility of precasting some or all of the concrete components of the test frame, the activities for Tasks 5.3, 5.4, and 5.5 must occur on the DRDC Suffield EPG at:

Defence Research and Development Canada – Suffield Research Centre
Experimental Proving Ground
Ralston, AB
T0J 2N0
Canada

10. TRAVEL

The Contractor is required to travel to DRDC Suffield as follows. The Treasury Board Travel Directive will apply for any travel, accommodation and living expenses. All travel expenses must be included in the Contractor's price bid.

Task: 5.1, 5.2

Location: DRDC Suffield

Address:

Defence Research and Development Canada – Suffield Research Centre
Building 13A
Ralston, AB
T0J 2N0
Canada

Duration: One day meetings

Frequency: One meeting at the start of the contract. One meeting at the end of Task 5.1. One meeting at the end of Task 5.2

Task: 5.3, 5.4, 5.5

Location: DRDC Suffield

Address:

Defence Research and Development Canada – Suffield Research Centre
Experimental Proving Ground
Ralston, AB
T0J 2N0
Canada

Duration: Daily, as required

Frequency: Daily, as required

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11. MEETINGS

Formal meetings are required to be held in Building 13A at DRDC Suffield Research Centre as follows

- 11.1 Task 5.1 Kickoff Meeting: The kickoff meeting must be held within 2 weeks after contract award. At this meeting the Technical Authority will disclose any additional relevant information which has become available including the precise location on the EPG. This meeting will include a site visit to the EPG, and the mandatory, one hour Range Safety Briefing for all Contractor and subcontractor personnel who will be working on the EPG.
- 11.2 Task 5.1 Completion Meeting: Informal discussions and meetings may occur during Task 5.1 through face-to-face discussions, phone calls or emails as appropriate. At the conclusion of Task 5.1, the Contractor must present the final design details which will be committed to drawings/instructions (deliverable 6.1). With acceptance of deliverable 6.1 by the Technical Authority, the Contractor must then commence work on task 5.2.
- 11.3 Task 5.2 Completion Meeting: When all drawings and instructions are completed, the Contractor must present the details (deliverable 6.2) to the Technical Authority. On approval of deliverable 6.2 by the Technical Authority the Contractor must then proceed with Task 5.3.
- 11.4 Task 5.3, 5.4, 5.5 Meetings: It is not anticipated that formal meetings will be required during Tasks 5.3, 5.4, or 5.5. Any necessary meeting or discussions will be held informally onsite on the EPG with necessary decisions being documented by the TA. This will include acceptance of deliverables 6.3, 6.4 and 6.5.

12. GOVERNMENT SUPPLIED MATERIAL (GSM)

None.

13. GOVERNMENT FURNISHED EQUIPMENT (GFE)

GFE 1: Two way radios for vehicles used on the Experimental Proving Ground.

14. SPECIAL CONSIDERATIONS

As noted above, weather conditions and ground conditions will play a significant role in scheduling work on the EPG. There may also be occasions in which other activities on the EPG will prevent Contractor access to the site for up to one day at a time. This is not expected to occur more than once per month, and the TA will endeavour to provide at least 2 weeks' notice prior to such schedule conflicts.

15. CASH PHASING

Milestones:

FY 16/17 (Task 5.1, 5.2, 5.3)	\$
FY 19/20 (Task 5.4)	\$

Task Authorization:

FY 17/18 (Task 5.5)	\$
FY 18/19 (Task 5.5)	\$
FY 19/20 (Task 5.5)	\$

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16. DRDC-SUFFIELD GENERAL CONTRACT SAFETY & SECURITY REQUIREMENTS

16.1 General Experimental Proving Grounds (EPG) Safety and Access Information

In accordance with DRDC Suffield regulations, all Contractor employees and subcontractors participating in Experimental Proving Ground (EPG) activities that are not escorted by DRDC Suffield personnel or the DRDC-authorized Contract principal will attend a general EPG safety briefing lasting approximately one (1) hour at the Field Operations Section (FOS). This briefing will take place annually for long standing Contracts and new or additional Contractor employees or subcontractors will be required to take the briefing before beginning work.

An access permit is required for non-DND vehicles travelling on the EPG. In addition, a two-way radio, compatible with the DRDC Suffield communication system, will be supplied for safety reasons. Other forms/briefings related to safety and security may be required.

16.2 Work-Specific Safety Briefing

Contractors employees or subcontractors supporting DRDC Suffield personnel on specific Field Trial Plans (FTP's), Standing Operating Procedures (SOP's), Study Approval Form (SAF), or other procedure will attend work-specific briefings by the DRDC Technical Authority (TA) lasting approximately one (1) hour relating to health, safety, environmental and emergency response procedures. Documentation including FTP's, SOP's, SAF or other procedures, safety standards and EPG regulations will be cited or made available to the Contractor employees or subcontractors on a loan basis for reference, as applicable.

16.3 Observance of On-Site Safety, Health and Environmental Standards on Protection of Property

The Contractor, their employees and subcontractors must comply with all DND/DRDC Suffield regulations in force at the worksite, including the observance of all safety, health and environmental standards and those in place to preserve and protect DND property from loss or damage from all causes including fire.

16.4 Compliance

The Contractor is responsible to ensure that all employees and subcontractors that will be working on the site are fully briefed and have completed and signed the Safety Checklist prior to the start of any portion of the on-site work. A copy of the signed checklist must be provided by the Contractor to the DRDC Suffield Technical Authority.

Appendix 1 – Preliminary Design

1. Overall inclusive concept of operation

- a. Figure 1 shows the main components of the test frame in the fully assembled state but without the target masonry wall. With only a few exceptions, the items are reinforced 30 MPa (minimum) concrete with steel pieces cast-in to facilitate welding of the components. The pieces can be pre-cast or cast on-site as makes best sense from a manufacturing and transportation point of view. All items must be fabricated, transported and assembled by the Contractor.
- b. A base for the foundation slab (not shown in Figure 1) must be designed and constructed so that the test frame is stable when subjected to changes in soil moisture, frost, and the effects of the explosive test blast wave. The blast effects are discussed below. The excavation for the base will be done by the TA but the dimensions of the excavation must be specified by the Contractor during Task 5.1. The creation of the base (notionally assumed to be compacted gravel) is a Contractor responsibility.
- c. All pieces except the U-shaped loading assembly must be attached to each other by the Contractor during the process of assembling the test frame (Figure 2).
- d. Following the assembly of the test frame, a target wall will be constructed on top of the foundation slab, and in the opening between the shear walls. This effort will be executed by a third party and is not connected in any way with the work of this contract (Figure 3).
- e. When the target wall has been completed, the third party will apply a layer of grout to the target wall's upper surface. The loading assembly will be lifted by crane, centered over the target wall and secured in place until the grout has cured and can distribute the loading assembly weight evenly across the target wall (Figure 4). As described below, this may have to be done in pieces rather than in a single lift due to the size and mass of the loading assembly. The final design of the loading assembly must take into account that the loading assembly will have to be installed up to six times and removed up to six times over the contract period, so it is essential that the design allow for an economical lifting solution. The effort of installing and/or removing the loading assembly may be done by the TA or by the Contractor under an Option directed by the TA. As part of the initial build of the test frame, the Contractor must, however, demonstrate that the loading assembly can be lifted, positioned, removed and laid flat on the ground without damage to the loading assembly or the other components.
- f. During the curing of the target wall, and during assembly of the loading assembly (if it is installed in pieces) it will be necessary to support the columns. Removable wedge jacks may be used under the legs of the loading assembly. These will be removed following the cure, leaving the entire mass of the loading assembly bearing vertically on the target wall. The Contractor must include this support mechanism in the design and construction of the test frame. For illustration only, and without requiring any specific make or model of jack, a brief internet search revealed at least three possible alternative wedge jacks:
 - i. <http://ischebeck.ca/products/ischebeck-wedge-jack-2.html>
 - ii. http://www.vibrationmountsindia.com/Wedge_Mounts_Series_DF.html
 - iii. <http://bilz-usa.com/products/model-pk-free-standing-precision-leveling-no-pad-set/>

- g. Following complete cure of the target wall, and the removal of the loading assembly support jacks, an explosive test will take place to load the front face of the test wall.
- h. At the end of the project the Contractor must break down the test frame and remove all materials to the landfill on the EPG.

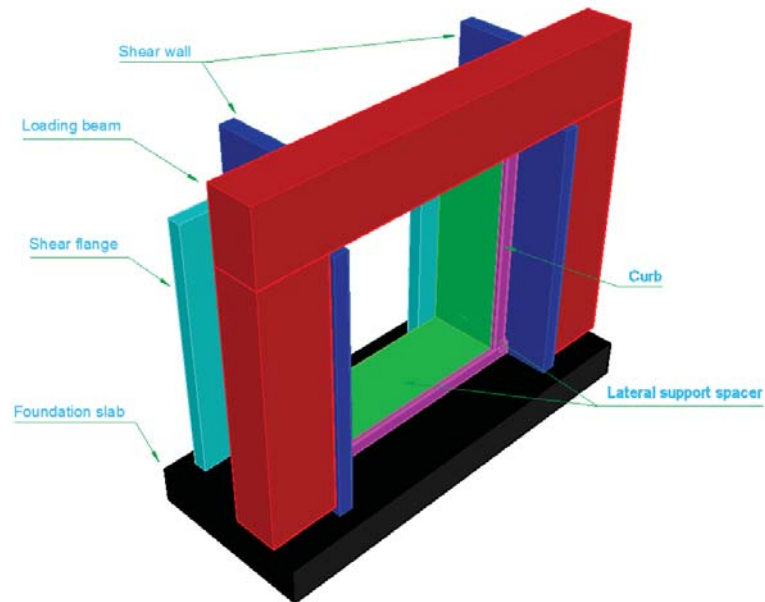


Figure 1 - Test Frame Assembly – without Masonry Test Wall

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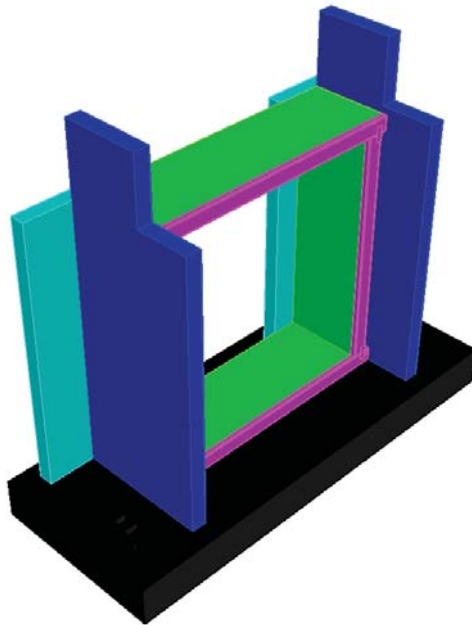


Figure 2 - Permanently attached components

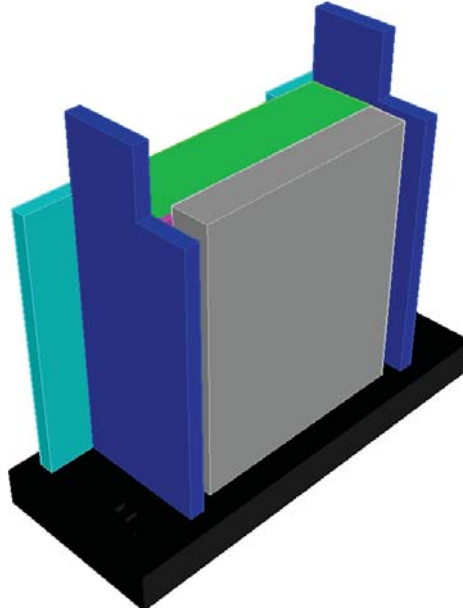


Figure 3 - Target Masonry wall added by others (not part of this contract)

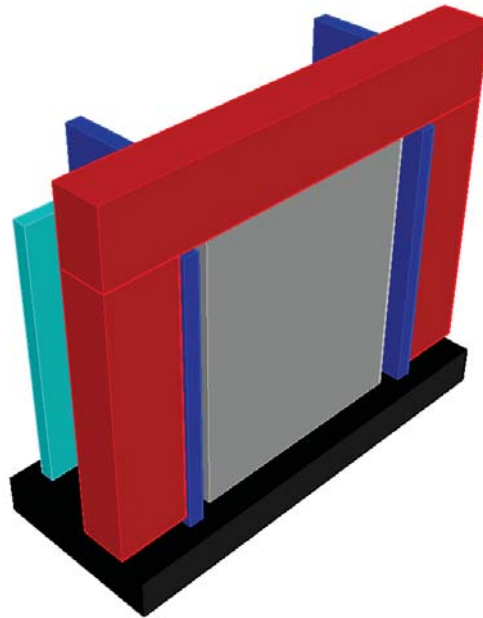


Figure 4 - Loading assembly installed

2. Major component dimensions and descriptions

- a. Each of the main components is shown in Figure 5 through Figure 10. The items may be precast or cast-on site at the Contractor's discretion. Lifting/handling points must be integral to each piece. Steel plates with welded steel studs or rebar that are cast into the surrounding concrete (i.e. steel inserts) must be included in all parts as noted to allow the components to be welded together. The dimensions and positions of each component are important for the purposes of (i) structurally supporting the other components including the target masonry wall, and (ii) shaping the blast wave from the explosion to minimize the effects of the blast wave wrapping around behind the structure. Where dimensions are shown, they are subject to revision by up to 300mm. The finalized dimensions will be confirmed by the TA at the Task 5.1 Kickoff Meeting.
- b. Figure 5: Foundation slab
 - i. The purpose of the foundation slab is to provide a solid base for the rest of the test frame and also for the target masonry wall which will be built directly on the foundation slab.
 - ii. The foundation slab is to be installed with its top surface flush with the surrounding soil. It is to rest on a prepared footing/base which is assumed to be compacted gravel. It is also assumed to incorporate a number of steel or concrete pilings to provide a secure anchor to prevent sliding and minimize rocking during the blast testing. The gravel footing and pilings are not shown.
 - iii. Three or more heavy steel pins (nominally 900 diameter) are to be inserted by hand into recesses in the foundation slab to ensure that the loading assembly columns are aligned and remain aligned during and after the blast loading. It is expected that the recesses should be sleeved with steel pipe to avoid damaging

the surrounding concrete during the blast.

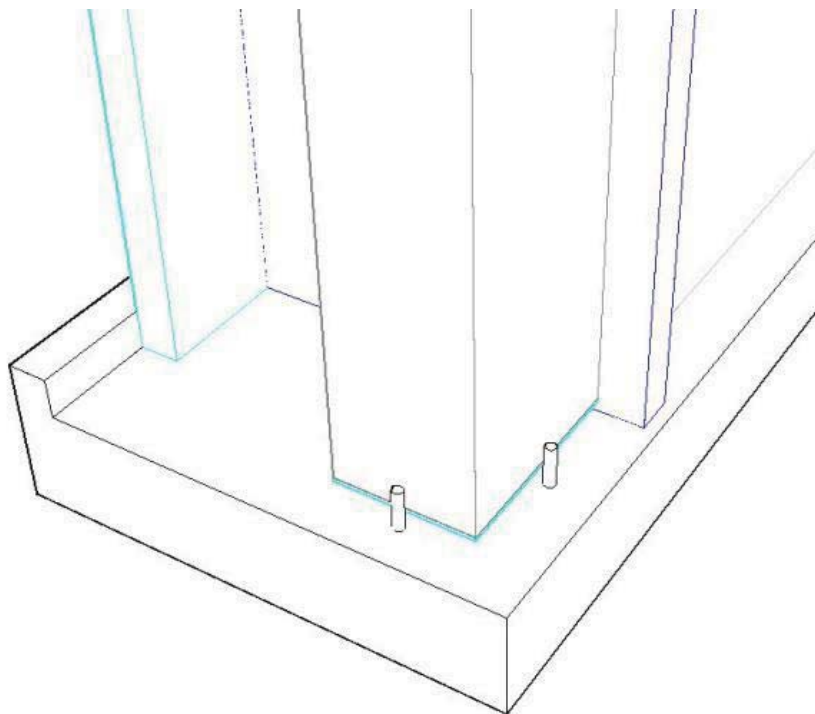
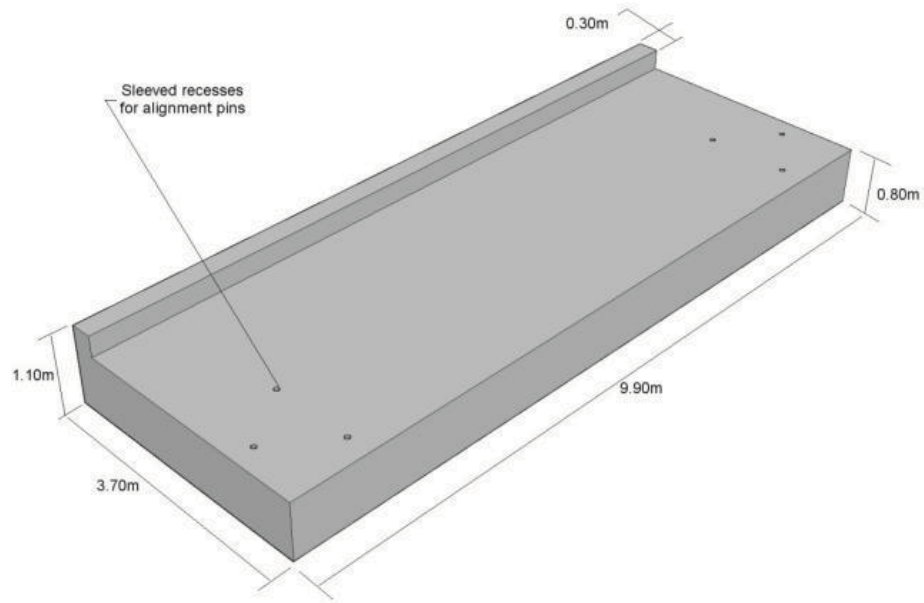
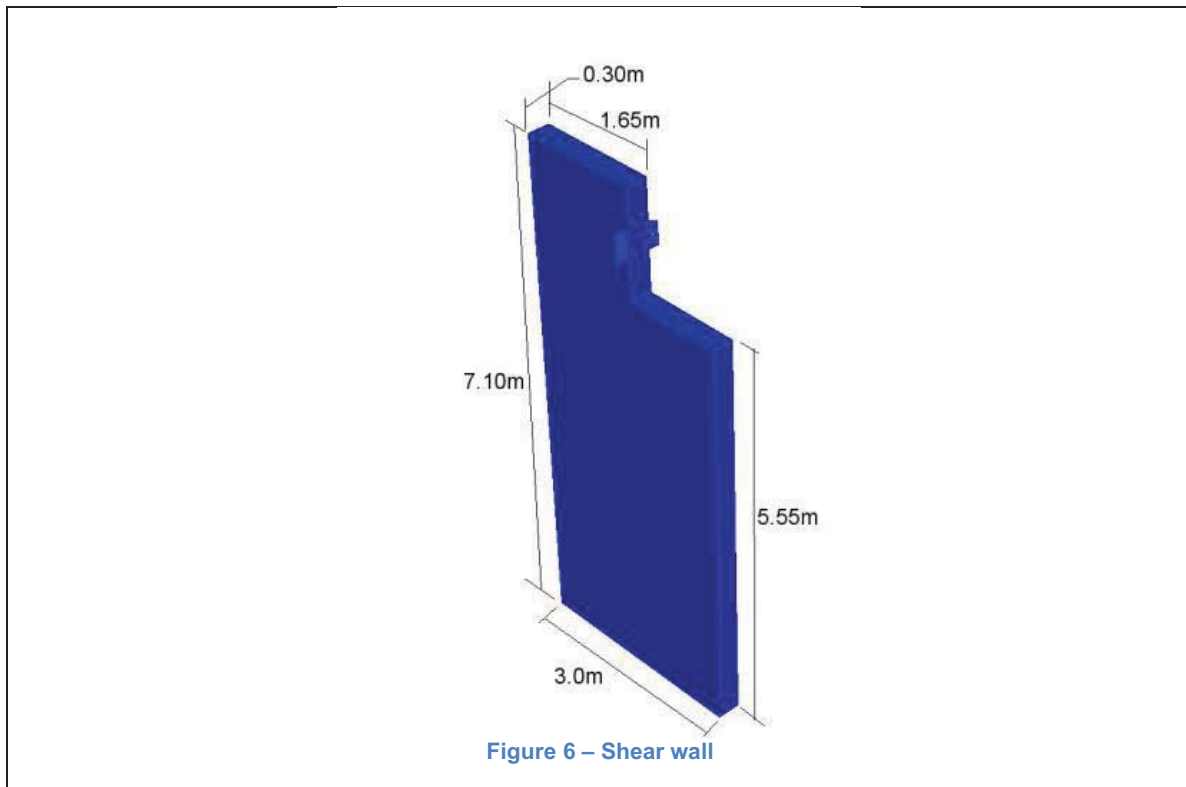


Figure 5 - Foundation slab (top) / Alignment pins (bottom)

c. Figure 6: Shear walls

- i. Two shear walls are required and will ultimately flank the target masonry wall. These are welded to the foundation slab via steel inserts.
- ii. A shelf is built into both shear walls. In this shelf area, the U-shaped loading assembly will rest on top of the target test wall which will be slightly (50-100 mm) higher than the height of the shelf. The shelf is intended to support the U-shaped loading assembly if the test wall fails.
- iii. On the vertical edge of the shear wall just above the shelf is a steel insert which will accept a bracket with a slotted hole. Combining the slotted hole with a threaded rod running through the loading assembly will keep the loading assembly secured to the shear walls while still allowing it to be raised or lowered. The steel components and the slotted bracket are all Contractor responsibilities.



d. Figure 7: Shear flanges

- i. A vertical wall (shear flange) is located behind each shear wall, and includes steel inserts for welding to the foundation slab and the shear walls.
- ii. The shear flanges reinforce the shear walls and also provide shaping of the blast wave.

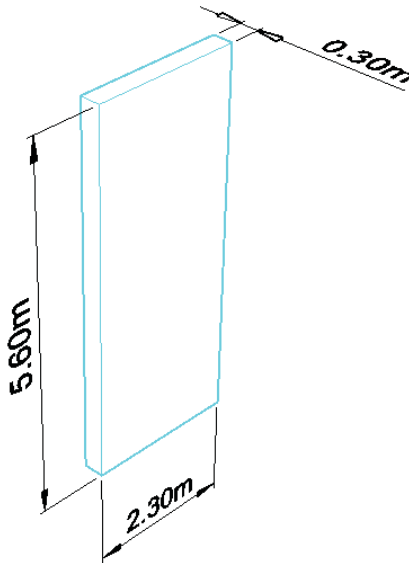
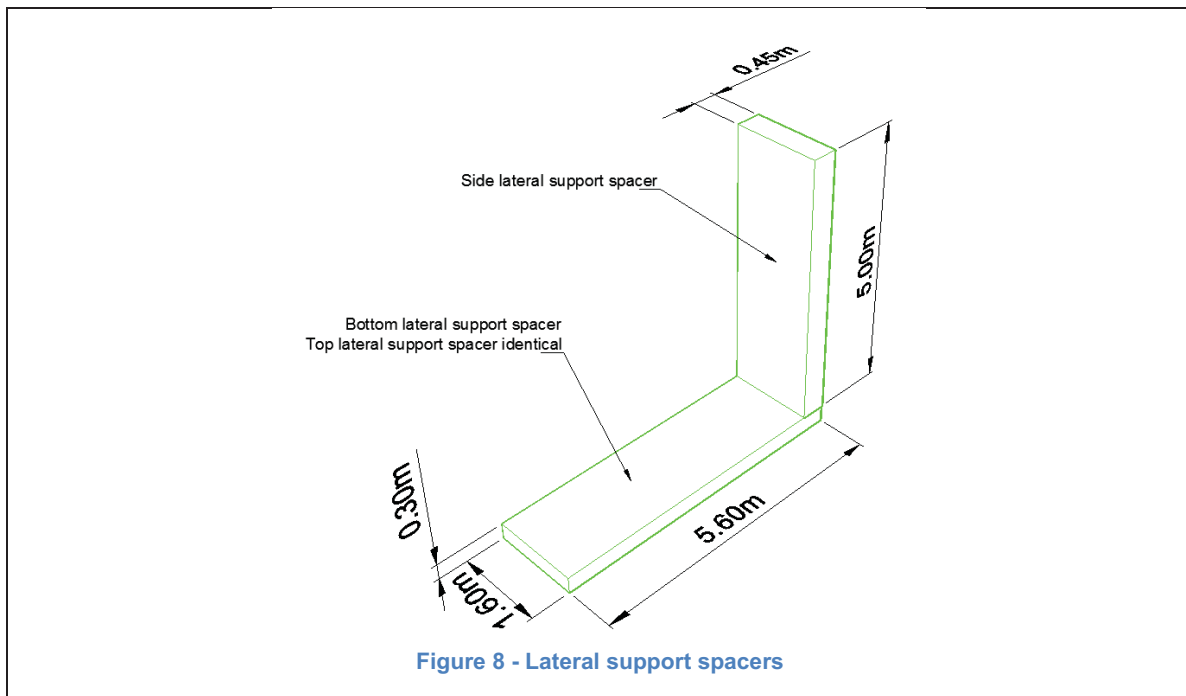


Figure 7 – Shear flange

- e. Figure 8: Lateral support spacers
- A bottom lateral support spacer will be placed on the foundation slab. Side lateral support spacers will be rested on top of the bottom support spacer and welded to the shear walls. A top lateral support spacer will be placed with its ends resting on the tops of the side lateral support spacers.
 - The purpose of the lateral support spacers is to act as a backstop against which the target masonry wall will be pressed during the explosive blast test. This assumes a 1000mm deep masonry target wall, under a centrally loaded 1000mm deep loading assembly.
 - It will be necessary to attach additional spacers or curbs (see below) to the top and bottom lateral support spacers. Attachment points for these must be built into the front edges of the top and bottom lateral support spacers.
 - If the span of the top lateral support spacer is long enough that it requires additional reinforcement, it can be configured as an inverted T-section to provide a stiffening spine.



f. Figure 9: Curbs

- i. Some of the masonry target walls may be less than 1000mm deep. In this case the wall must still be supported by the lateral support spacers, but it must also still be centrally located under the 1000mm deep loading assembly whose position is restricted by the position of the shear wall shelf. Hence, additional spacers or curbs are needed between the target wall and the front edges of the lateral support spacers.
- ii. Each of the curbs is envisioned as being a single piece of 4 inch x 12 inch structural steel tubing rather than concrete but can be made from concrete at the Contractor's discretion. These dimensions will allow a target wall of 800mm depth to be positioned correctly under the loading assembly.
- iii. The bottom and top curbs must have upper lips or tabs which will overlap the upper surfaces of the top and bottom lateral support spacers. Heavy bolts should be run through these tabs into threaded receivers in the tops of the lateral support spacers. The top/bottom lateral support spacer tabs shown in Figure 9 are notional and are not representative of the desired geometry.
- iv. The side curbs will be bolted to the top and bottom curbs at their ends.
- v. A second layer of curbs is required in the event that a target wall of 600mm depth is used. These will simply attach to the first layer of curbs in the same way that the first layer attached to the lateral support spacers.

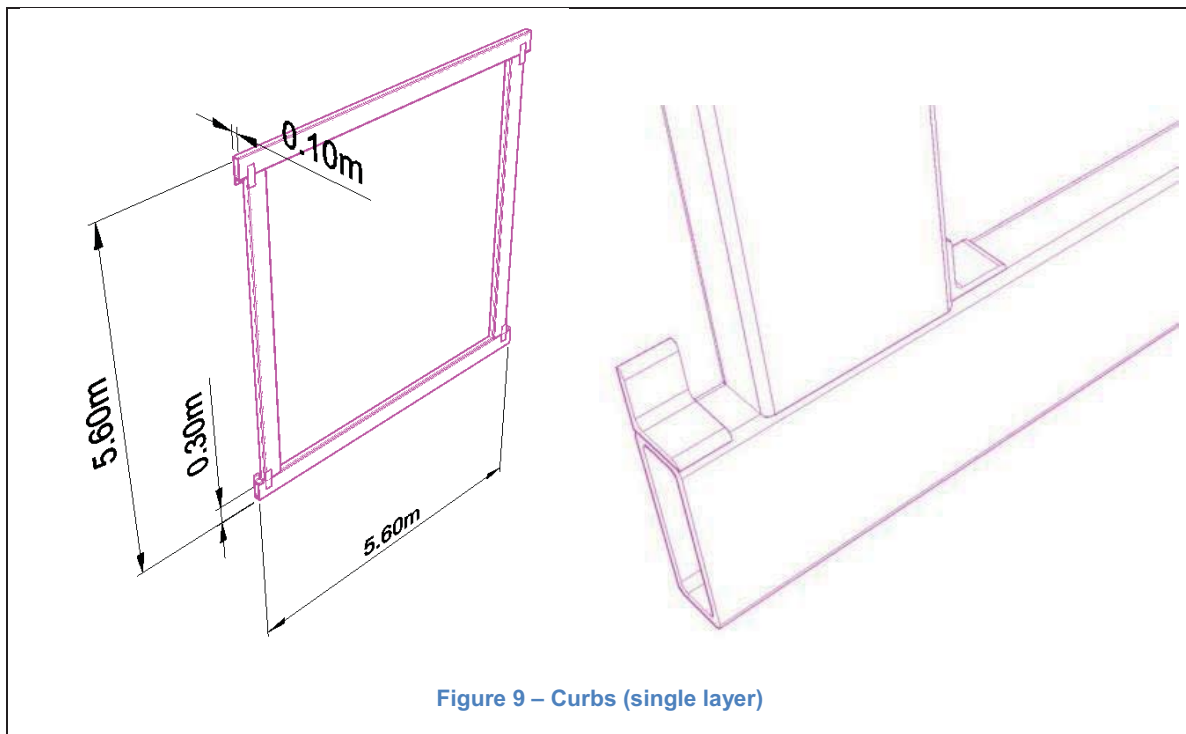


Figure 9 – Curbs (single layer)

g. Figure 10: Loading assembly

- i. The loading assembly requires extra attention due to its size and weight and the fact that it must be removable. The following discussion is meant to illustrate the requirements and restrictions of loading assembly design, but not to limit or define the final design of this item.
- ii. The main purpose of the loading assembly is to simulate the weight of a second storey of a building bearing on the target masonry wall. Therefore, the bottom of the loading columns cannot touch the slab/foundation when the loading beam is placed on top of the test wall. The top of the test wall is expected to have a minimum height above the slab/foundation of 5.6 m. The secondary purpose is to provide a flat face above and on both sides of the target wall to shape the explosive blast wave and to minimize wrap-around effects of the wave. The geometry of the U-shape is therefore important.
- iii. For safety reasons it may be necessary to remove the loading assembly when the masonry target wall is being assembled, or during the disassembly/demolition of the masonry target wall. Therefore the entire loading assembly must be removable in an efficient, cost effective manner. The loading assembly may need to be installed on the completed test wall before each test and removed after each test, so in all, up to 12 lifts will be necessary.
- iv. When fully assembled the loading assembly will weigh approximately 70 tonnes and will measure approximately one metre thick, seven metres tall and almost ten metres long. The original intent was that the loading assembly would be built as a single piece which would be removed and laid flat on the ground when

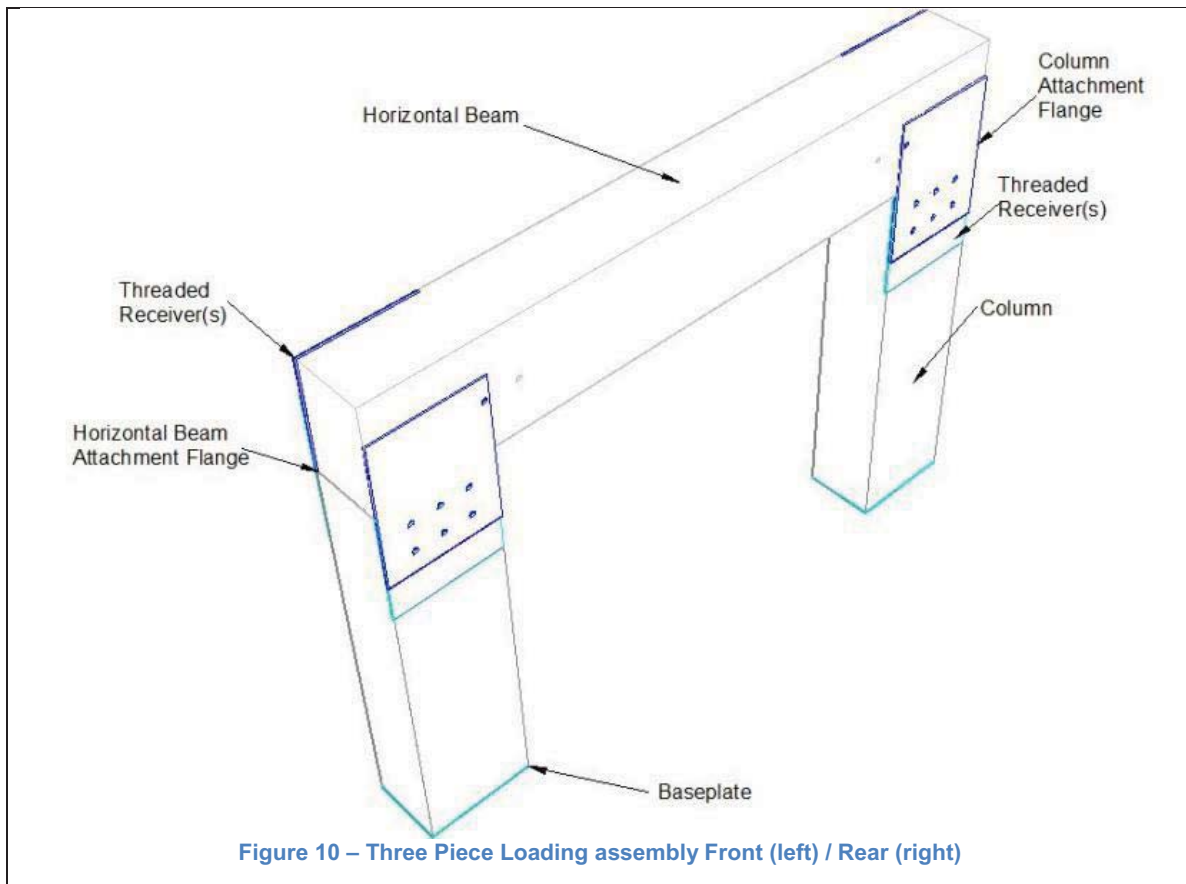
not installed on the test frame. A preliminary investigation revealed that the load and reach needed for this would require a crane with a capacity in the order of 500 tonnes, which would prove unaffordable with up to 12 lifts being needed. A second possibility was to cast the loading assembly in separate pieces that can be lifted with a much smaller and more affordable crane, and which can be assembled and disassembled quickly and efficiently.

- v. The following discussion shows a conceptual design for a three-piece loading assembly. The final design is not required to follow this design. In addition, the Contractor is free to pursue a one-piece design providing that a single crane of nominally 200 tonne capacity can be used. This may require creating a stand to secure the loading assembly vertically when not in use.
- vi. The conceptual design for a three-piece loading assembly is shown in Figure 10 to Figure 12. Up to four wedge jacks are placed under each column, with a steel plate on the bottom of the column distributing the point loads. Sliding joint brackets (described below) are attached to the front and rear faces of the columns to secure the columns to the shear walls. Custom turnbuckles are also shown to aid in stabilizing the columns but these are only notional and may not be required.

The columns have a steel plate at the bottom to distribute the point loads at the wedge jacks. They also have a large steel flange on the top rear face which will interface with the back face of the horizontal beam using heavy bolts. The top of the front face will also have threaded steel 'receivers' to interface with a flange on the front of the horizontal beam. Similar receivers will be needed for the sliding joint brackets. The sliding joint brackets connecting the load beam to the reaction structure should resist a lateral load of 260 kips in tension (rebound from blast load). For simplicity a steel plate is shown but it may be better to have smaller, deeper threaded posts integrated with the reinforcements in the concrete. The horizontal beam includes similar flanges (front face) and receivers (rear face). Whatever the connection between the horizontal beam and the vertical columns, the joints must be able to resist the blast loads which act on the front faces of both. From the preliminary blast design, a shear load of 212 kips (212,000 pounds-force or 96 metric tonnes) is the design load for the top connection of the loading columns to the loading beam and for the bottom connection of the loading columns to the foundation. These shear loads act in both the direction of the blast load and in the opposite direction of the blast load (i.e. rebound). Design of all connections to resist lateral loads associated with blast loading should be based on LRFD (Load and Resistance Factor Design) design with a load factor of 1.0.

- vii. The sliding joints serve three purposes.
 - 1. During installation of the beam (in one piece or in multiple pieces), there is a need to allow a small amount of vertical travel to seat the horizontal beam on the top of the wall. Small amounts of vertical travel may also be needed to ensure proper alignment.
 - 2. During the explosive blast the target masonry wall may suffer damage which causes the top of the wall to slump, and the loading assembly needs to follow this movement in the vertical direction only.
 - 3. During disassembly the loading assembly needs to be lifted off the target wall. It may be necessary to allow a small amount of vertical travel to replace the wedge jacks for disassembly of the loading assembly.
- viii. Regardless of the final design of the loading assembly, the total vertical travel to be accommodated by the sliding joints is only approximately 0.1 metres. After

- this the horizontal part of the beam will be resting on the shelf of the shear walls.
- ix. The weight of the loading assembly legs will tend to bend its horizontal component into a curve with a downward-concave shape which could compromise the ability of the grout on top of the wall to distribute the loading assembly weight evenly. The loading assembly must therefore be designed and constructed to correct for this curvature.
 - x. The loading assembly (or components as appropriate) must include lifting points suitable for lifting by crane.



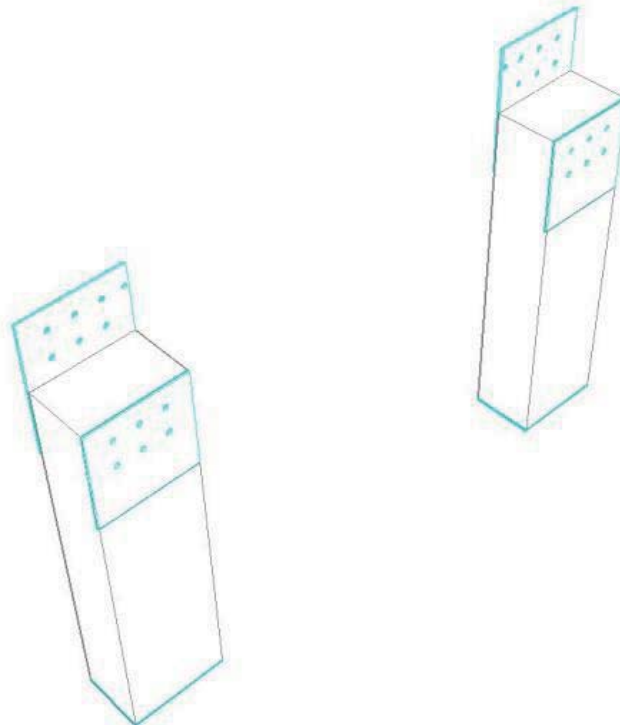


Figure 11 – Three Piece Loading assembly Columns

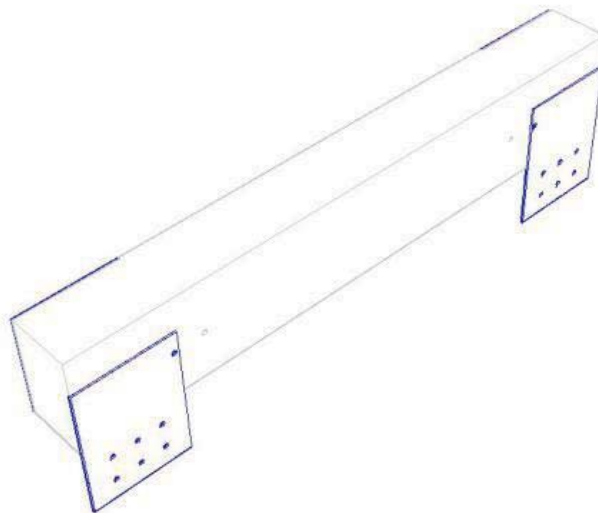


Figure 12 – Three Piece Loading assembly – Horizontal Beam

3. Steel inserts and reinforcement

- a. The preliminary design report included sketches of the various steel items used to connect/secure the components. These are included below in Figure 13 through Figure

20. These should not be taken as complete, sufficient or entirely accurate. Rather, they should be considered as guidance to the Contractor to indicate the intent.
- b. The quantity and type of reinforcing steel shown in Figure 13 does indicate the minimum required to survive the anticipated blast load. The Contractor's proposed design must include at least this amount of reinforcing steel. Figure 14 through Figure 20 show heavy, structural connections required so that the test frame can resist blast loads during explosive testing. The quantity and capacity of connections indicated in these figures are therefore required minimums for the connections. All headed studs and rebar welded to embedded steel plates in Figure 14 through Figure 20 must be sized and welded to the steel plate to develop their full tensile capacity. The Contractor must perform analysis to ensure that the Contractor's design also meets the minimum static structural load requirements as outlined in Section 4 below. This includes all connections.
- c. Some of the items described above, especially for the loading assembly, are not included in the following figures and tables. The Contractor must ensure that all connections are properly designed and implemented regardless of what is shown below.

Table 2. Reinforcing Steel in Reaction Frame Components

ID No.	Piece	Number of Pieces	Rebar		Stirrups
			Size	Number ¹ and (Length of Each Bar)	
1	Loading beam	1	25 mm Ø	12 - (9.3 m)	16 mm Ø at 300 mm
2	Loading columns	2	25 mm Ø	12 - (5.6 m)	16 mm Ø at 300 mm
3	Top lateral support beam w/ 2 layers of reinforcement	1	19 mm Ø at 200 each way each layer	10 (long bars) - (5.6 m) 40 (short bars) - (1.6 m)	
4	Bottom lateral support spacer w/ 2 layers of reinforcement	1	16 mm Ø at 300 each way each layer	10 (long bars) - (5.6 m) 40 (short bars) - (1.6 m)	
5	Side lateral support spacers w/ 2 layers of reinforcement	2	16 mm Ø at 300 each way each layer	10 (long bars) - (5 m) 34 (short bars) - (1.6 m)	
6	Shear Walls w/ 3 layers of reinforcement	2	19 mm Ø at 300 (vert) and 16 mm Ø at 300 (horz) each layer	33 (vert) - (7.1 m) 75 (horz) - (1.6 m)	
8	Shear Wall Flanges w/ 2 layers of reinforcement	2	16mm Ø at 200 (vert) and 16mm Ø at 200 (horz) each layer	24 (vert) - (5.6 m) 60 (horz) - (2.3 m)	
9	Foundation w/ 3 layers of reinforcement	1	16 mm Ø at 300 each way in each layer	38 (long bars) - (9.3 m) 100 (short bars) - (3.7 m)	16 mm Ø at 300 mm (only in lip along edge)

Note 1: The number of bars includes total bars in each piece. Double the number of bars shown in this column for items with two pieces.

Figure 13 - Steel listing from Preliminary Design Report

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Buyer ID - Id de l'acheteur
edm607
CCC No./N° CCC - FMS No./N° VME

Table 3. Summary of Connection Design

Component Type	Size	Length (mm)	Number	Total DBA ¹
Embedded Plates	152 x 12.5	914	8	96 - 19 mm dia.
	75 x 9.5	254	24	94 - 19 mm dia.
Embedded Angles	102x102x9.5	965	8	48 - 22 mm dia.
	102x102x9.5	254	24	94 - 19 mm dia.
Embedded Section	127 mm dia. x 9.5 mm thick pipe	203	2	
	89 mm dia. solid steel pin	406	2	
	230x230x9.5 HSS	305	2	
	254x254x6.3 HSS	305	2	
	305x203x6.3 HSS	356	2	
Loose Pieces	38 mm dia. threaded rod	1219	2	
	29 mm dia. threaded rod	9449	4	
	51 mm dia. threaded rod	1778	4	
	19 mm dia. threaded rod	762	8	
	203x203x9.5 HSS	559	2	
	152x152x12.5 gusseted clip angle	203	4	
	75x9.5 weld plates	203	14	

Note 1: DBA are deformed bar anchors welded to embeds. Bar length must develop full strength of bar.

Table 4. Summary of Field Welds

Weld Size ¹ (mm)	Length (mm)	Number	Total Length (mm)	Location
9.5	910	8	7300	In foundation under shear walls
6.4	710	4	2840	Connection for clip angles attaching load beam to shear wall
6.4	200	12	2400	Shear wall connection to shear wall flange
6.4	20	8	1600	Shear wall flange connection to Foundation slab
6.4	180	8	1440	Top support slab to shear wall
6.4	180	6	1080	Side support slabs to shear wall

Note 1: All welds are fillet welds.

Figure 14 - Connection design from Preliminary Design Report

1. Attach 2 Shear Walls to Foundation Slab

Use 9.5 mm welds between embedded angles in shear wall to embedded plates in foundation. There are four connections per shear wall. Each connection has 900 mm of weld. Total weld length is $4(910 \text{ mm}) \times 2 \text{ shear walls} = 7300 \text{ mm}$

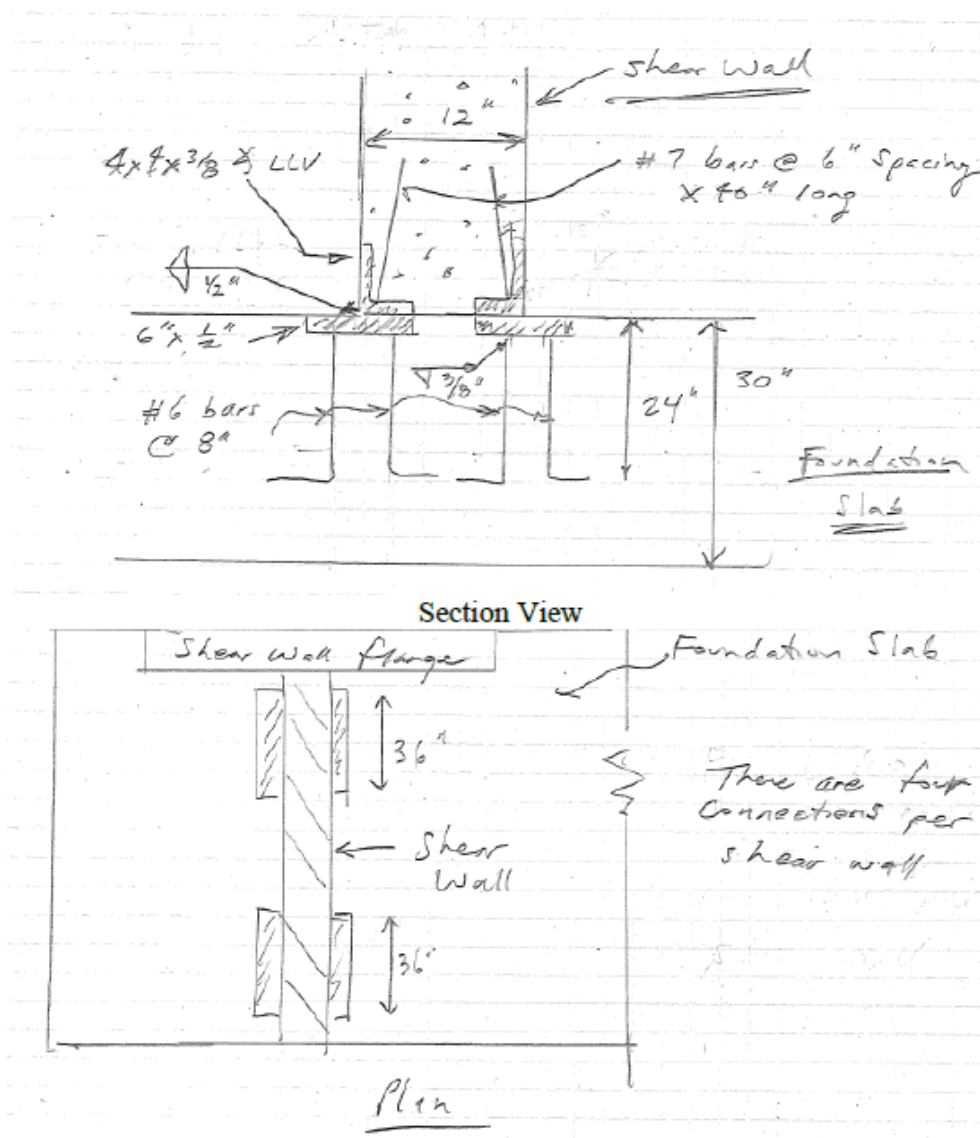
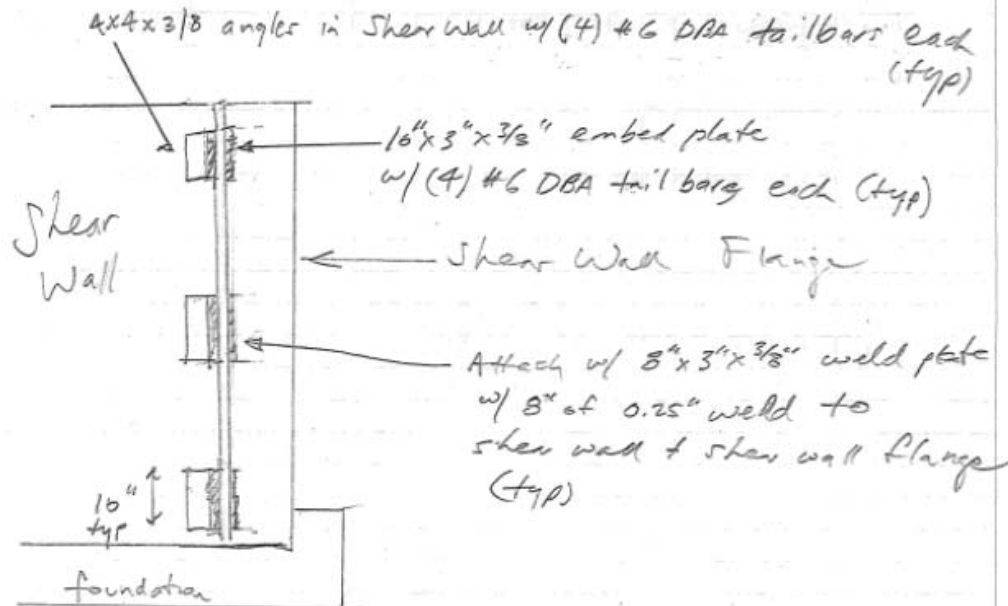


Figure 15 - Component Connections from Preliminary Design Report

2. Attach Shear Wall Flanges to Shear Walls and Foundation

2A. Attach shear wall flange to shear wall. Use weld plates between embedded angles in shear wall and embedded plates in shear wall flange. All welds are 6.3 mm. There is a total of 200 mm of weld to shear wall and to shear wall flange at each of three connections per shear wall flange. This is a total weld length for 6.3 mm weld of 2400 mm.

200 mm x (2 sides of connection plates) x 3 connections x 2 shear wall flanges = 2400 mm of 6.3 mm weld



Shear wall - Shear wall Flange Connections

1 set of connections for each shear wall as shown above

Figure 16 - Component Connections from Preliminary Design Report

2B. Attach Shear Wall Flanges to Foundation

Directly weld embedded angles in shear wall flange and embedded plates in foundation. All welds are 6.3 mm. There is a total of 200 mm of weld to shear wall flange and to foundation at each of four connections per shear wall flange. This is a total weld length for 6.3 mm weld of 1600 mm.

200 mm x 4 connections x 2 shear wall flanges = 1600 mm of 6.3 mm weld

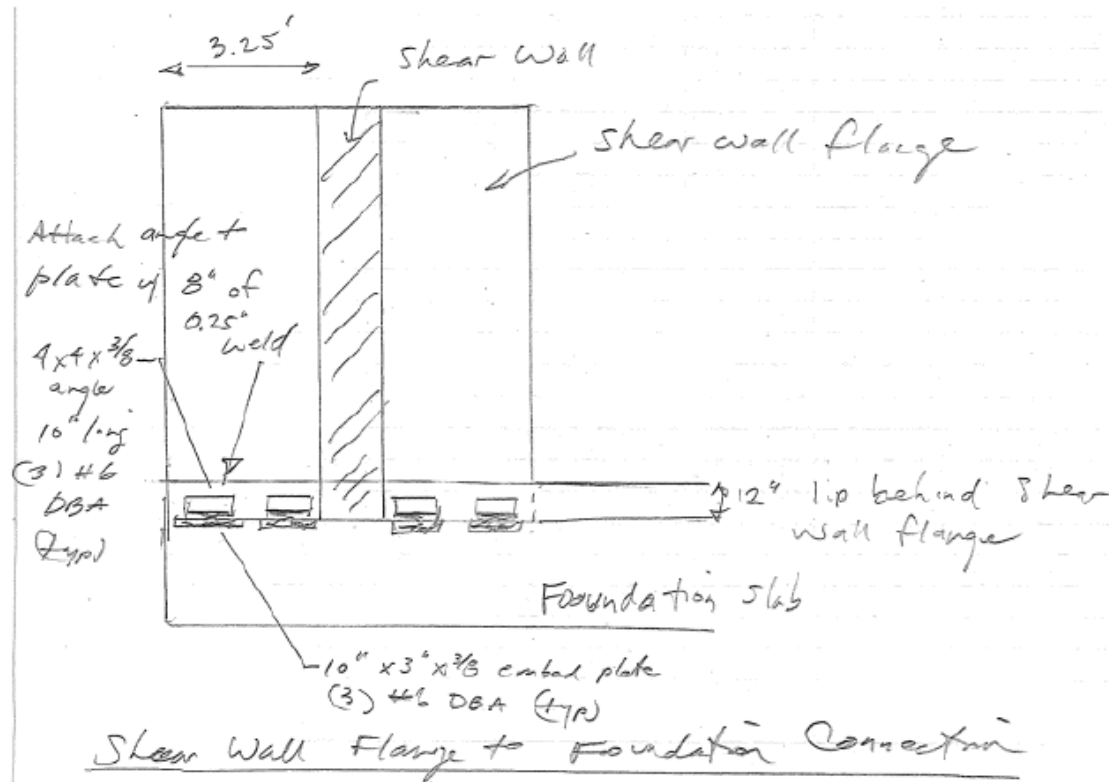
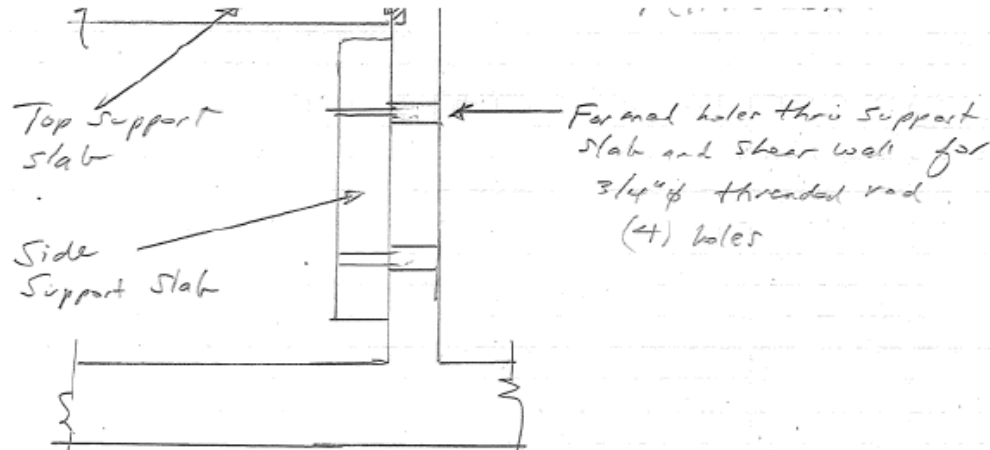


Figure 17 - Component Connections from Preliminary Design Report

3. Place Bottom and Side Lateral Support Slabs

3A Place Bottom and Side Lateral Support Slabs

Slide bottom support slab into place flush with back lip on foundation slab. Place 2 side lateral support slabs by first using threaded rod thru 4 formed holes per lateral support slab and thru shear wall to thru-bolt support slabs to shear wall. Use 19 mm threaded rod.



Then directly weld embedded plates along back vertical side of lateral side support slab (i.e. side near shear wall flange) to embedded plates in shear wall. Use 180 mm of 6.3 mm weld per connection. There are three connections per lateral side support slab and two of these slabs. The total length of 6.3 mm weld is 1080 mm.

180 mm x 3 connections x 2 slabs = 1080 mm

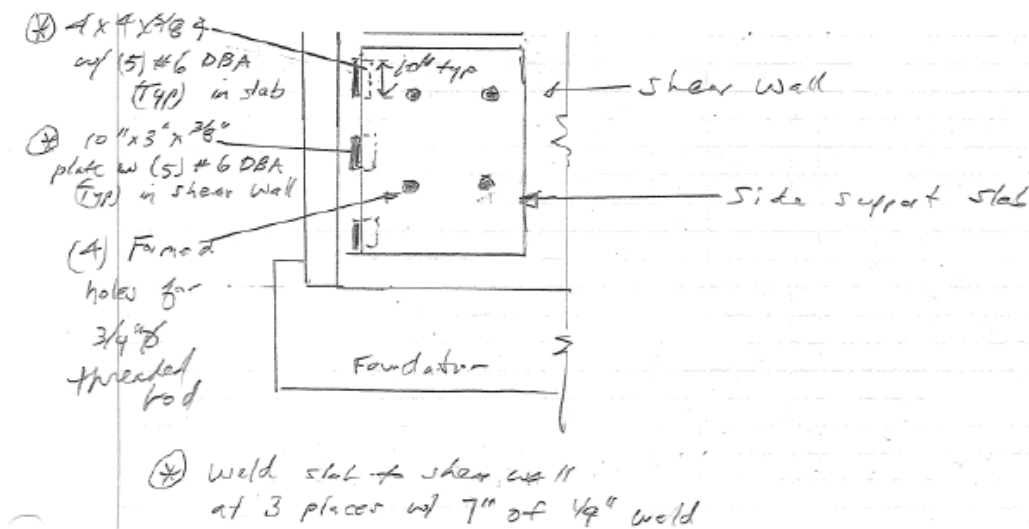


Figure 18 - Component Connections from Preliminary Design Report

3B. Place Top Lateral Support Slab

This slab can be initially supported by side support slabs with shims to get it to the correct height. Embedded angles along two sides of top lateral support slab are welded to embed plates in shear wall. Use connection plates welded to embedded angles and plates. Use 180 mm of 6.3 mm weld per connection. There are two connections on each side of the top lateral support slab. The total length of 6.3 mm weld is 1440 mm.

180 mm x (2 sides of connection plates) x 2 connections x 2 connections to shear wall = 1440 mm

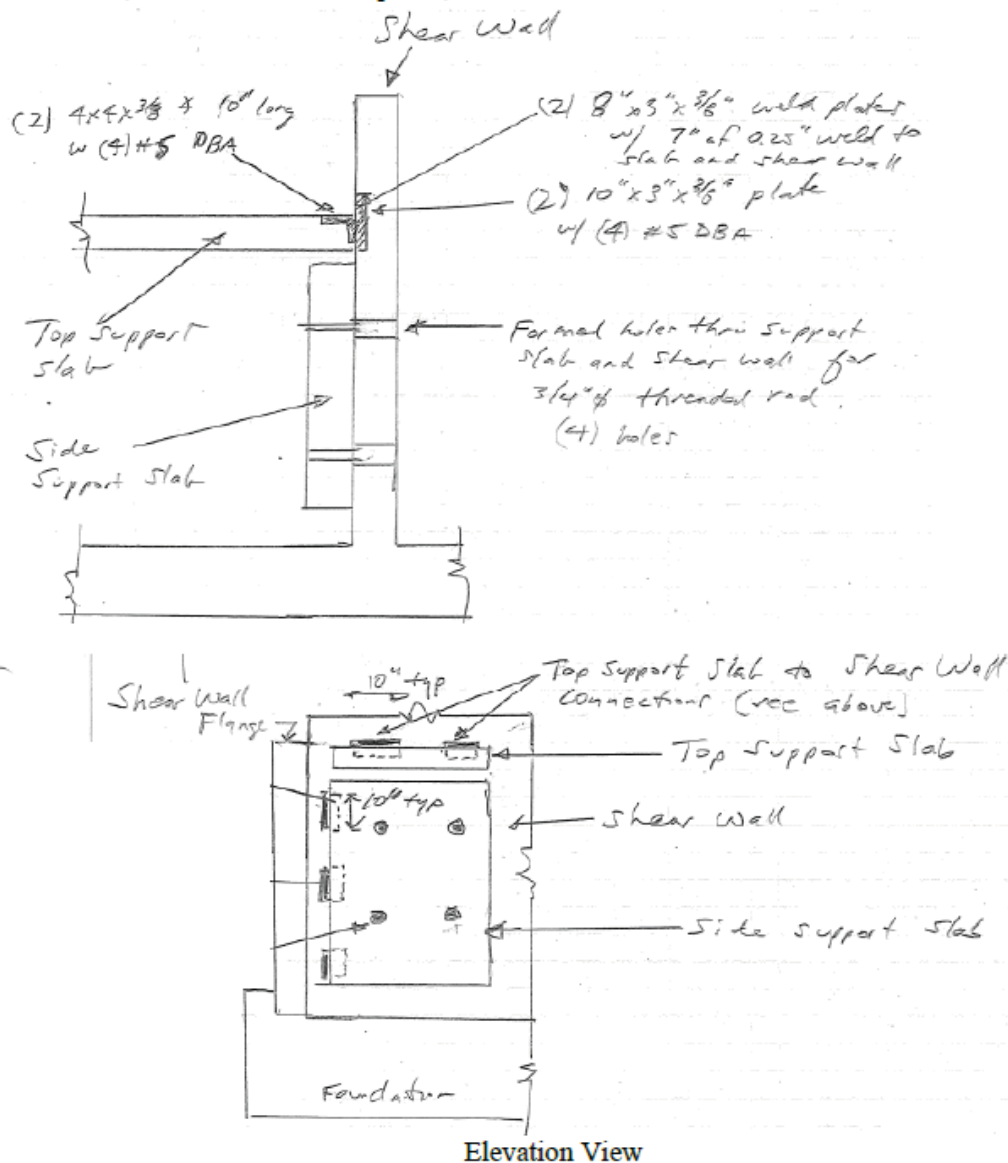
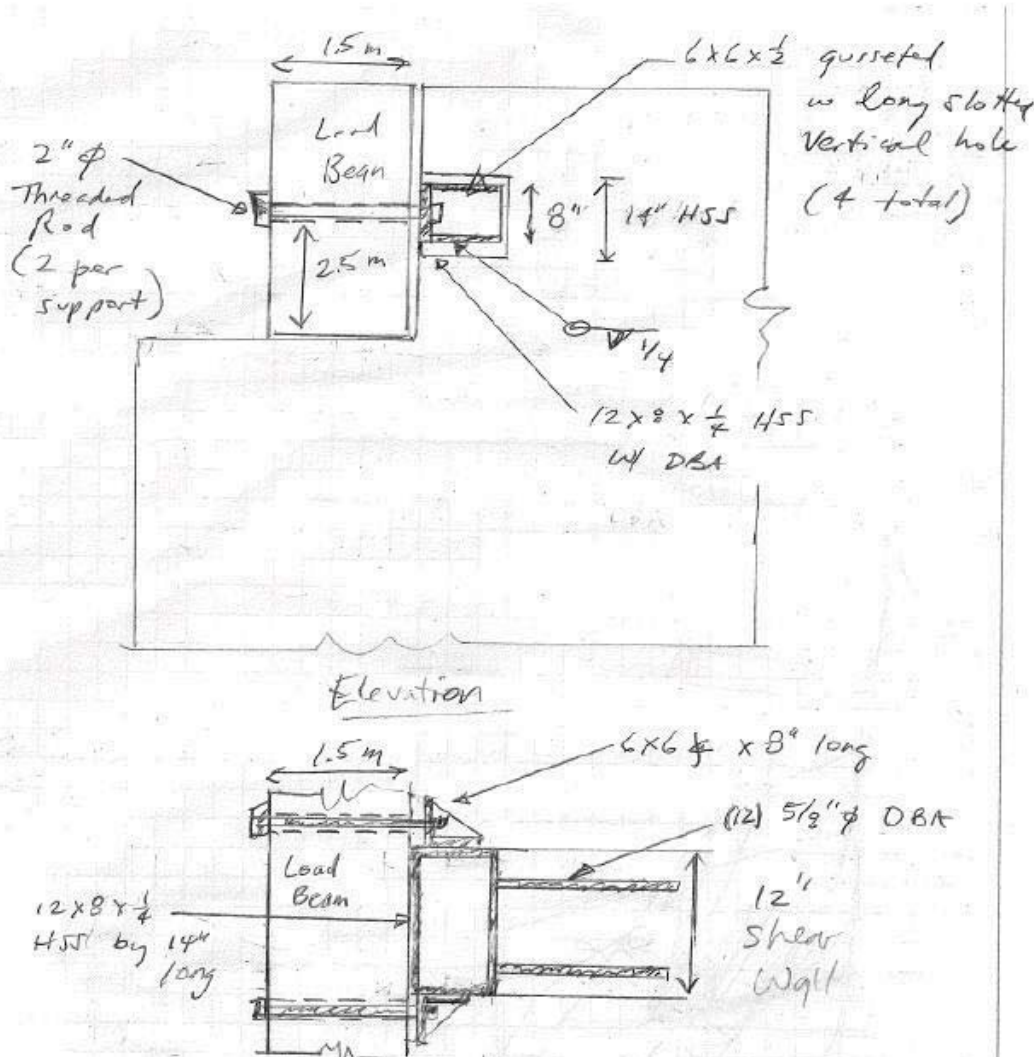


Figure 19 - Component Connections from Preliminary Design Report

6. Attach Load Beam to Shear Wall

Load beam has 4 formed horizontal holes for 52 mm threaded rod. Place threaded rod through holes. There are four gusseted clip angles (152x152x12.5 angles that are 200 mm long). Place clip angles so that threaded rod fits through holes in angle. Then mark clip angles and weld them to an embedded steel tube in the shear wall. Weld each clip angle all around to the tube with 6.3 mm weld (710 mm of weld per clip angle for 4 clip angles = 2840 mm of weld). Place threaded rod through holes in load beam and use nuts to hand tighten threaded rod to clip angles.



Horizontal Cut Through Load Beam at Threaded Rod Attachment to Shear Wall

Figure 20 - Component Connections from Preliminary Design Report

4. Structural Design

- a. During Tasks 5.1 and 5.2, the Contractor must ensure that the components are designed

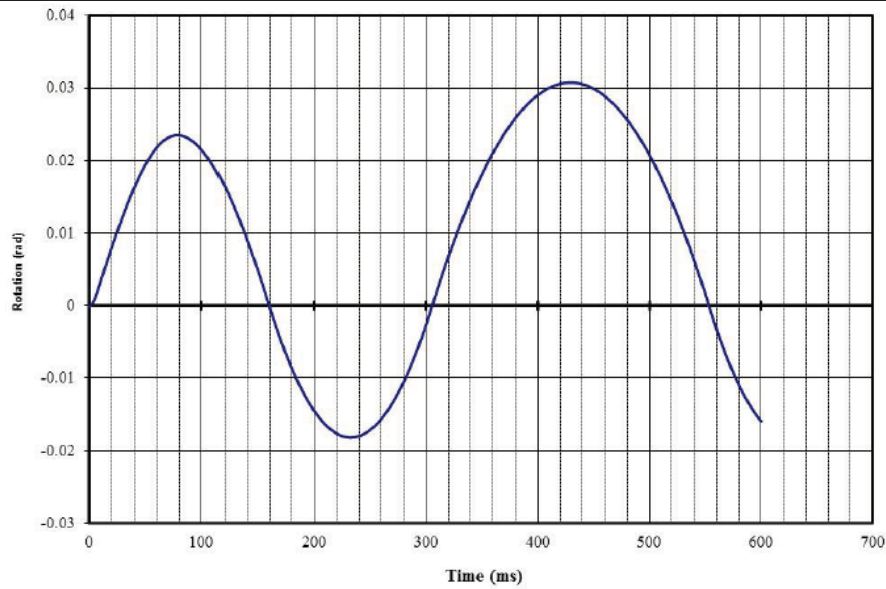
to be structurally adequate to withstand the expected static and dynamic loads during assembly and disassembly and while sitting statically. There is also a requirement for the test frame to resist the explosive blast effects but this type of damage will not be the Contractor's responsibility. The exception is that the Contractor must ensure that the connection capacities for lateral connections of the loading beam and loading column stated above for blast resistance are provided. It is expected that the various components will probably be adequate to withstand the blast. Movement of the test frame during the blast loading is a potential problem that the Contractor must address in the design of the foundation.

- b. The original preliminary design report included a simulation of the blast effects on the wall / test frame combination with the assumption that the test frame was above ground and not anchored by pilings. Therefore, in the original preliminary design, only inertial forces and friction resisted overturning and sliding forces. The blast conditions experienced by the test wall in the simulation included an average calculated peak pressure of 538 kPa and an impulse of 2760 kPa-msec, with an equivalent triangular duration of 10.2 msec.
- c. As the wall and test frame were not anchored or sunk into the ground in the simulation, the entire assembly was predicted to slide and rotate (tilt/rock) due to the blast as shown in below in Figure 21.
- d. The purpose of (i) sinking the foundation slab into the soil and (ii) anchoring the test frame via pilings is to eliminate or at least minimize both the sliding and rotating response of the test frame. The design of the base for the foundation slab and the anchoring mechanism – notionally pilings – are parts of the final design which the Contractor must address.

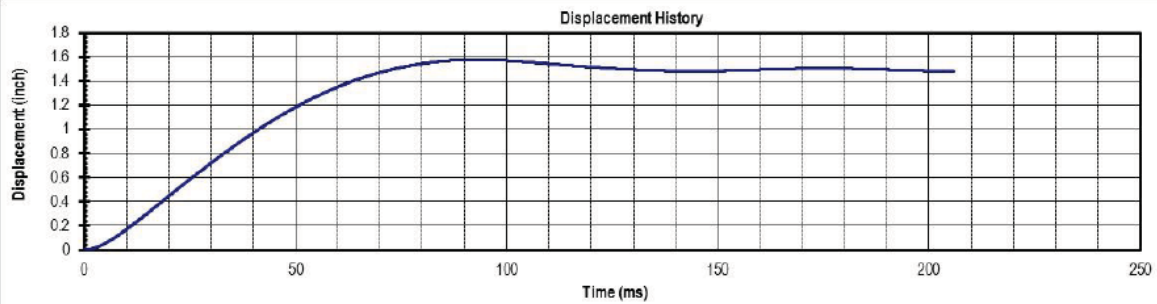
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Overturning Analysis Output



Sliding Analysis Output

Figure 21 - Predicted Blast Response (Unrestrained Test Frame)

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ANNEX "B" - BASIS OF PAYMENT

PART A: SCHEDULE OF MILESTONES

Canada will make milestone payments in accordance with the Schedule of Milestones detailed below if all the work associated with the milestone and, as applicable, any deliverable required has been completed and accepted by Canada.

MILE- STONE	DESCRIPTION	AMOUNT CLAIMED	HOLD- BACK	AMOUNT DUE
1.	Deliverable 6.1 and 6.2: Tasks 5.1 and 5.2 at the conclusion of Task 5.2. (Est. date: _____)	\$	\$	\$
2.	Deliverable 6.3: for Task 5.3 at the conclusion of Task 5.3; not later than November 2016.	\$	\$	\$
3.	6.4 Deliverable: Task 5.4 at the conclusion of Task 5.4. (Est. date: _____)	\$	\$	\$
4.	Release of holdback upon acceptance of all milestone reports and deliverables by the Technical Authority.	-----	(\$_____)	\$
TOTAL MILESTONES - FIRM PRICE		\$	-----	\$

PART B – TASK AUTHORIZATION REQUIREMENTS

Payment will be made 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")

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.

a) Title, name _____ (est) ____ days @ \$---./day/hour

b) title, name _____ (est) ---- days @ \$---./day/hour

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):

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4. Subcontracting at actual cost incurred without mark-up, (subcontractor name)
- a) Heavy lift crane _____ (est) ____ days @ \$---./day
- b) _____ (est) ____ days @ \$---./day
- c) _____ (est) ____ days @ \$---./day
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), 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.
- _____
- _____

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.
(Applicable to Universities only)
- _____
- _____
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 labour (item 1) (est.) \$ _____
- b) at a maximum 30% of off-campus labour (item 1) (est.) \$ _____
- c) at a maximum 2% of travel expenses (item 6) (est.) \$ _____
9. Profit at a firm ____% of items __, __, __, __, above (\$----.).

Total Estimated Cost – Part B: Task Authorization Requirements: \$175,000.00

TOTAL ESTIMATED COST TO A LIMITATION OF EXPENDITURE: \$ _____

With the exception of the firm milestones, 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

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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, as applicable.

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

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ANNEX “C” - SECURITY REQUIREMENTS CHECK LIST

RECEIVED

FEB 26 2016

ANNEX "C"

Government
of CanadaGouvernement
du Canada

Contract Number / Numéro du contrat

W7103-165197

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		2. Branch or Directorate / Direction générale ou Direction
DND		DRDC
3 a) Subcontract Number / Numéro du contrat de sous-traitance	3. b) Name and Address of Subcontractor / Nom et adresse du sous-traitant	
TBD	TBD	
4. Brief Description of Work / Brève description du travail Manufacture and assembly of test frame for blast tests. Concrete and welding work onsite. Cast in place and precast. Assembly work onsite (cranes/lifting). Repairs possible after blast tests. Disassembly and removal of components at end of project.		
5 a) Will the supplier require access to Controlled Goods? Le fournisseur aura-t-il accès à des marchandises contrôlées?		<input checked="" type="checkbox"/> No Non <input type="checkbox"/> 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?		<input checked="" type="checkbox"/> No Non <input type="checkbox"/> 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)		<input checked="" type="checkbox"/> No Non <input type="checkbox"/> 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		<input type="checkbox"/> No Non <input checked="" type="checkbox"/> 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?		<input checked="" type="checkbox"/> No Non <input type="checkbox"/> 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"/>
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TBS/SCT 350-103(2004/12)

Security Classification / Classification de sécurité
UNCLASSIFIED

Canada



Government of Canada
Gouvernement du Canada

Contract Number / Numéro du contrat

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UNCLASSIFIED

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 ☐ Yes
Non 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 ☐ Yes
Non 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 EMPLACEMENTS | | | |

Special comments:

Commentaires spéciaux : Unescorted access to DRDC Suffield sites. N/A for offsite work. Unescorted/unscreened for offsite work only

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 unscreened personnel be used for portions of the work?
Du personnel sans autorisation sécuritaire peut-il se voir confier des parties du travail? ☐ No ☒ Yes
Non Oui

If Yes, will unscreened personnel be escorted? *Unscreened pers. may only access*

Dans l'affirmative, le personnel en question sera-t-il escorté? *public/reception zone*

☒ No ☐ Yes
Non 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 ☐ Yes
Non 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 ☐ Yes
Non 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 ☐ Yes
Non 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 ☐ Yes
Non 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 ☐ Yes
Non Oui

TBS/SCT 350-103(2004/12)

Security Classification / Classification de sécurité
UNCLASSIFIED

Canada



Government
of Canada

Gouvernement
du Canada

Contract Number / Numéro du contrat

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Security Classification / Classification de sécurité
UNCLASSIFIED

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 CLASSIFIÉE			NATO				COMSEC					
	A	B	C	CONFIDENTIAL	SECRET	TOP SECRET	NATO RESTRICTED	NATO CONFIDENTIAL	NATO SECRET	COSMIC TOP SECRET	PROTECTED PROTÉGÉ			CONFIDENTIAL	SECRET	TOP SECRET
											A	B	C			
Information / Assets Renseignements / Biens Production							NATO DIFFUSION RESTREINTE				COSMIC TRÈS SECRET					
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 ☐ Yes
Non 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 ☐ Yes
Non 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).

ANNEX "D" - INSURANCE REQUIREMENTS

D.1 Commercial General Liability Insurance

- 1.1 The Contractor must obtain Commercial General Liability Insurance, and maintain it in force throughout the duration of the Contract, in an amount usual for a contract of this nature, but for not less than \$2,000,000 per accident or occurrence and in the annual aggregate.
- 1.2 The Commercial General Liability policy must include the following:
- a. Additional Insured: Canada is added as an additional insured, but only with respect to liability arising out of the Contractor's performance of the Contract. The interest of Canada should read as follows: Canada, as represented by Public Works and Government Services Canada.
 - b. Bodily Injury and Property Damage to third parties arising out of the operations of the Contractor.
 - c. Products and Completed Operations: Coverage for bodily injury or property damage arising out of goods or products manufactured, sold, handled, or distributed by the Contractor and/or arising out of operations that have been completed by the Contractor.
 - d. Personal Injury: While not limited to, the coverage must include Violation of Privacy, Libel and Slander, False Arrest, Detention or Imprisonment and Defamation of Character.
 - e. Cross Liability/Separation of Insureds: Without increasing the limit of liability, the policy must protect all insured parties to the full extent of coverage provided. Further, the policy must apply to each Insured in the same manner and to the same extent as if a separate policy had been issued to each.
 - f. Blanket Contractual Liability: The policy must, on a blanket basis or by specific reference to the Contract, extend to assumed liabilities with respect to contractual provisions.
 - g. Employees and, if applicable, Volunteers must be included as Additional Insured.
 - h. Employers' Liability (or confirmation that all employees are covered by Worker's compensation (WSIB) or similar program)
 - i. Broad Form Property Damage including Completed Operations: Expands the Property Damage coverage to include certain losses that would otherwise be excluded by the standard care, custody or control exclusion found in a standard policy.
 - j. Notice of Cancellation: The Insurer will endeavour to provide the Contracting Authority thirty (30) days written notice of policy cancellation.
 - k. If the policy is written on a claims-made basis, coverage must be in place for a period of at least 12 months after the completion or termination of the Contract.
 - l. Owners' or Contractors' Protective Liability: Covers the damages that the Contractor becomes legally obligated to pay arising out of the operations of a subcontractor.
 - m. Non-Owned Automobile Liability - Coverage for suits against the Contractor resulting from the use of hired or non-owned vehicles.
 - n. Sudden and Accidental Pollution Liability (minimum 120 hours): To protect the Contractor for liabilities arising from damages caused by accidental pollution incidents.
 - o. Litigation Rights: Pursuant to subsection 5(d) of the [Department of Justice Act](#), S.C. 1993, c. J-2, s.1, if a suit is instituted for or against Canada which the Insurer would, but for this clause, have the right to pursue or defend on behalf of Canada as an Additional Named

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Insured under the insurance policy, the Insurer must promptly contact the Attorney General of Canada to agree on the legal strategies by sending a letter, by registered mail or by courier, with an acknowledgement of receipt.

For the province of Quebec, send to:

*Director Business Law Directorate,
Quebec Regional Office (Ottawa),
Department of Justice,
284 Wellington Street, Room SAT-6042,
Ottawa, Ontario, K1A 0H8*

For other provinces and territories, send to:

*Senior General Counsel,
Civil Litigation Section,
Department of Justice
234 Wellington Street, East Tower
Ottawa, Ontario K1A 0H8*

A copy of the letter must be sent to the Contracting Authority. Canada reserves the right to co-defend any action brought against Canada. All expenses incurred by Canada to co-defend such actions will be at Canada's expense. If Canada decides to co-defend any action brought against it, and Canada does not agree to a proposed settlement agreed to by the Contractor's insurer and the plaintiff(s) that would result in the settlement or dismissal of the action against Canada, then Canada will be responsible to the Contractor's insurer for any difference between the proposed settlement amount and the amount finally awarded or paid to the plaintiffs (inclusive of costs and interest) on behalf of Canada.

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ANNEX "E" – DISCLOSURES CERTIFICATION

This document is to be completed and signed by the Contractor at the completion of the subject contract and submitted to the Contracting Officer and the Technical Authority designated below:

Contracting Authority

Lorraine Jenkinson
Procurement Specialist

Public Works & Government Services Canada

Acquisitions, Western Region
ATB Place, North Tower, 5th Floor
10025 Jasper Avenue
Edmonton, AB T5J 1S6

Technical Authority

(T.A.)

Defence Research & Development Canada-Suffield
Research Station
Department of National Defence
P.O. Box 4000 Main
Medicine Hat, AB T1A 8K6

CONTRACT TITLE: FINAL DESIGN AND ASSEMBLY OF TEST FRAME FOR BLAST TRIALS
(Department of _____, Prof. _____)

Please tick appropriate box:

- ☐ We hereby certify that all applicable disclosures were submitted in compliance with Section 28, General Conditions 2040 - Research and Development.

YOUR ATTENTION IS DRAWN TO SECTION 27 and 28, REGARDING IMPLICATIONS ON NON-DISCLOSURE OF any Technical Documentation, Prototypes, Inventions and Technical Information arising during the performance of work pursuant to the above identified contract.

OR

- ☐ We hereby certify that there are no disclosures to submit under the above-referenced Contract, referred to in Section 28, General Conditions 2040 - Research and Development.

Signature

Print Name

Title

Contractor Name

Date

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ANNEX "F" - DND 626 TASK AUTHORIZATION FORM

**TASK AUTHORIZATION
AUTORISATION DES TÂCHES**

ANNEX "F"

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 Delivery location – Expédiez 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/Completion date – Date de livraison/d'achèvement	<div style="display: flex; justify-content: space-between;"> <div>_____</div> <div>_____</div> </div> <div style="display: flex; justify-content: space-between; font-size: small;"> <div>Date</div> <div>for the Department of National Defence pour le ministère de la Défense nationale</div> </div>	
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> <div style="border-top: 1px solid black; margin-top: 20px; display: flex; justify-content: space-between;"> <div style="width: 40%; font-size: small;"> _____ for the Department of Public Works and Government Services pour le ministère des Travaux publics et services gouvernementaux </div> <div style="width: 60%;"></div> </div>		

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.

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ANNEX "G" - TASK AUTHORIZATION USAGE REPORT

The Contractor must provide quarterly Task Authorization (TA) usage reports. The Contractor agrees that it is their responsibility to implement a system for tracking TAs under this Contract for the purposes of providing usage reports. This is to ensure that the Limitation of Expenditure indicated for "as and when requested" Work under this Contract is not exceeded.

Each Task Authorization Usage Report must include all the completed TAs for goods and services supplied under this Contract.

Task Authorization Usage Report Submission Schedule:

REPORT DUE	WORK PERIOD START DATE	WORK PERIOD END DATE
15 January	01 October	31 December
15 April	01 January	31 March
15 July	01 April	30 June
15 October	01 July	30 September

The Contractor must provide information on each completed TA using the following format:

TA NUMBER	TA DOLLAR VALUE (GST INCLUDED)	CUMULATIVE TA DOLLAR VALUE (GST INCLUDED)	COMMENTS
Total Dollar Value of TAs for this Period:			
Accumulated TAs to Date (Cumulative Dollar Value + Period Dollar Value):			

☐ Check this box if you are submitting a NIL **REPORT** (We have not done any business with Canada under this Contract, for this period).

SEND TO:

PWGSC.WRPAEDM-ROAAEDM.TPSGC@pwgsc-tpsgc.gc.ca OR Facsimile: (780) 497-3510

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ANNEX "H" - ELECTRONIC PAYMENT INSTRUMENTS

As indicated in Part 3, Section 3.3 the Bidder must complete the information requested below, to identify which electronic payment instruments are accepted for the payment of invoices.

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

- ☐ VISA Acquisition Card;
- ☐ MasterCard Acquisition Card;
- ☐ Direct Deposit (Domestic and International);
- ☐ Electronic Data Interchange (EDI);
- ☐ Wire Transfer (International Only);
- ☐ Large Value Transfer System (LVTS) (Over \$25M)

ANNEX "I" – EVALUATION CRITERIA

A. TECHNICAL EVALUATION:

1. MANDATORY EVALUATION CRITERIA

Bidders must demonstrate they meet the following mandatory technical criteria. Failure to meet any of the mandatory technical criteria will render the bid non-compliant and it will be given no further consideration.

	MANDATORY EVALUATION CRITERIA	MET	NOT MET
M1	The bidder must demonstrate at least five years' experience in the production of precast and cast-in-place reinforced concrete structures.		
M2	The bidder must demonstrate previous project experience in moving precast concrete components of greater than 20 tonnes mass in a field (outside of plant facilities) environment.		
M3	The bidder's team, including subcontractor(s) must include a professional engineer registered with the Association of Professional Engineers and Geoscientists of Alberta with the authority to approve and stamp construction drawings for concrete structures.		
M4	The bidder must demonstrate experience in at least three previous contracts in the design of concrete structures which include embedded steel components for the purposes of welding and/or bolting the components into final assemblies.		

2. POINT-RATED EVALUATION CRITERIA

Each evaluation criterion has a point allotment that reflects its importance within the bid. The degree to which the bid satisfies the requirement of each criterion will be assessed and a score will be assigned ranging from 0 to the total point allotment, with 0 meaning the bid completely fails to satisfy the requirements, and the total allotment meaning the bid fully meets the outlined criterion.

	POINT-RATED EVALUATION CRITERIA	Maximum Pts.	Score
P1	The bidder's submission includes a viable design and handling method for a multi-piece loading beam, and/or a viable design and handling method for a single-piece loading beam. <ul style="list-style-type: none"> - Multi-piece design and handling method (5 points) - Single-piece design and handling method (5 points) 	10	
P2	The bidder's submission includes details of the base for the foundation slab and/or an anchoring system for securing the foundation slab. <ul style="list-style-type: none"> - Foundation base details (5 points) - Foundation slab anchoring details (5 points) 	10	
TOTAL		20	

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B. CALCULATION OF BID EVALUATION TOTAL COST:

The price proposal must be submitted in accordance with the Proposed Basis of Payment.

Price proposals will be assessed as follows:

- a) PART A: Schedule of Milestones: The Bidder is to quote a firm price for each milestone indicated. Items 1, 2, 3 and 4 will be added together to determine the Total Milestones – Firm Price.
- b) PART B – Task Authorization Requirements: The Bidder is to provide firm labour rates, and identify any cost elements it anticipates will be required to provide the tasks listed under Statement of Work section 5.5 Test Frame (Task Authorization requirements). The total estimated Limitation of Expenditure stated will be used in the bid evaluation calculation.
- c) The total of Part A and Part B will be added together to obtain the Total Estimated Cost to a Limitation of Expenditure:

C. MERIT/COST CALCULATION:

MERIT: Proponent's Overall Total Point Score/Total Point Available X 20	
COST : Lowest Bid Evaluation Total Cost/Proponent's Bid Evaluation Total Cost X 80	
COMBINED RATING OF TECHNICAL MERIT AND PRICE	