UNITED STATES SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

AMENDMENT NO. 1 TO FORM 10-K

X ANNUAL REPORT UNDER SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended October 2, 2011

"TRANSITION REPORT UNDER SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from ___ until ___

Commission File Number 000-22573

OPTEX SYSTEMS HOLDINGS, INC.

(Exact name of registrant as specified in its charter)

Delaware 33-143215

(State or other jurisdiction of incorporation organization) (I.R.S. Employer Identification No.)

1420 Presidential Drive Richardson, TX

Richardson, TX 75081-2439
(Address of principal executive offices) (Zip Code)

Registrant's telephone number, including area code

Securities Registered under Section 12(b) of the Act **None**

(972) 644-0722

Securities Registered under Section 12(g) of the Act Common Stock, par value \$.001 per share

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes." No X

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes $\ddot{}$ No x

Indicate by check mark whether the issuer (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the past 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes x No "

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes X No "

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

Indicate by check mark whether the registrant is a large accelerated filer company. See the definitions of "large accelerated filer," "accelerated fil Act.						
Large accelerated filer "	Accelerated filer "					
Non-accelerated filer "	Smaller reporting company X					
Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes "No X						
The aggregate market value of the 26,111,658 shares of voting stock held by non-affiliates of the registrant based on the closing price on the Over the Counter Bulletin Board on December 20, 2011 was \$52,223.						
Indicate the number of shares outstanding of each of the registrant's classes of common stock, as of the latest practicable date.						
	Shares Outstanding					
Title of Class	March 26, 2012					
Common Stock	139,444,940					
DOCUMENTS INCORPORATED BY REFERENCE						
None.						
EXPLANATORY NOTE: This Amendment No. 1 to Form 10-K is filed to attach a revised redacted version of Exhibit 10.34 originally attached to the Form 10-K for the fiscal year ended October 2, 2011, in connection with the issuer's ongoing application for confidential treatment of certain terms of Exhibit 10.34.						

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Optex Systems Inc.



COMMANDER'S SIGHTING SYSTEM (CSS) LAV III UPGRADE

Heath Brown

Subcontract Administrator General Dynamics Land Systems - Canada 2035 Oxford Street East London, Ontario, Canada N5V 2Z7 Telephone: (519) 964-5278 Facsimile: (519) 964-5761

E-Mail: brownh3@gdls.com

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PART A

TERMS AND CONDITIONS

1. Definitions:

Unless otherwise stated,

"Buyer" means General Dynamics Land Systems - Canada Corporation;

"Buyer's Representative" means the authorized Purchasing Agent or Subcontract Manager representing Buyer;

"Seller" means the person, firm or corporation which is furnishing the Goods provided for herein;

"Goods" means all of the labour, articles, materials, supplies, goods and services constituting the subject matter of this Contract;

"Subcontractor(s)" means subcontractors at any tier;

"Customs broker" means an individual or firm authorized to act for the Seller in handling the sequence of custom formalities associated with the importation of goods into the Seller's country.

2. The Contract:

- (a) The documents ("Contract Documents") that form the agreement between Buyer and Seller (the "Contract") are:
- (i) the Purchase Order into which these Section A Terms and Conditions are incorporated;
- (ii) any supplements to the Purchase Order issued by the Buyer;
- (iii) the statement of work;
- (iv) the specifications; and
- (v) all other referenced annexes, attachments, exhibits or documents.
- (b) If there is any conflict or inconsistency between the provisions in one or more of the Contract Documents, and there is no reasonable interpretation that resolves the conflict or inconsistency in a manner that is consistent with the entire Contract, then such conflict or inconsistency shall be resolved by giving precedence to the following descending order of precedence:
- (i) the face of the Purchase Order;
- (ii) these Section A Terms and Conditions;
- (iii) Section B, if included, in the order provided (including any Government Annexes):
- (iv) the statement of work; (v) the specifications; and
- (vi) all other annexes, attachments, exhibits or documents in the order provided.

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(c) Any terms or conditions proposed by Seller which are inconsistent with or in addition to the terms and conditions in the Contract Documents shall be void and of no effect unless specifically agreed to in writing by Buyer's Representative.

3. Acceptance:

Seller has read and understands the Contract Documents and agrees that Seller's written acceptance, acceptance of payment, or commencement of any work or services shall constitute Seller's acceptance of this Contract.

4. Shipping; Billing; Payment:

- (a) Seller agrees: (i) to properly pack, mark, label and ship Goods in accordance with the requirements of Buyer, the involved carriers, and, if applicable, the country of destination; (ii) to route shipments in accordance with Buyer's instructions; (iii) to make no charge for handling, packaging, storage or transportation of Goods, unless otherwise stated as an item on this Contract; (iv) to provide with each shipment, packing lists with Buyer's Contract and/or shipping release number and date of shipment marked thereon; and (v) to promptly forward the original bill of lading or other shipping receipt for each shipment in accordance with Buyer's instructions. Seller shall include on bills of lading or other shipping receipts, any product classifications required under applicable domestic and international transportation regulations (e.g. US National Motor Freight classification and Transportation of Dangerous Goods classifications). The marks on each package and identification of the Goods on packing slips, bills of lading and invoices (when required) shall be sufficient to enable Buyer to easily identify the Goods purchased. If goods are to be exported from the United States, Seller agrees to 1) ensure that the appropriate destination control statement (i.e. ITAR or EAR) is referenced on Seller's commercial invoice and 2) provide Buyer's Export Compliance Department with a copy of applicable US export authorization prior to shipment of goods from the US.
- (b) Seller further agrees: (i) to accept payment by electronic funds transfer or cheque. Payment shall be made, on average, on the second day of the second month following Buyer's receipt date of Seller's invoice. Buyer may withhold payment pending receipt of evidence, in such form and detail as Buyer may direct, of the absence of any liens, encumbrances and claims on the Goods under this Contract. Seller shall promptly repay to Buyer any amounts paid in excess of amounts due to Seller.
- (c) The prices invoiced under this Contract include, and Seller is liable for and shall pay, all taxes, impositions, charges and exactions imposed on or measured by this Contract, except for applicable sales and use taxes which are separately listed on Seller's invoice. Prices shall not include any taxes, impositions, charges or exactions for which Buyer has furnished a valid exemption certificate or other evidence of exemption.
- (d) Seller warrants that the prices charged for the Goods do not exceed the prices charged to any other customer for the same Goods, in the same or similar quantities, under similar circumstances.

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5. **Delivery:**

(a) Time is of the essence, and deliveries shall be made both in quantities and at times specified in Buyer's delivery schedules. Where delivery schedules are not provided, Seller shall deliver Goods in such quantities and at such times as Buyer directs in shipping releases.

(b) Buyer shall not be required to make payment for Goods which are (i) delivered in advance of delivery schedules or shipping releases, or (ii) delivered to Buyer in excess of quantities specified in Buyer's delivery schedules or shipping releases.

6. **Expedited Shipments:**

Without limiting any other rights or remedies that Buyer may have under this Contract, by law or in equity, if Seller fails to meet Buyer's delivery requirements and Buyer requires a more expeditious method of transportation for the Goods than the transportation method originally specified by Buyer, Seller shall, at Buyer's option, ship the Goods as expeditiously as possible at Seller's sole expense.

7. Changes:

- (a) Buyer reserves the right at any time, by written direction to Seller, to: (i) make changes in the designs, materials, requirements, drawings, and/or specifications of the Goods, (ii) in quantities, place of delivery, shipment and/or packing methods, (iii) incorporate additional provisions that Buyer deems necessary in order to comply with customer requirements, or (iv) otherwise change the scope of the work covered by this Contract, including work with respect to such matters as inspection, testing or quality control. Upon receipt of Buyer's direction, Seller agrees to promptly make such changes.
- (b) Any difference in price or time for performance (increase or decrease) resulting from such changes shall entitle Seller or Buyer, as the case may be, to an equitable adjustment (increase or decrease) in the price or time for performance or both. Any claim for adjustment by Seller must be submitted in writing to Buyer's Representative and shall include particulars of the claim and supporting cost data, within thirty (30) days after receipt of Buyer's directed change. Any adjustment in price or time for performance, or both, shall be set out in a written amendment signed by both parties. Any action taken by Seller, whether or not accomplished with the concurrence of Buyer's employees, shall not entitle Seller to an equitable adjustment, unless such action was specifically directed by a written notice issued by Buyer's Representative.

8. **Configuration Control:**

Seller shall make no change in design, manufacturing, assembly processes or source of supply, after approval of the first production item or after acceptance of the first completed end item, without the prior written approval of Buyer.

9. Supplier Quality and Development; Inspection:

Seller agrees to participate in Buyer's supplier quality and development program(s) and to comply with all quality requirements and procedures specified by Buyer, as revised from time to time, including those applicable to Seller as set forth in Quality System Requirements ISO 9000, I-2000. In addition, Buyer shall have the right to enter Seller's facility at reasonable times to inspect the facility, Goods, materials and any property of Buyer covered by this Contract. Buyer's inspection of the Goods whether during manufacture, prior to delivery or within a reasonable time after delivery, shall not constitute acceptance of any work-in-process or finished Goods.

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10. **Nonconforming Goods:**

Seller acknowledges that Buyer may not perform incoming inspections of the Goods, and waives any rights to require Buyer to conduct such inspections. To the extent Buyer rejects Goods as nonconforming, the quantities under this Contract will automatically be reduced, unless Buyer otherwise notifies Seller. Seller will not replace quantities so reduced without a new contract or schedule from Buyer. Nonconforming Goods will be held by Buyer in accordance with Seller's instructions at Seller's risk. Seller's failure to provide written instructions within ten (10) calendar days, or such shorter period as may be commercially reasonable under the circumstances, after notice of nonconformity, shall entitle Buyer, at Buyer's option, to return goods to Seller at Seller's cost or charge Seller for storage and handling or to dispose of the Goods without liability to Seller. Payment for nonconforming Goods shall not constitute an acceptance of such Goods, or limit or impair Buyer's right to assert any legal or equitable remedy, or relieve Seller's responsibility for latent defects.

Seller shall initiate prompt containment and corrective action on notification of nonconforming goods. Seller shall respond within forty-eight (48) hours of notification to inform buyer of goods already shipped to the buyer and status of future shipments. Seller shall not ship any additional nonconforming material without formal authorization from Buyer. The seller shall submit a formal response within 30 days to any Formal Supplier Corrective Action Requests directed to Seller by GDLS Quality. The response shall include: cause of defect, corrective action taken to prevent recurrence of the deficiency and the effective date or break in point of the corrective action.

11. Force Majeure:

- (a) Neither party shall be liable for any excess costs if any delay or failure to perform arises solely out of causes that (i) could not be reasonably foreseen and prevented by the party, (ii) are beyond the reasonable control of the party, and (iii) occur without the fault or negligence of the party. Such causes may include, but are not limited to, acts of God, actions by any governmental authority (whether valid or invalid), fires, floods, windstorms, explosions, riots, natural disasters, wars, sabotage, or court injunction or order ("Force Majeure").
- (b) In order for the provisions of this Article to apply to a particular Force Majeure, the affected party must (i) use its best efforts to minimize the Force Majeure, and (ii) provide written notice of such Force Majeure to the other party within ten (10) days after the beginning of such Force Majeure. The written notice shall include the facts giving rise to the Force Majeure, the anticipated duration of the Force Majeure, and a proposed work-around plan to minimize the impact. The Seller shall implement any work-around plan approved by Buyer.
- (c) If a Force Majeure which meets the criteria in (a) above is caused by Seller's subcontractor(s), and the Seller has not contributed to the Force Majeure, Seller shall not be liable for excess costs provided that Seller has taken all reasonable action to obtain the Goods from other sources in sufficient time to permit Seller to comply with its obligations under this Contract.

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(d) During the period of such delay or performance failure by Seller or Seller's subcontractor(s), Buyer may, at its option, in addition to any other remedies Buyer may have under this Contract, by law or in equity, (i) purchase Goods from other sources and reduce the quantities of Goods required from Seller, without any liability to Seller, or (ii) extend the date for performance by a reasonable time not exceeding the duration of the delay or performance failure.

12. Warranty

- (a) Unless otherwise stated, Seller represents and warrants that the Goods delivered to Buyer are (i) new (meaning not previously used or reconditioned); (ii) merchantable and free from defects in materials and workmanship; (iii) free from defects in design and specifications (except to the extent such Goods are manufactured pursuant to detailed designs and specifications furnished by Buyer); and (iv) in conformity with all requirements of the Contract. Seller acknowledges that Seller knows of Buyer's intended use for the Goods and warrants that all Goods are fit and sufficient for the particular purposes intended by Buyer.
- (b) Seller further warrants that all work shall be performed by qualified personnel with the degree of skill and judgment normally exercised by recognized firms with respect to the performance of similar contracts, and that all work will be performed in a competent and workmanlike manner.
- (c) In addition to the warranties set forth in (a) and (b) above, Buyer shall have the benefit of all warranties extended to Seller by a third party, to the extent they exceed Seller's warranties in scope or duration. The arranties in (a) and (b) above, any third party warranties, and Seller's service warranties and guarantees, if any, ("Warranties") shall survive and shall extend to Buyer, its successors, assigns, and customers. The Warranties shall continue for a period of fifteen (15) months after delivery of conforming Goods to Buyer (the "Warranty Period"). The rights and remedies of Buyer concerning latent defects shall exist indefinitely, and shall not be affected in any way by any terms or conditions of this Contract, including this Article.
- (d) If during the Warranty Period the Goods are found not to be as warranted, Buyer may, in addition to other remedies available at law or in equity, (i) return the defective Goods to Seller for credit or refund, (ii) return the Goods to Seller and require prompt repair or replacement at Seller's expense, or (iii) repair or replace the Goods and recover all costs from Seller. Goods repaired or replaced by Seller shall be subject to this Article in the same manner and to the same extent as Goods originally delivered under this Contract.

13. Ingredients Disclosure; Special Warnings and Instructions:

(a) If requested by Buyer, Seller shall promptly furnish to Buyer in such form and detail as Buyer may direct: (i) a list of all ingredients in the Goods; (ii) the amount of all ingredients; and (iii) information concerning any changes in or additions to such ingredients.

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(b) Prior to and with the shipment of the Goods, Seller agrees to furnish to Buyer: (i) sufficient warning and notice in writing (including appropriate labels on the Goods, containers and packing) of any hazardous material that is an ingredient or a part of any of the Goods, and (ii) such special handling instructions as may be necessary to advise carriers, Buyer, and their respective employees of how to exercise the measure of care and precaution that will best prevent bodily injury or property damage in the handling, transportation, processing, use or disposal of the Goods, containers and packing shipped to Buyer.

14. **Stop Work Order:**

- (a) Buyer may at any time, by written notice, require Seller to stop all or any part of the work under this Contract for a period of up to ninety (90) days after Seller's receipt of the stop work order notice ("SWO").
- (b) Upon receipt of a SWO, Seller shall immediately comply with its terms and take all reasonable steps to minimize the incurrence of costs allocable to the work covered by the SWO during the period of work stoppage. Unless the SWO expires or Buyer extends the period of the SWO, Buyer shall, within such ninety (90) days, cancel the SWO, or terminate the work covered by the SWO in accordance with Article 15 "Termination for Cause" or Article 16 "Termination for Convenience", whichever Buyer deems appropriate. Seller shall resume work upon expiration or cancellation of a SWO and an equitable adjustment shall be made in the delivery schedule (or shipping release(s)), or in the price, or both, provided that Seller submits a written claim for adjustment, including particulars of the claim and supporting cost data, within twenty (20) days after the date the SWO expires or is cancelled.

15. Termination for Cause:

- (a) Buyer may immediately terminate all or any part of this Contract by written notice to Seller, without liability to Seller, in any of the following or any other comparable events: (i) Seller fails to deliver the Goods within the time specified by the Contract or any written extension, (ii) Seller fails to perform any other provision of the Contract or fails to make progress, so as to endanger performance of the Contract, and, in either of these two circumstances, does not cure such failure within ten (10) days after receipt of notice from Buyer specifying the failure, or (iii) Seller declares bankruptcy, suspends its business operation, or initiates any form of reorganization and/or other arrangement for the benefit of its creditors. Seller shall continue all work not terminated.
- (b) In the event that Buyer terminates all or part of this Contract in accordance with (a) above, Buyer may:
- (i) acquire, under terms and conditions and in a manner Buyer deems appropriate, Goods similar to those terminated and Seller shall be liable to the Buyer for any excess costs for such Goods, and
- (ii) require Seller to transfer title and deliver to Buyer, in the manner and to the extent directed by Buyer, (1) any completed Goods, and/or (2) such partially completed Goods and materials, parts, tools, dies jigs, fixtures, plans, drawings, information and contract rights ("Manufacturing Materials") as Seller has specifically produced or specifically acquired for performance of such part of this Contract that has been terminated.

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(c) Subject to the terms of this Contract, (i) payment for completed Goods delivered to and accepted by Buyer in accordance with this Contract shall be at the Contract price, and (ii) payment for Manufacturing Materials delivered to and accepted by Buyer in accordance with this Contract, shall be in an amount agreed upon by Buyer and Seller. Failure to agree on an amount for Manufacturing Materials shall be a dispute and settled under Article 31- "Governing Law; Jurisdiction; Dispute Resolution". Seller shall submit a written comprehensive termination claim to Buyer, including any supplemental and supporting information as Buyer shall require, within sixty (60) days after the effective date of termination. Buyer may withhold from amounts otherwise due to Seller for such completed Goods or Manufacturing Materials such sum as Buyer deems necessary to protect Buyer or its customer(s) against any loss, including outstanding liens, claims of former lien holders, or for damages otherwise caused by Seller's failure to perform its obligations under the Contract. In no event shall Buyer be obligated to pay Seller any amount in excess of the Contract price. Buyer or Buyer's agents shall have the right to audit and examine all books, records, facilities, work, material, inventories and other items relating to such termination claim.

(d) The rights and remedies of Buyer in this Article are cumulative and in addition to any other rights or remedies provided by this Contract, at law or in equity.

16. **Termination for Convenience:**

- (a) In addition to any other rights of Buyer to terminate this Contract, Buyer may, for its convenience, immediately terminate all or any part of this Contract, at any time and for any reason, by giving written notice to Seller. Upon such termination, Seller shall immediately cease all work terminated and cause Seller's subcontractor(s) to cease work. Seller shall continue all work not terminated.
- (b) Subject to the terms of this Contract, Buyer shall pay to Seller an amount to cover the actual, substantiated and allowable costs of Seller, plus a reasonable profit, for the work performed in accordance with the Contract up to the effective date of termination.
- (c) Under no circumstances shall (i) Seller be paid any amount for any anticipatory profits, (ii) Seller be paid any amount for costs incurred due to Seller's failure to mitigate its damages or to terminate work as ordered on the effective date of termination, and (iii) the total amount paid under the provisions of this Article exceed the price set forth in the Contract for the work terminated.
- (d) Seller shall submit a written comprehensive termination claim to Buyer, including any supplemental and supporting information as Buyer shall request, within sixty (60) days after the effective date of termination. Buyer or Buyer's agents shall have the right to audit and examine all books, records, facilities, work, material, inventories and other items relating to such termination claim.

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17. Rights and Use of Proprietary Information and Materials:

- (a) All (i) technical, proprietary and/or trade secret information that is marked as "Proprietary", "Confidential", or the like, and (ii) all tangible items containing, conveying or embodying such information, obtained directly or indirectly, from Buyer in connection with this Contract (collectively referred to as "Proprietary Information and Materials") shall remain Buyer's property and shall be protected by Seller from unauthorized use and disclosure.
- (b) Seller shall use Proprietary Information and Materials only in the performance of and for the sole purpose of this Contract. The restrictions on disclosure or use of Proprietary Information and Materials by Seller shall apply to all materials derived by Seller or others from Proprietary Information and Materials.
- (c) Upon the completion, termination, or cancellation of this Contract, or upon Buyer's request at any time, Seller shall return to Buyer all Proprietary Information and Materials and all materials derived therefrom, unless specifically directed otherwise in writing by Buyer. Seller shall not, without the prior written authorization of Buyer, sell or otherwise dispose of (as scrap or otherwise) any parts or other materials containing, conveying, embodying or made in accordance with or by reference to any Proprietary Information and Materials of Buyer. Prior to disposing of such parts or other materials as scrap, Seller shall render them unusable. Buyer shall have the right to audit Seller's compliance with this Article.
- (d) Seller may only disclose Proprietary Information and Materials of Buyer to Seller's subcontractor(s) if required for the performance of this Contract, provided that each such subcontractor first agrees in writing to obligations no less restrictive than those imposed upon Seller under this Article relating to Proprietary Information and Materials. Seller shall be liable to Buyer for any breach of such obligations by Seller's subcontractor(s).
- (e) The provisions of this Article shall survive the completion, termination or cancellation of this Contract.

18. **Intellectual Property:**

- (a) Seller agrees:
- (i) to defend, hold harmless and indemnify Buyer, its successors, assigns and customers against any claims of infringement (including patent, trademark, copyright, industrial design right, or other proprietary right, or misuse or misappropriation of trade secret) and resulting damages and expenses (including attorney's and other professional fees) arising in any way in relation to the Goods;
- (ii) that Buyer or Buyer's subcontractor(s) has the right to repair, reconstruct, or rebuild the Goods delivered under this Contract without payment of any royalty to Seller;
- (iii) that parts manufactured based on Buyer's drawings and/or specifications may not be used for Seller's own use or sold to third parties without Buyer's express written authorization;

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(iv) that Buyer shall own all rights in intellectual property, including all discoveries, inventions, improvements, designs, works or any other form of intellectual property, including without limitation, specifications, maps, plans, notes, papers, correspondence, diagrams, illustrations, training material, operators and maintenance manuals, records and test results, created or developed by Seller or Seller's subcontractor(s) during the course of this Contract. Where required, Seller shall undertake to have the authors or owners of all intellectual property rights assign their rights therein to the Buyer and to waive all moral rights they may have therein.

(b) This Article shall survive the completion, termination, or cancellation of this Contract.

19. **Indemnification:**

- (a) Seller agrees to indemnify and hold harmless Buyer, its parent, affiliates, subsidiaries, directors, officers, employees and agents from and against all liability, actions, causes of action, claims, suits, judgments, liens, awards, damages, demands and expenses of any kind and nature whatsoever (including attorney's and other professional fees) for:
- (i) property damage, and
- (ii) personal injury (including death) of Buyer's or Seller's employees, or any other person,

whether such property damage or personal injury arises from or is in any way related to Seller or Seller's subcontractor(s) (1) breach of obligations or responsibilities arising from this Contract, or (2) failure to comply with all applicable laws and regulations in the performance of this Contract.

- (b) In no event shall Seller's indemnification obligations be limited to the insurance available to, or provided by Seller or Seller's subcontractor(s).
- (c) The provisions of this Article shall survive the completion, termination, or cancellation of this Contract.

20. Insurance and Workers' Compensation:

- (a) Seller and Seller's subcontractor(s) shall comply with the applicable workers' compensation legislation of the jurisdiction(s) in which the work is performed. Seller shall provide to Buyer, upon request, evidence of compliance with such legislation. Unless otherwise agreed to in writing by Buyer, Seller shall cause its insurance carrier to agree in writing to waive its right to subrogation with respect to Workers' Compensation.
- (b) Unless otherwise agreed to in writing by Buyer, Seller shall, at its own expense, maintain insurance coverage with carriers acceptable to Buyer and in the amounts set forth below in subarticle (c). Seller shall furnish to Buyer either a certificate showing compliance with such insurance requirements or certified copies of all insurance policies within ten (10) days of Contract initiation. The certificate shall name General Dynamics Corporation and Buyer as additional insured on all liability policies, and shall provide that Buyer will receive thirty (30) days' prior written notice from the insurer if any coverage is suspended, voided, cancelled or reduced in limit. Seller's furnishing of certificates of insurance or purchase of insurance shall not release Seller of its obligations or liabilities under

this Contract.

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- (c) Seller shall maintain insurance coverage in amounts not less than the following: (i) Comprehensive General Liability \$1,000,000 for bodily injury and property damage combined single limit per occurrence, (ii) if motor vehicles are used during the performance of this Contract, Comprehensive Automobile Liability, \$1,000,000 bodily injury and property damage combined single limit per occurrence, including all statutory coverage for all provinces/states or countries of operation, (iii) Employers' Liability \$1,000,000 per occurrence. Buyer may also specify additional insurance coverage and amounts as required based on its business requirements.
- (d) All policies of insurance procured by Seller must be written as primary policies, not contributing with or in excess of coverage that Buyer may carry. Seller agrees that Seller, Seller's insurer(s) and anyone claiming by, through, under or on Seller's behalf shall have no claim, right of action or right of subrogation against Buyer and Buyer's customer.

21. Seller's Property:

Unless otherwise agreed to in writing by Buyer, Seller, at its expense, shall furnish, keep in good condition, and replace when necessary all machinery, equipment, tools, jigs, dies, gauges, fixtures, molds, patterns and other items ("Seller's Property") necessary for the production of the Goods. The cost of changes to Seller's Property necessary to make design and specification changes directed by Buyer shall be paid for by Buyer after satisfactory evidence of such cost, in such form and detail as Buyer may require, is provided to Buyer. Seller shall insure Seller's Property with full fire and extended coverage insurance for its replacement value. Seller grants Buyer an irrevocable option to take possession of and title to Seller's Property that is special for the production of the Goods upon payment to Seller of its net book value, less any amounts that Buyer has previously paid to Seller for the cost of such items; provided, however, that this option shall not apply if Seller's Property is used to produce Goods that are the standard stock of Seller, or if a substantial quantity of like Goods are being sold by Seller to others.

22. **Buyer's Property:**

- (a) All supplies, materials, tools, jigs, dies, gauges, fixtures, molds, patterns, equipment and other items furnished by Buyer, either directly or indirectly, to Seller to perform this Contract, or for which Seller has been reimbursed by Buyer, shall be and remain the property of Buyer and shall be held by Seller on a bailment basis ("Buyer's Property"). Seller shall bear the risk of loss of and damage to Buyer's Property. Seller shall indemnify and save harmless Buyer from all liens and claims upon Buyer's Property arising from any cause.
- (b) Buyer's Property shall (i) at all times be properly and safely stored and maintained in good condition, reasonable wear and tear excepted, at Seller's expense; (ii) not be used by Seller for any purpose other than for the performance of this Contract; (iii) be deemed to be personal property and shall not be attached or affixed to real property; (iv) be recorded by Seller and conspicuously marked by Seller as the property of Buyer; (v) not be commingled with the property of Seller or with that of any other person; and (vi) not be moved from Seller's premises without the prior written approval of Buyer's Representative.

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(c) Buyer shall have the right to enter Seller's premises at all reasonable times to inspect Buyer's Property and Seller's records with respect thereto. Upon the request of Buyer, Buyer's Property shall be immediately released to Buyer or delivered to Buyer by Seller, either (i) F.O.B. or F.C.A. (as applicable)- Seller's address on the face of the Purchase Order (Incoterms, 2000), properly packed and marked in accordance with the requirements of the carrier selected by Buyer to transport such property, or (ii) as otherwise directed to any location designated by Buyer, in which event Buyer shall pay to Seller the reasonable costs of delivering Buyer's Property in such manner and to such location. When permitted by law, Seller waives any lien or other rights that Seller might otherwise have on any of Buyer's Property for work performed on such property or otherwise.

23. **Government Property**

In this Article,

"Government" means the Buyer's customer in respect of the prime contract to which this Contract relates;

"Government Property" means all property owned or leased by the Government and provided to the Seller by the Buyer or the Government in relation to this Contract.

(a) Seller agrees:

- (i) to use Government Property solely for the purposes of this Contract;
- (ii) that title in and to Government Property shall at all times remain with the Government;
- (iii) to take all necessary steps to protect and safeguard GovernmentProperty from loss, damage, destruction or theft; (iv) to tag and properly identify Government Property;
- (v) to segregate and secure Government Property so as to ensure that it does not become commingled with property of the Seller or third parties;
- (vi) not to incorporate Government Property into or attach it to any propertynot owned by the Government, unless permitted in writing by the Buyer or the Government;
- (vii) not to permit Government Property to become a fixture or to be attached to real property;
- (viii) to periodically perform a physical inventory of all Government Property; (ix)to bear the risk of any loss or damage to Government Property; and
- (x) to create and maintain records of all Government Property and permitaccess to those records by the Buyer and/or the Government as requested.
- (b) In the event Seller is provided with Government Property to support engineering and manufacturing activities relevant to the test and evaluation of form, fit and function of an end item deliverable, Seller shall return the Government Property to the Buyer or the Government in the same condition it was provided, less reasonable wear and tear.

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- (c) Upon request, Government Property shall be immediately released, packed and delivered in accordance with suitable commercial practice to the destination set forth in the delivery instructions provided by the Buyer and/or the Government.
- (d) Disposal of Government Property shall only be as directed in writing by the Buyer or Government.

24. Service and Replacement Parts:

- (a) Seller shall: (i) maintain in inventory an adequate quantity of Goods as necessary to fulfill all of Buyer's Requirements (as defined herein) for a minimum period of three (3) years following Contract initiation; (ii) supply to Buyer all of Buyer's Requirements for a minimum period of thirty (30) years following Contract initiation ("Required Inventory Term"); and (iii) maintain all supplies and items (including drawings, specifications, tooling, fixtures, gauges) necessary for Buyer's Requirements for the Required Inventory Term ("Required Supplies").
- (b) In the event Seller determines that it is unable to comply with (a) above, Seller shall: (i) provide Buyer with a minimum of twelve (12) months prior written notice before Seller takes any action to discontinue its supply of Buyer's Requirements, and (ii) make available to Buyer, without restriction, all Required Supplies as Buyer may deem necessary to facilitate Buyers ongoing supply of Goods.
- (c) Unless otherwise agreed to by Buyer, the price(s) for the Goods during the first three (3) years following Contract initiation shall be fixed. For the remainder of the Required Inventory Term, the price(s) for the Goods shall be as agreed to by Buyer and Seller. Upon Buyer's request, Seller shall make service literature, technical support documentation, and other similar materials available to Buyer, at no additional charge, to support Buyer's service parts activities.
- (d) For the purposes of this Article, "Buyer's Requirements" shall mean all Goods required for use in Buyer's manufacturing and service parts operations, and Buyer's rebuild, power, marine and industrial businesses.

25. Remedies:

The rights and remedies reserved to Buyer in this Contract are cumulative with, and in addition to, any other rights and remedies provided by law or in equity.

26. Compliance with Laws; Customs; Export Controls:

(a) Seller shall (i) comply with all applicable laws, rules, regulations, ordinances and orders of all applicable local, province/state and federal government authorities (including but not limited to the Canadian Defence Production Act, Export and Import Permits Act, Controlled Goods Regulations, United Nations Act, and Special Economic Measures Act, and the United States Arms Export Control Act, International Traffic in Arms Regulations, and Export Administration Regulations, as amended from time to time, and (ii) procure all applicable registrations, licences/permits or other official authorizations, and pay all fees and other required charges.

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For routed transactions and without limiting the generality of the foregoing, Buyer hereby authorizes Seller to act as the exporter and forwarding agent for items being exported from the United States from Seller to Buyer. Seller is required to prepare and submit the Electronic Export Information and to facilitate the export of items from the United States.

- (b) Without limiting the generality of the foregoing, if the United States Government requires an export licence, or other government approval, Seller shall not transfer, by any means, directly or indirectly, any hardware, software, technology, information or technical data disclosed under this Contract to any individual or country without first obtaining such licence or approval. Seller shall provide a copy of license to GDLS-C prior to first shipment and include destination control statement.
- (c) Seller agrees (i) to insert the substance of this Article in all subcontracts entered into in connection with this Contract and (ii) that this Article shall survive the completion, termination, or cancellation of this Contract.
- (d) Seller MUST complete appropriate GDLS-Canada Customs Invoices for all shipments originating outside of Canada destined to a Canadian address that originate from a point outside of Canada. Seller's failure to provide properly executed GDLS-Canada Customs Invoice shall entitle Buyer, at Buyer's option, to charge Seller for reasonable administrative costs incurred. Seller shall refer to Buyer's website http://www.gdlscanada.com/purchasing/index.htm) for instructions on determining appropriate GDLS-Canada Customs Invoice.
- (e) Upon Buyer's request, seller shall promptly provide written certification (i.e. NAFTA certificate) to Buyer for all goods covered under a qualifying free trade agreement. Seller shall refer to Buyer's website for additional details on providing NAFTA certificates (http://www.gdlscanada.com/purchasing/index.htm).
- (f) Sellers located outside Canada shall promptly provide name, address, and phone number of customs broker used by Seller to facilitate the customs clearance of goods returned to Seller.

27. **Setoff/Recoupment:**

Buyer shall have the right to setoff any amount owing to Buyer or any of its affiliates and/or subsidiaries or any other contractual agreement between Buyer and Seller or their respective affiliates and/or subsidiaries.

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28. No Advertising; Use of Trademarks:

Except as required by law, Seller shall not, in any manner, release any form of public statement (including an advertisement or the creation of any website content) related to this Contract or any work performed in connection with this Contract, without Buyer's prior written consent. Seller agrees not to use any trademarks or trade names of Buyer without Buyer's prior written consent. The provisions of this Article shall survive the completion, termination, or cancellation of this Contract.

29. **No Implied Waiver:**

The failure of either party at any time to require performance by the other party of any provision of this Contract shall in no way affect the right to require such performance at any time thereafter, nor shall the waiver of either party of a breach of any provision of this Contract constitute a waiver of any succeeding breach of the same or any other provision.

30. Assignment, Delegation; Subcontracting:

- (a) Unless prior written consent is provided by Buyer, Seller shall not (i) assign or transfer any of its rights or interest in this Contract, nor (ii) delegate or subcontract any of its duties or obligations under this Contract. This Article shall not limit Seller's ability to purchase standard commercial supplies or raw materials.
- (b) No assignment, transfer, delegation or subcontract ("Assignment") by Seller, with or without Buyer's consent, shall relieve Seller of any of its obligations under this Contract, or prejudice any of Buyer's rights against Seller, whether arising before or after the date of any Assignment.

31. **Relationship of Parties:**

Seller and Buyer are independent contracting parties and nothing in this Contract shall make either party the agent or legal representative of the other for any purpose whatsoever, nor does it grant either party any authority to assume or to create any obligation on behalf of or in the name of the other. Nothing in this Contract shall be read to create any partnership, joint venture, trust or other fiduciary relationship between the parties.

32. Governing Law; Jurisdiction; Dispute Resolution:

- (a) The validity, performance, interpretation and construction of this Contract and/or the rights and obligations of the parties arising under or in connection with this Contract shall be governed and construed in accordance with the laws of the province of Ontario and those of Canada applicable therein, excluding its choice of law rules and excluding the Convention for the International Sale of Goods.
- (b) All disputes arising from or relating to this Contract, with the sole exception of disputes regarding the creation or ownership of any and all intellectual property, shall be irrevocably submitted to arbitration, to be conducted in Toronto, Ontario, Canada, in accordance with the *Ontario Arbitration Act*, 1991. In the event of any litigation, the Seller expressly agrees and consents to exclusive venue and jurisdiction in the courts of Toronto, Ontario, Canada, unless Buyer otherwise agrees in writing. Seller hereby waives any defence of inconvenient forum in connection with the maintenance of any such action or proceeding. Seller further agrees not to bring any action or proceeding in any other court or jurisdiction and expressly waives any subsequent objection to the judicial recognition or enforcement of any award granted hereunder. The language to be used in any proceedings shall be English.

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(c) The procedures set forth in this Article shall be the sole and exclusive procedures for the resolution of Dispute(s) between the parties, arising under or in connection with this Contract; provided, however, that a party may seek a injunction equitable judicial relief if, in its sole judgment, such action is necessary. Despite such action, the parties shall continue to participate in good faith in the procedures specified in this Article. Each party is required to continue to perform its obligations under this Contract pending resolution of any Dispute(s), unless to do so would be impossible under the circumstances.

33. Severability:

If any provision of this Contract is invalid or unenforceable under any statute, regulation, ordinance, executive order or other rule of law, such provision shall be deemed reformed or severed from this Contract, as the case may be, but only to the extent necessary to comply with such statute, regulation, ordinance, order or rule. The remaining provisions of this Contract shall remain in full force and effect.

34. **Gratuities:**

Seller represents and warrants that neither the Seller, nor any of its officers, directors, employees, agents or representatives ("Seller's Employees") have offered or given, nor will Seller's Employees offer or give, any kickbacks or gratuities to any officer, director, employee, agent or representative of Buyer or Buyer's customer for the purpose of securing or amending this Contract or securing favorable treatment under this Contract.

35. Anti-Corruption Compliance:

The parties agree that in pursuing this Contract and performing under it, they will fully comply with the *Foreign Corrupt Practices Act*, the *Corruption of Public Officials Act* and other applicable anti-bribery laws. Without limiting the generality of the foregoing, the parties represent and agree that:

- (a) they have not and will not directly or indirectly offer, give, promise or authorize anything of value to any government official,
 United Nations official, political party, party official or candidate for office ("Public Official") for the purpose of obtaining or retaining business or gaining any competitive advantage;
- (b) no Public Official has nor will benefit, directly or indirectly, from the compensation that the parties may receive in connection with this Contract or proceeds of any subcontract related thereto; and
- (c) they will cause their employees, directors and Subcontractors to comply with the provisions of this Article in connection with this Contract and any subcontract or agreement related thereto.

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36. Foreign Offset:

This Contract has been awarded with the cognizance of General Dynamics Corporation Industrial Participation Programs, all offset credits resulting from this Contract are the sole property of General Dynamics Corporation to be applied to the offset program of its choice. Seller agrees, at no cost, to assist General Dynamics Corporation in securing appropriate offset credits from the respective government authorities. Any offset credits earned resulting from these transactions must receive written consent and authorization from General Dynamics Land Systems – Canada prior to use.

37. **Privacy**:

- (a) In the event that during performance of this Contract Seller collects, uses, or discloses Personal Information (as defined herein), of Buyer's officers, directors, employees, contract personnel, or any agents or representatives of Buyer, Seller shall comply with all applicable international, federal, state, provincial and local laws, rules, regulations, directives and governmental requirements currently in effect and as they become effective relating in any way to the privacy, confidentiality or security of such Personal Information.
- (b) Seller agrees to maintain and implement a comprehensive, written information security program that includes appropriate administrative, technical and physical safeguards and other security measures designed to protect the security and use of such Personal Information. Seller agrees to notify Buyer immediately in writing of any breach of this Article or any unauthorized use or disclosure of or access to any Personal Information of which Seller becomes aware. Seller shall promptly take all necessary and advisable corrective actions, and shall cooperate fully with Buyer in all reasonable and lawful efforts to prevent, mitigate or rectify such breach or unauthorized use, disclosure or access.
- (c) Promptly upon the completion, termination, or cancellation of this Contract, or such earlier time as Buyer requests, Seller shall return to Buyer or its designee, or irrevocably destroy if return is not reasonably feasible or desirable to Buyer (which decision will be based solely on Buyer's written statement), each and every original and copy in every media of all Personal Information in Seller's possession, custody or control including, without limitation, all information and materials that contain or are derived from Personal Information. Seller's obligations under this Article shall survive the completion, termination, or cancellation of this Contract.
- (d) For the purposes of this Article, "Personal Information" means any information about an identified or identifiable individual, including but not limited to, birthday, age, social insurance number.

38. Entire Agreement; Amendments:

- (a) This Contract, constitutes the entire agreement between Seller and Buyer with respect to the matters contained herein and supersedes all prior oral or written representations and agreements.
- (b) This Contract may only be modified by a Contract Amendment issued in writing and signed by Buyer's Representative.

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39. Notices:

(a) All notices required or permitted to be given under this Contract shall be deemed given if such notice is in writing and delivered (i) personally, (ii) by prepaid courier or registered mail addressed to Seller's representative or Buyer's Representative, as the case may be (the "Receiving Party"), at the address set forth in the Contract, or (iii) by facsimile addressed to the Receiving Party, at the address set forth in the Contract.

(b) The effective time of such notice: (i) if delivered personally, shall be on the day on which it was delivered, (ii) if delivered by prepaid courier or registered mail, shall be on the fifth (5th) business day after the time of such mailing (if both parties are within North America) or on the tenth (10th) business day after the time of such mailing (if one party is located outside of North America), or (iii) if delivered by facsimile, shall be on the first (1st) business day following transmission (provided that evidence confirming transmission receipt is provided).

40. Work on Buyer's/Buyer's Customer(s) Premises:

In the event that Seller and/or Seller's subcontractor(s) must enter Buyer's premises and/or Buyer's customer(s) premises for any reason in connection with this Contract, Seller and/or Seller's subcontractor(s) shall observe and comply with all rules, procedures and policies established by Buyer and/or Buyer's customer(s), including those with respect to security and safety.

41. Records and Audit:

Seller shall maintain and the Buyer, or Buyer's customer, or an authorized representative of Buyer's customer, shall have the right to examine and audit all books and records relating to this Contract showing all costs incurred, including direct costs such as labour, burden rates and subcontracts. Such books and records shall be made available at reasonable times at Seller's facility for up to three (3) years after final payment is made by Buyer hereunder.

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SECTION A, Annex A1

SHIPPING REQUIREMENTS

- a. Seller agrees: (1) to deliver goods to buyer at seller's dock in accordance with obligations outlined in FCA-Seller's Dock (Incoterms 2000) (2) suitably pack, mark and ship in accordance with Buyer s packing standards and carrier requirements to ensure lowest transportation cost and safe transport of the goods. No additional charge shall be made to the Buyer unless otherwise stated herein. If goods are to be exported from the United States, Seller agrees to 1) ensure that the appropriate destination control statement (i.e. ITAR or EAR) is referenced on Seller s commercial invoice and 2) provide Buyer s Export Compliance Department with a copy of applicable US export authorization prior to shipment of goods from the US.
- b. No charge shall be made by Seller for drayage or storage, unless otherwise stated herein.
- c. All shipping units (e.g. cartons, crates, skids, etc.) must be individually labeled, marked, or tagged clearly showing:
 - i. Supplier s name
 - ii. Complete Final Delivery Address
 - iii. Purchase Order Number Including Line & Release Number- If Applicable iv. Part Number, Revision and Description
 - v. Quantity Shipped Per Part
 - vi. Shipping Unit number
 - vii. Package Weight Specify pounds or kilograms
 - viii. Waiver/Material Review Board (MRB) number where applicable
- d. Returnable containers must be clearly identified as such on the container and on the shipping documents.
- e. It is imperative that any previous markings on the shipping units are completely removed
- f. Separate manifests and packing list must be provided for each Final DeliveryAddress
- g. Two copies of Packing Lists must be provided with each shipment, included inside one of the shipping units (e.g. cartons, crates, skids, etc.), and this unit must show "PACKING LIST ENCLOSED"
- h. All packing lists MUST include the following
 - i. Supplier Name
 - ii. GDLS-Canada Customer Contract Number If applicable
 - iii. Purchase Order Number including Line Item and Release
 - iv. Number
 - v. Part Number and Description

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- vi. Quantity Shipped per Part
- vii. Bill of Lading Reference
- viii. Total Number of Pieces Shipped
- ix. Total Weight Shipped
- i. Seller agrees to describe material on Bills of Lading or other shipping receipt and to route in accordance with the routing instructions of the Buyer s International Trade & Transportation Department. The ship-to address referenced on Buyer s purchase order must be shown as part of the Bill of Lading. EXPEDITED TRANSPORTATION PERMITTED ONLY WITH AUTHORIZATION FROM BUYER.
- j. Commercial invoice must be submitted in duplicate to the Accounts Payable Department, GDLS-Canada, London, Ontario. The proper commercial description of the goods must be on all invoices. Commercial invoices must show the marks, Numbers and Description of the Packages and GDLS-C purchase order number where applicable.
- k. Seller MUST complete appropriate GDLS-Canada Customs Invoices for all shipments originating outside of Canada destined to a Canadian address that originate from a point outside of Canada. Seller s failure to provide properly executed GDLS-Canada Customs Invoice shall entitle Buyer, at Buyer s option, to chargeSeller for reasonable administrative costs incurred. Seller shall refer to Buyers website http://www.gdlscanada.com/purchasing/index.htm) for instructions on determining appropriate GDLS-Canada Customs Invoice.
- (a) Seller shall (i) comply with all applicable laws, rules, regulations, ordinances and orders of all applicable local, province/state and
 federal government authorities governing the transportation of dangerous goods and hazardous material and the, as amended from time to
 time, and (ii) procure all applicable registrations, licences/permits or other official authorizations, and pay all fees and other required
 charges.

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SECTION A - Annex A2

TRADE CONTROLS

It is the policy of GDLS-C to conduct its business in compliance with all applicable laws and regulations. Further, it is the policy of GDLS-C to only conduct business with suppliers who are registered with their government to participate in activities related to the defense industry; have proven not to require registration (i.e. commercial material, technology and/or services); are exempt from registration by their government but authorized to participate in defense activities (i.e. government agencies); or are not able to register as their government does not have a registration program (export licenses may still be required for the export of defense articles).

As such, all bidders are required to comply with the trade regulations as set forth by their country's government agencies responsible for export/import authorization and compliance, and to advise GDLS-C of any and all restrictions that may be imposed upon GDLS-C.

End Use Information:

Suppliers to **General Dynamics Land Systems - Canada** provide products and services supporting armoured vehicles destined for customers worldwide. End use information is necessary to determine the requirement for, and the completion of, export and import permit/license applications. For reference, the text of the Buyer's purchase order, or Letter of Intent to purchase, provides an end use statement to significantly reduce the requirement to complete individual End User Certificates.

Flowdown:

In the performance of any ensuing purchase order, Suppliers are required to flowdown end use information as well as the requirement for export controls compliance to their sub-tier suppliers. Suppliers are required to provide proof of retransfer authorization to GDLS-C as applicable.

This sub-section is applicable to US bidders only: (information for Canadian Bidders begins on Page 3)

This section provides information to those suppliers who are manufacturers, brokers and/or importers/exporters of defense articles, to include technical data, and defense services subject to trade controls.

Jurisdiction of Parts:

The export and import of articles out of and into the United States, including technical data and defense services, may be subject to the jurisdiction of the US Department of State, Directorate of Defense Trade Controls (DDTC); the US Department of Commerce, Bureau of Industry and Security (BIS); or the US Department of Justice, Bureau of Alcohol, Tobacco, Firearms and Explosives (BATFE).

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DDTC, in accordance with the Arms Export Control Act (AECA) and the International Traffic in Arms Regulations (ITAR), is the organization within the US Department of State charged with controlling the permanent and temporary export and temporary import of defense articles, technical data, and defense services covered by the United States Munitions List (USML).

BIS is responsible for implementing and enforcing the Export Administration Regulations (EAR), which regulate the export and re-export of "dual-use" commodities, software and technology (those that have both commercial and military or proliferation applications); however, purely commercial items without an obvious military use are also subject to the EAR. Export of items not on the USML requires authorization by BIS either by exemption or export license.

BATFE is responsible for the permanent import of defense articles, as enumerated on the US Munitions Import List (USMIL) into the United States. Technical data is not included on the USMIL and permanent imports of data do not require an import authorization.

It is the Supplier's responsibility to identify to GDLS-C the jurisdiction of the goods they provide to GDLS-C – specifically if the goods are controlled under the ITAR or the EAR. The policy for designating and determining defense articles is set forth at 22 CFR 120.3. The intended use of the article or service after its export is not relevant in determining whether the article or service is subject to the controls of the ITAR. Any item enumerated on the USML is deemed to be a defense article or service and subject to the ITAR. It is important to note that the terms are defined broadly:

- Ÿ A defense article is any good, software or piece of technical data that is designed, developed, configured, adapted or modified for a military application (22 CFR 120.3, 120.6)
- Ŷ A defense service includes the furnishing of any assistance, including training, to foreign persons in the design, development, engineering, manufacture, production, assembly, testing, repair, maintenance, modification, operation, demilitarization, distribution, processing, or use of defense articles (22 CFR 120.6)

If there is doubt as to whether an article or service is in fact included on the USML, the Supplier shall follow the Commodity Jurisdiction procedure set forth at 22 CFR 120.4.

Registration for US Bidders

Any person who engages in the manufacture, brokering or exporting of defense articles or furnishing of defense services must be registered as a manufacturer and/or broker with the Directorate of Defense Trade Controls. Manufacturers who do not engage in exporting must also register with DDTC.

There is no registration requirement for manufactures/exporters of goods under the jurisdiction of the US Department of Commerce, Bureau of Industry and Security (BIS).

The requirements for registration are set forth in the ITAR at 22 CFR 22. In addition to paying a registration fee, the regulations require that you provide the US Department of State with specific information about your business, including such information as:

- Ÿ The defense articles you manufacture and/or sell;
- Ÿ The defense services you provide;
- Ÿ The officers and directors of your company;

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- Ÿ Whether your company, or any of its officers or directors, have been convicted of violating the Export Control Laws of the United States; and.
- Y Whether your company is owned or controlled by a foreign company.

As these regulations can be quite complex, you may wish to seek the advice of counsel or of an expert consultant to assist you in this process.

Proof of Registration and US Export Authorization for US Bidders:

As part of your response to this RFP/RFQ/Purchase Contract, you are required to provide either your company's DDTC registration number (per 22 CFR 122), a statement that your company has determined no such registration is required, or that your company has applied for registration. Use the form on page 6 of Annex A2.

You must also provide confirmation no later than 30 days prior to registration expiry that you have made the appropriate renewal applications to the US Department of State, Directorate of Defense Trade Controls. You must also provide confirmation to Buyer once renewal has been granted. Again, use the form on page 6 of Annex F2.

Licensing for US Bidders

Registration does not automatically confer export rights or privileges, and is essentially a precondition to the issuance of any export/import authorization. Once registered, your business must request and obtain authorization from DDTC for every permanent and temporary export and temporary import of defense articles and/or services. This authorization can be in the form of a license, agreement or exemption.

Export of items not on the USML requires authorization by BIS either by exemption or export license. BIS has determined that certain items may be exported to certain countries, for certain uses, by any exporter. Such a published determination is an exemption. It is not necessary to apply for permission to export under an exemption. Items under BIS jurisdiction that are not authorized for export under an exemption require an export license for export. Export licenses are handled on a case-by-case basis and require individual license applications.

Again, the regulations in this area are quite complex, and you may wish to seek the advice of an outside expert if your company does not have the necessary expertise in house.

Requirements for successful bidders:

- 1. If your company has determined that a license is not required under either the ITAR or the EAR, and that an exemption(s) will authorize all deliverables, provide notice stating applicable ITAR and/or EAR exemptions to Buyer within 30 days of receipt of the purchase order. Please note that the Canadian Exemption (ITAR) will be accepted as a valid exemption only in limited circumstances.
- 2. If your company has determined one or more export license(s) and/or agreement(s) are required from the US government to export the deliverables, forward evidence that application has been made for these approvals (e.g., the license/agreement application numbers) to Buyer within 30 days of receipt of the purchase order.

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- 3. Within 15 days of receipt of US government export approvals at your company, and in any case prior to first shipment of deliverables, forward copies of the approvals to Buyer. Buyer will in turn, and as required by Canadian law, attach your license(s) or exemption citation(s) to Buyer's application for Canadian export permit(s). You are further required to advise Buyer prior to shipment of parts if an export approval imposes special restrictions on use of a part (e.g. serialization).
- 4. You are further required to notify your Buyer in the event that an export approval is expiring, has been suspended or revoked.

Notice of Name Change

At any time, and to the maximum extent practicable, Seller will immediately notify Buyer of any pending or completed acquisitions, mergers, and/or name/address changes regardless of cause. Seller will provide details explaining cause. This requirement applies regardless of whether Seller is required to be registered with the DDTC.

The remainder of Annex A2 applies to Canadian bidders.

This sub-section is applicable to CANADIAN bidders only:

This section provides information to those suppliers who are manufacturers, brokers and/or importers/exporters of defense articles, to include technical data, and defense services subject to Canadian Export and Import Regulations.

The Defence Production Act is administered by the Minister of Public Works and Government Services Canada for the regulation of access, in Canada, to controlled goods listed in the Export Control List (ECL) within the Export and Import Permits Act (EIPA). In order to examine or possess controlled goods and/or technology in Canada, the entity (business or individual) must be registered with the Controlled Goods Directorate (CGD). This includes individuals, partnerships, corporations and other business enterprises.

The Export and Import Permits Act regulates the export and import of strategic and other goods out of, and into, Canada. Export permits cannot be issued unless the entity (business or individual) is CGD-registered. The Canadian Export and Import Permits Act authorized the Canadian Government to establish an Import Control List (ICL) and an Export Control List (ECL) to control the movement of goods. The Export and Import Controls Bureau, within the Department of Foreign Affair and International Trade Canada (DFAIT), authorizes the import and export of goods requiring permits. An export permit is required before an item included on the ECL may be exported from Canada to any destination, with the exception (in most cases) of the United States.

Registration for CANADIAN Bidders

The first step you must take is to determine your need to be registered with Public Works and Government Services Canada under the CGD. The requirements for registration are set forth on the CGD web site at http://www.cgp.gc.ca/cgdweb/text/index_e.htm. There is no fee to register; however, there may be internal costs for complying with the Defense Production Act.

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You may wish to seek the advice of counsel or of an expert consultant to assist you in this process.

Proof of Registration for CANADIAN Bidders:

As part of your response to this RFP/RFQ/Purchase Contract you are required to provide either proof of your company's registration under the CGD, a statement that your company has determined no such registration is required, or that your company has applied for registration. Use the form on page 6 of Annex A2.

A successful bidder will be required to provide the amount of US controlled goods in their product; the regulatory authority for exporting that product from the United States into Canada; and any subsequent retransfer authorization as applicable.

You must also provide confirmation no later than 30 days prior to registration expiry that you have made the appropriate renewal applications to the CGD. You must also provide confirmation to Buyer once renewal has been granted. Again, use the form on page 6 of Annex A2.

Notice of Name Change

At any time, and to the maximum extent practicable, Seller will immediately notify Buyer of any pending or completed acquisitions, mergers, and/or name/address changes regardless of cause. Seller will provide details explaining cause. This requirement applies regardless of whether Seller is required to be registered with the CGD.

Completion of Trade Control Supporting Documents

In order for GDLS-C to retransfer certain US controlled articles or services, to include technical data, to Supplier, Supplier may be required to execute a Non-Transfer and Use Certificate (DSP-83) and/or a Non-Disclosure Agreement (NDA). If Supplier will not execute these documents as requested, GDLS-C will not be able to provide Supplier with US controlled goods.

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TO:		General Dynamics Land Systems Canada GDLS – Canada Corporation				
FAX:	:	519-964-5730 or 519-964-5688				
ATT	ENTION:	Supply Chain Management Export Compliance				
SUBJ	JECT:	Export Controls Registration Status				
FRO	M:					
		Company Name				
		Company Address				
	ORT IPLIANCI TACT NA					
TITL	Æ:					
PHO	NE NUMI	BER:				
FAX	NUMBEI	R:				
EMA	IL ADDR	RESS:				
SIGN	ATURE:					
0		on of Registration from the Directorate of Defense Trade Controls is attached OR e of Registration from the Controlled Goods Directorate is attached.				
0	O Application for Registration has been submitted. The date of application wasNotification or Certificate of Registration will be forwarded once received.					
O Registration under the ITAR (US) or CGD (Canada) is not required, as we provide commercial material, technology, and/or services only.						
0	Note: 1	on under the ITAR (US) or CGD (Canada) is not required, through government exemption. Public Works and Government Services Canada (PWGSC) can exempt Canadian entities fromCGD registration (ex. Canadian Government Department or Agency).				
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Model Subcontract Section A, Annex A4 Rev 3/1/2003

Section A - Annex A4

MATERIAL SAFETY DATA SHEET (MSDS) INFORMATION REQUIREMENTS

Introduction

The following policies and instructions are intended as guidelines for the completion of Material Safety Data Sheets (MSDS) to Buyer's standards. The information provided will be used in programs to protect the health, safety and environment of individuals and communities associated with the Buyer's sites. The chemical manufacturer, importer, distributor or employer preparing the MSDS shall ensure that the information recorded accurately reflects the scientific evidence used in making the hazard determination and complies with all applicable international, national, state, province, and local laws.

Materials that require MSDSs

- All liquids, gases, pastes, powders, flakes, gels, aerosols, and many solids.
- · Any product which generates dust, fumes, fog, vapor, etc., during shipping, storage, handling, use, or disposal.
- Any product with specific ventilation requirements.
- Any product with personal protective equipment (PPE) requirements or recommendations.
- Any product stored in a pressurized cylinder or container.
- Any product that emits radiation higher than background.
- Any product intended to be altered, processed, etc., (e.g., cut, mold, grind).
- Lubricants or coatings on steel or other articles.
- "Articles" that will be processed by Buyer.
- "Consumer products" that are <u>not</u> used in a manner typical to a consumer.

Examples of these products include but are not limited to:

- 1. Abrasives
- 2. Acids & caustics
- 3. Adhesives & sealers
- 4. Castings, forging
- 5. Cleaners
- 6. Compressed gases
- 7. Coolants & metalworking fluids
- 8. Flux (e.g., soldering)
- 9. Fuels (e.g., coal & gasoline)
- 10. Insulating materials
- 11. Lubricating oils & greases
- 12. Nylons & other plastics
- 13. Office supplies containing hazardous chemicals
- 14. Oxidizers
- 15. Paint & related chemicals
- 16. Pesticides & biocides
- 17. Printer's inks
- 18. Resins
- 19. Soaps
- 20. Solder
- 21. Solvents
- 22. Steel
- 23. Welding rods & wires
- 24. Wood

μ: Indicates an essential information standard that must be met for all products.

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General instructions (Applicable to all MSDSs submitted to Buyer)

Language

The MSDS must be provided in the language of the country of origin. A copy of the MSDS must also be available in English.

Readability

The MSDS must be legible. Font, point type, margin width and format for an MSDS must allow for quality reproduction, copying, and faxing.

Blanks/Negative Responses

Blank data fields are not acceptable as a negative response. Terms like "not applicable (NA)", "not established (NE)", "not available", "none", "none known", "unknown", "not determined", etc., may be accepted in place of data on the MSDS or addendum. If abbreviations are used for these terms, a legend should be provided explaining them. For Canadian use, only "not applicable" (not app) or "not available" (not ava) can be used as a negative response for a Workplace Hazardous Materials Information System (WHMIS) controlled product.

Full Disclosure

Ingredients listed in Section 2 or on the addendum must add up to at least 100%. (See Section 2 of this document for details.)

Confidentiality Policy

Any MSDS, attachment or addendum marked "confidential" "proprietary" "trade secret" or words to that effect will be returned to the supplier or destroyed. Material marked "for Buyer's use only" will be accepted but will not constitute a secrecy agreement on the part of the Buyer. Buyer <u>does not sign secrecy agreements</u>. (See Section 2 of this document for guidelines on protecting trade secret information.)

Addendum/Addenda

It is no longer necessary to fill out a Buyer MSDS form. Instead, your company's MSDS may be submitted along with a separate page listing any remaining data required by BUYER. It may be called an addendum, attachment, additional information or words to that effect. This addendum, however, must be clearly labeled with the trade name and should be dated.

Regulatory Compliance

All suppliers are expected to comply with local, regional, national and international regulations. For example, the US and Canada maintain listings (Toxic Substance Control Act (TSCA) and Domestic Substance List (DSL), respectively) of chemicals approved for commercial commerce within their borders that may require usage reports and/or are restricted in some fashion. **Suppliers must include this information on the MSDS**. Furthermore, the MSDS or addendum must include:

- A listing of all ingredients constituting 1% or more of the product
- A listing of all ingredients constituting 0.1% or more of the product that are recognized as carcinogens
- Written statements of compliance to all local, regional, national and international regulations for all non-listed ingredients constituting less than 1% of the product

μ: Indicates an essential information standard that must be met for all products.

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(See Section 2 of this document for details.)

Dates (Policy & Definitions)

The MSDS date of preparation or effective/revision date must be less than 3 years old.

(See **Section 1** for exceptions to this rule.)

- Date of Preparation The date the MSDS was prepared or originated. This could also be the effective/revision date.
- Effective/Revision Date The date the MSDS is considered to be as complete and accurate as possible in describing the product as provided and relevant information such as manufacturer/supplier name, address and phone number. The effective and/or revision date will change as the product formulation changes or when new data on health, safety, environmental impact, regulations, toxicology or handling information becomes available.
- Print Date The print date will not be considered the effective date.

Essential versus Optional Information

The following 16 section format, based on the ISO 11014 and ANSI Z400.1 standards, is the preferred format for an MSDS, but other formats are acceptable.

Those items identified with a circled star (μ) represent minimum requirements that must be met for all materials. Those items not identified with μ are not required, but are desirable.

Data sheets and addenda that do not meet these requirements will be labeled non-compliant and remain so as long as these key areas of information are not provided. In these cases, BUYER sites will be encouraged to find alternate materials from compliant suppliers. Suppliers are strongly encouraged to supply all the other remaining information but will not be labeled as non-compliant if that information is incomplete.

The following are section-by-section instructions for Sections 1 - 16 of the MSDSs.

SECTION 1 - Product and Company Identification

- μ 1. Indicate the product name or number as it appears on the label.
- μ 2. Provide appropriate synonyms that apply to the product.
- μ 3. Indicate the name of the manufacturer as it appears on the label. If the supplier is different from the manufacturer, then clearly identify the responsible party(ies) preparing or distributing the MSDS who could provide additional information on chemical components and/or emergency procedures. Include complete addresses and phone numbers for each party. Indicate the specific nature of the phone numbers such as information, fax, emergency, national emergency response lines (e.g., CHEMTREC Chemical Transportation Emergency Center USA, NRC National Response Center USA, CCOHS Canadian Center for Occupational Health and Safety).
 - 4. Indicate the preparer's name and title and include a phone number if it is different from the emergency or information phone number.
- Clearly, indicate the date of preparation or the revision/effective date of the MSDS. If the date is more than three years old and no changes have been made to the data sheet (e.g. area code, address, verbiage) or the product, then a written statement with a current date may be submitted and it will be considered the effective date in lieu of revising the document.

 $\mu\text{:}$ Indicates an essential information standard that must be met for all products.

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SECTION 2 - Composition/Information on Ingredients

Buyer requires 100% disclosure of all ingredients found in a product. This means an ingredient present at 1% or greater (0.1% for carcinogens) must be listed, even if it is generally considered non-hazardous (e.g., water). In addition, ingredients present at less than 1% in the product must be listed if those ingredients would be present at 1% or greater in the "dry" product. (For example, if zinc oxide is present at 0.7% in the product as shipped, but is present at 1.2% after applying the product to a substrate, this ingredient must be listed.) If a CAS (Chemical Abstract Services) registry number exists for an ingredient, it must be listed along with the proper chemical name or common chemical name or synonym on the MSDS or addendum. Exceptions to CAS number disclosure for trade secret ingredients may be granted if a good chemical description is provided (see below for an explanation of a "good chemical description").

If a CAS registry number of an ingredient is not available because the item is not a discrete chemical that can be represented by a chemical formula or is a mixture where the identity of individual components may be unknown or may vary, then a good chemical description must be provided. **Examples** of good chemical descriptions include, but are not limited to, those shown in the following table:

Unacceptable Name		Acceptable Name	
1.	Resin	1.	[Alkyd or benzophenol or other] resin (see other examples below)
2.	Urethane resin/polymer	2.	Diphenylmethane diisocyanate (MDI) based urethane resin
3.	Polyurethane resin/polymer	3.	Diphenylmethane diisocyanate (MDI) based urethane resin
4.	Hydrocarbon resin	4.	Alkyd resin
5.	Plasticizer	5.	Phthalate plasticizer
6.	Surfactant	6.	Linear alkyd sulfonate (LAS)
7.	UV Absorber	7.	Benzotriazole
8.	Additive	8.	A specific chemical family is required
9.	Epoxy resin	9.	Bisphenol A diglycidyl ether epoxy resin
10.	Phenol resin/polymer	10.	benzophenol based resin
11.	Thickener	11.	Starch (gelatin, semi-synthetic cellulose)
12	Pigment or Colorant	12	Yellow iron oxide pigment
13	Inhibitor	13	Acetanilide
14.	Antioxidant	14.	â-Naphthylamine
15.	Curing agent	15.	TDI based urethane prepolymer
16.	Emulsifier	16.	Fatty acid emulsifier
17.	Detergent	17.	Alkyl benzene sulfonate (ABS)

 μ : Indicates an essential information standard that must be met for all products.

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- μ 2. Indicate the percentage of each ingredient in the product and identify if the value represents percent by weight or percent by volume. Ranges should be within >5% of the true value for all components (both hazardous and non-hazardous). Exceptions will be made in those situations where a >5% range will not accurately describe the product (e.g., when the base oils vary from batch to batch depending on crude oil availability). For a WHMIS controlled product for Canadian use, ranges must comply, at a minimum, with WHMIS regulations. Summation of exact percentages must equal 100%. Summation of maximum ranges must equal or exceed 100%. Summation of minimum ranges must equal or be less than 100%. Carcinogens and chemicals subject to national reporting requirements by CAS registry number (e.g., SARA 313, NPRI) should be given in exact percentages. For non-carcinogenic ingredients present in the product at <1%, but still provided on the MSDS, T for trace will be accepted in place of a numeric value (for carcinogenic, biocide, flame retardant, and pigment ingredients, T may be used for items < 0.1%). One item on the list may be listed as "balance" or "remainder".</p>
 - If the ingredient is present in the product at less than 1% and is not a hazardous substance, carcinogen, or known to cause toxicological problems in and of itself, or during processing, but is still provided on the MSDS, then a functional description such as "additive" will be acceptable.
 - In addition, similar items may be grouped (e.g., "colorants"), even if their total is greater than 1% (0.1% for appropriate chemicals), provided that no one chemical is present in the product at > 1%.
- μ 3. List appropriate exposure guidelines or limits for all of the product's components identifying the source, e.g., OSHA PEL (Occupational Safety and Health Administration Permissible Exposure Limits), ACGIH TLV (American Conference of Governmental Industrial Hygienists Threshold Limit Values), NIOSH REL (National Institute of Occupational Safety and Health Recommended Exposure Limits), manufacturer standard, etc., and clearly indicating the units of measure for the given guidelines.
- 4. For any ingredient that is not identified by the CAS number, the following toxicological information requirements apply. If the component is greater than 10% of the chemical material, industrial hygiene sampling, monitoring and/or toxicological data must be provided on the component.

If the component is less than 10% of the chemical material, industrial hygiene sampling, monitoring and/or toxicological data may be required.

If industrial hygiene or toxicity information is not available, then a statement or words to that effect must appear on the MSDS or addendum.

See Sections 3, 8, 9, 10 and 11 for examples of industrial hygiene and toxicology information.

SECTION 3 - Hazards Identification

- Provide a clear, brief emergency overview describing the material's appearance and most significant immediate concerns for emergency response personnel. This section may contain adverse human health effects, environmental effects, physical or chemical hazards.
- μ 2. Indicate the primary routes of entry such as skin, eye, inhalation, and ingestion or any combination thereof. If no applicable information is available; then a statement or words to that effect must appear on the MSDS or addendum.
- Describe medical conditions (e.g., asthma) which are generally recognized as being aggravated by exposure to the product or its constituents. If no applicable information is available, then a statement or words to that effect must appear on the MSDS or addendum.

μ: Indicates an essential information standard that must be met for all products.

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SECTION 4 First Aid Measures

- μ 1. Provide emergency and first aid instructions to be followed in the event of overexposure to the product. If no applicable information is available, then a statement or words to that effect must appear on the MSDS or addendum.
 - Describe any procedures to be used by trained medical personnel above and beyond first- aid procedures in event of overexposure.
 - 3. List any known antidotes, if applicable.
 - 4. Include notes to physicians, if applicable.
 - 5. Provide advice for the protection of first-aiders, if appropriate.

SECTION 5 - Fire-Fighting Measures

- Indicate the flash point of the product and specify the method used. Use exact values whenever possible. For those instances where the flash point is difficult to determine (e.g., it boils out of the cup), or extremely dangerous to test, the following convention will be accepted: If the flash point is greater than 212°F (100°C), then >212°F (100°C) may be used if the actual value is unknown. If the flash point is less than 0°F (-17°C), then <0°F (-17°C) may be used. If no applicable information is available, then a statement or words to that effect must appear on the MSDS or addendum.</p>
- μ 2. LEL/UEL (Lower Explosive Limits/Upper Explosive Limits) must be provided for liquids and gases. If no applicable information is available, then a statement or words to that effect must appear on the MSDS or addendum.
 - 3. List autoignition temperature for the product, if applicable.
- μ 4. Specify the appropriate fire extinguishing media. If no applicable information is available, then a statement or words to that effect must appear on the MSDS or addendum.
- Indicate fire or explosion hazards. If no applicable information is available, then a statement or words to that effect must appear on the MSDS or addendum.
 - 6. Describe special fire fighting procedures, if applicable.
- μ 7. Give health, flammability and reactivity ratings for the product using NFPA criteria, if available.

SECTION 6 - Accidental Release Measures

- Indicate steps to be taken in case material is released or spilled including recovery, neutralization or disposal if they are different than section 13.
 - 2. Describe expected environmental impact resulting from the release of the product.
 - 3. Provide information on secondary hazards and their prevention (e.g., contaminated surfaces may be slippery, post appropriate warnings, etc.).

SECTION 7 - Handling and Storage

- Indicate storage precautions (e.g., incompatible products, conditions to avoid, temperature requirements, etc.,). If no applicable information is available, then a statement or words to that effect must appear on the MSDS or addendum.
 - Indicate handling precautions recommended for other activities associated with the product such as grinding, power sanding, welding, etc.

μ: Indicates an essential information standard that must be met for all products.

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SECTION 8 - Exposure Controls/Personal Protection

- If appropriate, indicate engineering measures or controls recommended to reduce exposure including ventilation type and rate.
- Provide any generally applicable personal protective equipment (PPE) recommendations in accordance with the intended use of the product including specific suitable materials (e.g., neoprene gloves not impervious gloves; safety glasses not eye protection; organic vapor respirator not respirator) for respiratory, hand, eye, skin and/or body protection. If temperature and/or pressure conditions that warrant special and/or additional PPE precautions. If no applicable information is available, then a statement or words to that effect must appear on the MSDS or addendum.
- μ 3. If appropriate, indicate any specific hygiene measures or practices that should be followed.

SECTION 9 - Physical and Chemical Properties

- µ 1. Identify the physical and chemical properties that characterize the product including information on physical state. Report data in appropriate units of measurement with pertinent reference conditions and/or test methods.
- μ 2. List the specific gravity or range for all liquid and semi solid materials (water = 1). If a range must be used, then it should be no greater than "0.05.
 - 3. Indicate the density of the product.
 - Provide the theoretical or analytical Volatile Organic Content (VOC) or Reportable VOC (RVOC) in lbs./gal, gms/liter, or percent by weight, or if a solid, in gms/gm or lbs/lb.
 - For <u>surface coatings</u> (such as paints, inks, and adhesives) and <u>solvent-based materials</u>, analytical VOC content is preferred for all products and is required for productive materials. The analytical method used must be specified (e.g., U.S. EPA Method 24 or 24a).
 - For non-surface coatings, any constituent with a vapor pressure >0.1 mm HG at 20°C or at intended use conditions (e.g., heated fluids) and/or containing < 12 carbon atoms is considered to be a Reportable VOC (RVOC). Additionally, light naphthenic and paraffinic distillates should also be considered to be RVOCs.
 - If the VOC is 0 lb/gal, then a statement such as 0, zero, none, no VOC/RVOC present, or words to that effect must appear
 on the MSDS or addendum.
 - If the product obviously has no VOC content because of its ingredients, physical state (e.g., wood, oxygen, welding rod, inorganic) or generally accepted processing practices, then the VOC/RVOC statement does not have to appear on the MSDS or addendum. If the product releases VOCs or RVOCs during processing (e.g., plastics, elevated temperatures), then a VOC/RVOC value as described above must be reported.
- Provide a pH value or description. Use exact values whenever possible. Terms such as acidic, neutral, caustic, or alkaline may be accepted in some situations but more specific information such as <4 or >10 are preferred when actual values are not available. In addition, specify if the reported pH represents the packaged material (e.g., concentrate) or the typical use dilution. When a dilution pH is given, list typical dilution percentage. If no applicable information is available, then a statement or words to that effect must appear on the MSDS or addendum.
 - 6. Indicate the specific temperature or temperature ranges at which changes in physical state occur (e.g., boiling point, freezing/melt point).

 μ : Indicates an essential information standard that must be met for all products.

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- 7. Indicate the vapor density and specify the temperature.
- Indicate the vapor pressure in mm Hg and specify the temperature. 8.
- 9. Indicate the percent solid by weight and for paints by volume.
- 10. Indicate the evaporation rate. Specify the reference solvent (e.g., n-butyl acetate or ether as equal to 1).
- Indicate the product's solubility in water. 11.
- 12. Indicate the molecular weight of products that are pure chemicals (e.g., gases).
- Indicate the viscosity of the product as supplied and specify the temperature. 13.
- 14. Include additional chemical and physical data as deemed necessary to promote safe use and handling of the product (e.g., μ color, odor, radioactivity, particle size, softening point, octanol/water partition coefficient).

SECTION 10 - Stability and Reactivity

μ

- 1. State if the material is stable or unstable under normal, anticipated storage and handling conditions of ambient temperature and pressure.
 - 2. Indicate any hazardous material releases that will or may occur including both potential and actual releases through normal processes such as baking, welding, spraying, etc., that are not specifically listed as ingredients in Section 2 or listed below as hazardous decomposition products.
 - 3. List any conditions such as heat, pressure, shock, or other physical stresses that might result in a hazardous situation.
 - Indicate incompatible materials that the product could react with to produce a hazardous situation. 4.
- 5. Indicate hazardous decomposition products produced by burning, oxidation, heating or chemical reaction (e.g., phenol, μ formaldehyde and isocyanates.)
 - 6. State if the material is subject to hazardous polymerization and specify the conditions that might induce polymerization.

SECTION 11 - Toxicological Information

- Summarize the information on the various possible health effects, which might arise if the user comes in contact with the product. If no data is available on the product, then information on the hazardous constituents may be used. Information may cover clinical test data on acute toxicity (e.g., LD50-oral/dermal [species specific], LC50-inhalation [species specific]), irritation scores, target organs, effect and no-effect levels, species differences, local effects, subchronic and/or long term toxicity, and sensitization. If applicable, list the information according to different exposure routes (e.g., inhalation, skin contact, eye contact and ingestion).
 - If applicable, list effects due to single exposure, repeated exposure and continuous exposure.
 - If applicable, list immediate and delayed effects.
 - If applicable, include specific results from studies or reports in areas such as teratogenicity, neurotoxicity, mutagenicity, reproductive effects and epidemiology.
- 2. State the carcinogenic status of any ingredient per NTP, IARC, OSHA, ACGIH and/or any other source appropriate to the μ country of origin and the country of destination.

U: Indicates an essential information standard that must be met for all products.

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SECTION 12 - Ecological Information

- 1. Summarize information on the possible environmental effects of the material including potential environmental impact, soil mobility, product persistence or degradability, bioaccumulation and ecotoxicology data. If no applicable information is available, then a statement or words to that effect should appear on the MSDS or addendum.
- 2. Provide a Material Environmental Data Sheet (MEDS), if available.

SECTION 13 - Disposal Considerations

Recommend methods for safe and environmentally preferred disposal of uncontaminated bulk product, residue, or emptied packaging.

SECTION 14 - Transport Information

- List appropriate national and international information on codes, classifications, hazardous material descriptions, proper shipping names and packing groups for regulatory purposes differentiated by mode of transport.
 - US Suppliers: indicate Department of Transportation (DOT) hazardous materials description/proper shipping name, hazard class, UN (United Nations)/NA (North American) identification numbers and packing group according to 49 CFR 172.101 and other international restrictions as applicable. Include classification changes based on quantity, packaging or shipment. If the material is not regulated by DOT, include a statement to that effect.
 - Canadian Suppliers: indicate Transportation of Dangerous Goods (TDG) classification and/or other international restrictions as applicable.
 - 2. Indicate additional transportation restrictions.
 - 3. Specify any precautionary transport measures and/or conditions.

SECTION 15 - Regulatory Information

- μ 1. Indicate information on regulations specifically applicable to the chemical product and/or its constituents and include appropriate international and national requirements.
 - US:
 - List the chemical identity of any EPCRA (SARA Title III) 302 Extremely Hazardous Substance. Provide its threshold planning quantity (TPQ) and its reportable quantity (RQ).
 - ð Indicate the appropriate categories for the product under EPCRA (SARA Title III) 311 and 312 (i.e., immediate health hazard, delayed health hazard, fire hazard, sudden pressure release hazard, and reactivity hazard).
 - Specify product components subject to EPCRA (SARA Title III) 313 reporting. (See Section 2 for chemical name, CAS number and percentage requirements).
 - Modicate whether the product or its constituents are listed in the EPA Toxic Substance Control Act (TSCA) inventory. Where appropriate include information on other elements of TSCA such as Significant New Use Rule (SNUR), Final Consent Orders, Research and Development Limitations, Export Notification Requirements, and Exemptions from TSCA (e.g., pesticides, foods, and drugs).
 - **ŏ** List the RCRA hazardous waste codes that apply to the product as packaged.

μ: Indicates an essential information standard that must be met for all products.

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- **ŏ** List the CERCLA Reportable Quantity (RQ) for the product and its constituents.
- Canada:
- ð Workplace Hazardous Materials Information System (WHMIS) Hazardous Product Act Part II, Controlled Products Regulations; Hazardous Materials Information Review Act and Regulations;
- **ð** National Pollutant Release Inventory (NPRI)
- 4 2. In the United States and/or Canada, list any state or province health & safety and environmental regulations for ingredients contained in the product for the states or provinces where the material is manufactured or marketed. Include state right-to-know listed substances or specialized data requirements.

SECTION 16 - Other Information

- 1. Use this section for information that does not fit into a previous category. Examples of data to include here are: label text, hazard ratings, revision indicators, key/legend, references, recommended use, special training needs and possible restrictions.
- 2. Indicate the sections that have been revised or changed since the previous issue of the MSDS.

 μ : Indicates an essential information standard that must be met for all products.

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SECTION B

ADDITIONAL TERMS AND CONDITIONS APPLICABLE TO CONTRACTS ISSUED UNDER A GOVERNMENT CONTRACT

When the work and materials covered by this order are for use under a **Government** contract an acceptance of this order constitutes an acceptance of the following terms and conditions:

1. Notice Of Government Contract

Seller acknowledges that it has been notified that the work and materials covered by this order are for use under a Government contract, hereinafter called the "Government Contract".

2. Access to Seller's Facilities

Access to all reasonable facilities of the Seller will be granted for representatives of Buyer, and/or Government representatives visiting in an official capacity upon pre-arranged notice.

3. Inspection

Seller agrees to provide and maintain a quality system, which satisfies the requirements specified in this order. Seller's quality system and manufacturing processes shall be subject to review, verification and analysis by Buyer, the Government and the Government's representatives. All work and materials covered by this order shall be subject to inspection and test by the Buyer and/or the Government at all times and places and, when practicable, during manufacture. Both the Government and Buyer shall have the right to reject any work and materials found to be defective or not in accordance with the drawings or specifications, and shall have the right to require its replacement or correction.

If an inspection is made by Buyer or the Government on the premises of Seller or its subcontractors, Seller shall provide all reasonable facilities and assistance for the safety and convenience of the Buyer's or Government's representatives in the performance of their duties and shall provide test pieces and samples which may reasonably be required by such representatives. All inspection and evaluation shall be performed in such a manner as will not unduly delay the work.

Seller shall keep proper and adequate inspection records which shall at all times be open to examination by the Buyer's and/or Government, who may make copies there from.

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4. Interchangeability of Components

If an end item or any component part thereof, which Buyer does not possess design control:

- a) The Seller shall maintain a change control system to ensure configuration control for the thirty (30) year period following contract award. The Seller shall not make any changes to the product without prior written approval from the Buyer where design changes affect "form, fit and function".
- b) All changes must be reflected in appropriate documentation, manuals, spares, and repair parts. The Buyer reserves the right to request a physical configuration audit (PCA) at the Seller's manufacturing facility during the contract period. The Seller shall be responsible for both conducting the "PCA" under Buyer supervision and incorporating any disclosed discrepancies into the Seller's configuration identification.
- c) The Buyer encourages any design change suggestions with respect to safety, reliability, quality, manufacturing cost performance, or any other aspect of product improvement.

5. Continuing support

Seller acknowledges that the Buyer is obligated to provide the material and work covered by this order to its products for the expected life of those products. Seller agrees that in the event this order is cancelled pursuant to the provisions of the Terms and Conditions of this Purchase Order or in the event that Seller fails or is unable to provide the above support, Seller shall immediately provide Buyer with all drawings, data and technical information necessary for the manufacture of the material and work covered by this order and Buyer shall have the right to manufacture or have manufactured for it the material and work covered by this order.

6. Technical Information

Seller agrees to treat as confidential, agrees not to disclose to third parties, agrees to use only for the fulfillment of this order, and agrees that Buyer has proprietary rights to any and all technical information which Buyer shall have disclosed or may hereafter disclose to Seller in connection with the goods or services covered by this order and to technical information related to the goods, or the part thereof, created or developed specifically for Buyer hereunder.

7. Subject To All Laws

Seller agrees to comply with all applicable Federal, State, Provincial or local laws or ordinances. Without limitation, Seller shall comply with all labour conditions, and with all health conditions and requirements, from time to time applicable.

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8. New Material

Seller represents that the material, including any former Government property provided under this order are new (not used or reconditioned, and not of such age or so deteriorated as to impair their usefulness or safety).

10. Pertains To Purchase Orders Placed By GDLS-A To AustralianSuppliers Only - Special Term (Australia)

Goods and Services Tax

Seller shall amend the price for goods (other than goods supplied by an overseas Seller) and/or services supplied under this contract to reflect the amount of any goods and services taxes imposed by Australian law on the supply of such goods and/or services, provided that the Seller shall:

- a) notify Buyer of amounts of such taxes
- b) provide the Buyer with a tax invoice, as that term is defined in the relevant goods and services tax legislation, on the day following the date the goods are dispatched or the services are provided to the Buyer; and
- c) do all things necessary (including, without limitation, registering with any required government authority) to enable Buyer to claim any credits or other benefits available for such taxes, or to otherwise comply with its obligations under the relevant goods and services legislation.

Buyer reserves the right to review this Paragraph after the introduction of any new legislation imposing any taxes contemplated by this Paragraph.

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SECTION B - Annex B7

ADDITIONAL TERMS AND CONDITIONS APPLICABLE TO CONTRACTS ISSUED UNDER CANADIAN LAV-UP CONTRACT

When the work and materials covered by this contract are for use under **Government of Canada LAV-UP** contract, this contract shall be a defence contract within the meaning of The Defence Production Act of Canada and shall be read accordingly. Acceptance of this contract constitutes an acceptance of the following terms and conditions:

1. Subcontracting

Except as otherwise provided in this Article, Seller shall not subcontract nor sublet any work nor make any purchases without prior approval pursuant to Subarticle 1.2 and any such Subcontracts, sublets or purchases made without such approval shall not bind nor obligate Buyer in any manner.

- 1.1. Seller shall submit any request to subcontract, sublet or make any purchase to Buyer by written notice for prior approval. The Notice shall include the part number, model number, or description of service that will be listed with the Subcontractor and/or supplier. Buyer may, upon receipt of a Notice, approve the request. If Buyer does not notify Seller of its refusal to approve the request within thirty (30) days, Seller may assume that such approval has been granted.
- 1.2. Without the prior written approval of Buyer, Seller may:
 - 1.2.1. subcontract or sublet work to any one Subcontractor to a value not exceeding \$500,000 in the aggregate.
 - 1.2.2. make off the shelf purchases and purchases of such standard articles and materials as are ordinarily manufactured or produced by mills and manufacturers in the normal course of business; and
 - 1.2.3. authorize its first and subsequent tier Subcontractors to subcontract, sublet or make purchases as permitted in Section 1.2.1 or 1.2.2 above.
- 1.3. Except as otherwise provided in this article, Seller shall follow Seller's competitive process for the subcontract or the sublet of any work of any kind or to make any purchase in connection with this contract.
- 1.4. Buyer or Canadian Government reserves the right to audit both Seller's procedures and the application of said procedures at any time to ensure that Seller maintains the fairness and integrity of its selection process. Seller shall, upon request, provide Buyer or Canadian Government with access to all relevant documentation to allow for reasonable assessment of the selection procedures used in the procurement relative to this contract within twenty (20) days of such request.

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- 1.5. Seller recognizes that Buyer or Canadian Government Representatives, from time to time, may wish to meet with Subcontractors or suppliers. Any meetings between Buyer or Canadian Government Representatives or its authorized representatives and the Seller or the Seller's suppliers shall be arranged through the Seller. Buyer may however, arrange such a meeting should the Seller refuse or neglect to arrange any such meeting following notice from Buyer or Canadian Government representatives.
- 1.6. Seller shall bind its suppliers to all those relevant terms of the Contract in order that they shall always be able to satisfactorily perform their obligations in such subcontracts, sublets or purchases in a manner fully consistent with the due fulfillment of the terms of this contract by Seller. Deviations from the terms of this contract, including any termination rights in this contract, shall be at Seller's entire risk.
- 1.7. Notwithstanding any other terms of this contract, Seller shall always be fully responsible and liable for any matters or things done or provided by any Subcontractor or supplier pursuant to this contract.
- 1.8. No act nor omission of Seller, whether occurring before or after the Effective Date of this contract, shall have the effect of rendering any monies payable by Buyer under this contract to any person, firm or corporation, other than the Seller, unless Buyer consents thereto in writing.
- 1.9. Subcontracts which contain security requirements or requiring access to SENSITIVE (Designated/Classified) information or assets shall not be awarded without the prior written consent of the Industrial Security Division of "PWGSC".

2. Examination of Records By Canadian Government

When the work and materials covered by this contract are for use under a Canadian Government contract Seller shall keep proper accounts and records of the cost to Seller of the work and materials covered by this contract and of all expenditures or commitment made by Seller in connection therewith and the invoices, receipts and vouchers relating thereto. Such accounts, records, invoices, receipts and vouchers shall at all times be open to audit and inspection by the Government or its duly authorized representatives (who may make copies thereof and take extracts therefrom) at any time until the expiration of six (6) years from the end of the calendar year in which this contract is terminated or completed. Seller shall provide all facilities for such audits and inspections and shall furnish the Government and its authorized representatives with all such information as it or they may from time to time require with reference to such accounts, records, invoices, receipts and vouchers. Seller shall not, without the consent of the Government, dispose of any such accounts, records, invoices, receipts and vouchers, but shall preserve and keep the same available for audit and inspection at any time during such retention period.

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3. Not Used.

4. Not Used.

5. Translation Rights

Buyer or Government of Canada shall have the right to translate technical information and any other materials developed, conceived or provided by Seller as part of the work under this contract and in which copyright exists, in the official languages of Canada. All restrictions on the use and disclosure of such technical information set out in Section A, clauses17 and 18 shall apply to the translated versions. Buyer/Government shall reproduce Seller's copyright notice, if any, on all translations. Copyright in any translation made shall vest in Buyer/Government but this copyright shall be subservient to Seller's copyright, if any, in the original technical information provided.

6. Controlled/Hazardous Products

"Controlled Products" are products, substances, materials, or wastes that are banned, being phased out, regulated or restricted under any applicable law. The use of any new Controlled Products as part of this contract shall be submitted to Buyer for review and approval prior to use. A review in consultation with Buyer shall be conducted to determine whether replacement by other less hazardous Controlled Products that meet performance requirements can be utilized.

As part of any design change requirements or efforts related to this contract, Seller shall provide a list of all Controlled Products to be incorporated into the design and justification for its use for review and approval by Buyer. Where possible, Seller shall use the least hazardous Controlled Products while maintaining operational effectiveness.

7. Security and Protection of the Work

When the contract, the work, or any data/documentation is identified as SECRET, CONFIDENTIAL, or PROTECTED, Seller shall at all times take all measures reasonably necessary for the safeguarding of the material so identified in accordance with the Industrial Security Manual (June 1992). Buyer or Government shall be entitled to inspect Seller's premises and the premises of a Subcontractor at any tier for security purposes at any time during the term of the contract, and Seller shall comply with all written instructions issued by Buyer / Government. In the event a subcontract is awarded to a foreign supplier, the foreign supplier shall be security cleared by their responsible National Security Authority (NSA) and shall adhere to all instructions issued by their NSA. All designated/classified data given to Seller, or reports produced by Seller as a result of this undertaking, must be returned on the completion of the contract, or when requested by Buyer / Government.

8. Royalties

8.1. The term "Royalties" includes any costs or charges, including any claims for damages based upon the use or infringement in any country, in the nature of royalties, license fees, patent or licence amortizations costs and the like, and all other payments analogous to such for the use of, or rights in copyrights, registered industrial designs, trademarks, trade secrets, patents and patent applications or other intellectual property right, and any similar costs or expenses incurred as a result of the exercise by any person of moral rights as defined in the Copyright Act, R.S.C. 1985, c. C42;

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8.2. Seller shall:

- (i) report in writing to Buyer prior to commencement of this contract and during the performance of this contract the amount of Royalties which Seller will pay, may be obligated to pay, or proposes to pay in respect of performing this contract, the basis of the Royalties, and the parties to whom the same are payable;
- (ii) promptly advise the Buyer of any and all claims which would or might result in further or different payments by way of Royalties being made by Seller or any of Seller's subcontractors, and
- 8.3. If and to the extent directed by Buyer upon instructions from the Government of Canada, Seller shall not pay and shall direct Seller's subcontractors not to pay any royalties in respect of performing this contract. In the event of such direction by Buyer, and subject to the compliance by Seller with the foregoing provisions, Buyer shall indemnify the Seller and its subcontractors from and against all claims, actions, suits or proceedings for payment of such royalties as are covered by the direction. Seller shall not be entitled to any payment in respect to any Royalties included in the contract price to which the indemnity provided applies.

9. Not Used.

10. Section A, Clause 18 shall be deleted and replaced as follows: Intellectual Property and Copyright:

10.1.Definitions:

- i "Firmware" means computer program stored in integrated circuits, read- only memory or other similar devices;
- ii "Invention" means any new and useful art, process, methodology,technique, machine, manufacture or composition of matter, whether or not patentable, first conceived, developed or reduced to practice as part of the Work under the Contract;
- iii "Software" means computer programs whether in source or object code (including Firmware), computer program documentation recorded in any form or medium, and includes modifications to any of the foregoing; and
- "Technical Information" means all information of a scientific or technical nature relating to the Work, recorded in any form or medium and whether or not copyrightable, and specified to be delivered to Buyer as part of the Work under the Contract, including, but not limited to, any Inventions, designs, methods, processes, techniques, know-how, schematics, experimental or test data, reports, drawings, plans, specifications, collections of information, manuals, publications and any other documents, Software and Firmware; and
- v "Intellectual Property Right" means any intellectual property rightrecognized by law, including any intellectual property right protected by legislation such as patents, copyright, industrial design, integrated circuitopography, and plant breeders' rights, or subject to protection under the law as trade secrets and confidential information.

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- 10.2. The Seller must promptly report and fully disclose to the Buyer all Inventions, and must deliver to the Buyer all Technical Information not later than the time of completion of the Work or at such earlier time as this Contract may specify.
 - i The Seller shall, in each disclosure under this Sub-article, indicate the names of all Subcontractors, if any, in which Intellectual Property Rights to any Inventions have vested or will vest.
 - ii The Buyer and the Government of Canada have the right, at reasonable times and at their cost and expense, to examine all records and supporting data of the Seller that the Buyer or the Government of Canada reasonably deems pertinent to the identification of Inventions. This provision does not affect the Seller's obligation to retain accounts and records as required by the Defence Production Act nor the Government of Canada's rights thereunder.
- 10.3.Without divesting Buyer or any third party of Intellectual Property Rights thathave come into being prior to the Contract or that relate to GFI supplied by Buyer during the Contract, copyright, patent and all other Intellectual Property Rights to all Technical Information shall, immediately upon their conception, development, reduction to practice or production, vest in and remain the exclusive property of the Seller and/or its Subcontractors.
- 10.4. The Seller hereby grants to Buyer and the Government of Canada a non-exclusive, irrevocable, worldwide, fully paid and royalty-free license to use any Invention or Technical Information solely for the following purposes:
 - i Use, operation, maintenance, repair or overhaul of the Goods by Buyer, but not for manufacturing purposes;
 - ii Manufacturing of spare parts for the use, maintenance, repair or overhaul of any part of the Goods by Buyer in an emergency situation if those parts are not reasonably available from the Seller to enable timely use, maintenance, repair or overhaul; or
 - iii Further development, alteration, integration or enhancement of any part of the Goods by Buyer.
- 10.5.Buyer's license with respect to any Technical Information that is Software excludes the right to further develop, alter, enhance or otherwise modify that Software unless the owner of the Software, which may be the Seller or a Subcontractor otherwise, agrees.
- 10.6.In any disclosure, sublicense, or authorization to use, made or given by Buyer to a contractor engaged by Buyer solely for any of the purposes contemplated in Para 10.4, Buyer must require that contractor to agree to maintain the confidentiality of the Technical Information and not to use any Technical Information except as may be necessary to carry out that work for Buyer, and must require the Seller to return the Technical Information to Buyer upon completion of the work.
- 10.7. The Seller may refuse to grant any such right to disclose, sublicense or otherwise authorize the use of any Technical Information related to the Goods for the purposes contemplated in Para 10.4 (i) where the Seller is willing to perform the maintenance, repair or overhaul work for Buyer on reasonable commercial terms. The Seller must promptly notify Buyer whether consent will be granted by the Seller and if not, the reasons why.

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- 10.8. Although Buyer has no right to disclose, sublicense, or otherwise authorize the use of any Technical Information by any third parties whatsoever for any purposes contemplated in Para 10.4 the Seller and Buyer agree that during the lifetime of the Goods, Buyer may require the further development, alteration, integration or enhancement of any part of them. Therefore, during such period, the Seller agrees to either perform itself or to subcontract the performance of such work under terms and conditions agreeable to the Seller and Buyer that will provide Buyer with the optimum accomplishment of Buyer's requirement for timely performance, high quality and low price.
- 10.9. Buyer must provide the following information to the Seller concurrent with providing any Technical Information to third parties and/or Sellers in accordance with Para 10.6:
 - i A list of all third parties and Sellers that have received TechnicalInformation;
 - ii The intended or actual use of the Technical Information; and
 - iii The expected completion date of the work for which the TechnicalInformation has been supplied.
- 10.10. Buyer's license under Para 10.4 shall not be affected by any transfer of title to, or assignment or license of, any Invention or Technical Information by the Seller to any third party.
- 10.11. The Seller must not, without the written permission of the Buyer, deliver any Technical Information hereunder unless the Seller owns or has procured the rights necessary to provide the license to Buyer set out in Para 10.4
- 10.12. Wherever practical, the Seller must mark or identify any Technical Information delivered to Buyer under this Article as "Property of (Seller or Subcontractor, as appropriate). Buyer must not be liable for any unauthorized use or disclosure of Technical Information that could have been so marked or identified and was not.
- 10.13. Technical Information may contain information and data which is or becomes either publicly available without breach of Buyer's obligations hereunder, or is available from a source, other than the Seller, except any source that is under an obligation not to disclose such information or data. Such information or data is hereinafter referred to as the "Publicly Available Technical Information". The restrictions on use and disclosure of Technical Information contained in this Article do not apply to Publicly Available Technical Information. However, the remainder of the Technical Information which includes such Publicly Available Technical Information shall be subject to the restrictions on use and disclosure contained in this Article.
- 10.14. Notwithstanding the foregoing provisions of this Article, modifications made by the Seller to Document Type Definition's (DTD) and Format Output Specification Instance's (FOSI) must be furnished to Buyer without any restrictions on use or disclosure.

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- 11. Section A, Clause 19 shall be deleted and replaced as follows: Indemnification: Seller shall indemnify and hold Buyer harmless from and against any liability, claims, demands or expenses (including attorney's and other professional fees) for: (a) damages to the property of or injuries (including death) to Buyer, its employees or any other person arising from or in connection with Seller (including its agents, employees and subcontractors) performing this contract; (b) any liens, attachments, charges or other encumbrances; or (c) claims upon or in respect of any materials, parts, work in process or finished work furnished to, or in respect of which payment has been made by Buyer.
- 12. Not Used
- 13. Not Used.
- 14. Not Used.
- 15. Agreement

Buyer shall not in any way be bound nor obligated to enter into any other agreements with Seller.

16 Survival

In the event of contract completion, termination, or expiration, all of the Parties obligations under the warranty, intellectual property, confidentiality and any other provisions of this contract which, by the nature of the rights or obligations set out therein, may be reasonably expected to, shall survive.

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QUALITY CLAUSES

Material Supplied To Purchase Orders Must Be In Accordance With The Quality Clause Requirements Outlined on the Purchase order as follows:

EQD2A.0 (01/01/99) GD Source Inspection

General Dynamics Land Systems source inspection/acceptance is required on this order. Supplier shall notify the buyer five (5) working days prior to start of acceptance test or inspection to allow for scheduling of a GDLS quality representative to be in attendance. The supplier shall have technical data (e.g. drawing, QAR, specification, certification, etc.) available for use in support of source inspection.

QG3.3 (07/20/09) GDLS Minimum System Requirements

Supplier must provide and maintain a Quality System that is acceptable to General Dynamics Land Systems and government. In addition, all measuring and test equipment used to inspect the items delivered against this contract shall be calibrated by the supplier utilizing standards whose calibration is certified as being traceable to the National Institute of Standards and Technology. These systems are subject to approval and periodic reviews by GDLS to determine acceptability. GDLS contracted suppliers are responsible to document and control any portion of this contract that is performed by either the contracted supplier or any tertiary supplier. In view of the above contracted suppliers are responsible for extending GDLS contract requirements to any tertiary supplier.

QG4.3 (12/21/98) Commercial Requirements

The products provided shall meet the characteristics of this commercial catalog item, conform to the producer's own drawings, specifications, standards and quality assurance practices and be the same as offered for sale in the commercial market. General Dynamics Land Systems reserves the right to require proof of such conformance.

QG5.2 (04/18/00) C = O Sampling Plan

Product inspected by a sampling plan for delivery on this purchase order must use an acceptance number zero; i.e. accept on zero defects and reject the lot on one or more defects. AQLs may be used to establish the proper sample size however the acceptance number is zero.

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QUALITY CLAUSES

QG6.0 (12/21/98) Material Review Board

Limited material review board (MRB) approval is granted on this purchase order. This authority is limited to minor non-conformances that only impact internal supplier drawings. MRB is not allowed for any characteristic or performance requirement which impacts/violates the GDLS drawing package. A quarterly report will be provided to GDLS-SQA summarizing MRB activities and the associated corrective action. Government participation is not required for MRB.

QG7.0 (9/26/01) ISO 9000 System Requirement

The supplier must maintain a quality management system that is registered to ISO 9000. The system is subject to approval and/or periodic review by GDLS/Government. GDLS contracted suppliers are responsible to document and control any portion of this contract that is to be performed by them and extend applicable portions of this contract to any tertiary suppliers.

QJ21.1 (12/8/97) Inspection Delegation

The supplier shall conduct all required inspections as agreed upon in accordance with supplier instruction contained in PQA 3000. The above shall be accomplished through the use of the GDLS approved delegate only who is responsible for the adequacy and accuracy of said inspection. Failure of GDLS to inspect the goods shall not limit any of GDLS's rights as included under the terms and conditions of this contract to recover damages from seller for supply of defective goods. This program is subject to termination with minimum notice for reasons defined in PQA 3000. All specified documents referenced in the purchase order (i.e. certifications, test reports, etc.) are not to be shipped with the product. These records are to be maintained at the supplier's facility, under delegate control, and are subject to GDLS verification upon request. The records must be retained for five (5) years after completion of deliveries and payment thereof under this purchase order. This paragraph takes precedence over remaining quality requirement clauses for data submittals.

QJ7H.0 (10/5/98) Government GSI

Government inspection is required prior to shipment from your plant. Upon receipt of this order, promptly notify the government representative who normally services your plant so that appropriate planning for government inspection can be accomplished. In the event the representative or office cannot be located, our purchasing agent should be notified immediately

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QJ8.1 (1/18/88) Government Selective Evaluation

During performance on this order, your quality control or inspection system and manufacturing processes may be subject to review, verification and analysis by authorized government representatives. Government release of product prior to shipment is not required unless you are otherwise notified by General Dynamics Land Systems purchase order supplement.

QK9.1 (1/19/99) QAP-Cert (Fill In)

Special quality assurance requirements (QAR, QAP, SQAP, SPEC, etc) apply to the item(s) being procured under this contract. The supplier shall have documented objective evidence on file verifying conformance to specific characteristics referenced in the requirement. The objective evidence shall be made available to GDLS on request within a reasonable amount of time.

QK10.1 (5/31/10) Ballistic Steel Traceability

Items under this purchase order require steel traceability back to the mill material certifications. All parts must be uniquely identified via a traceability scheme

which relates the subject part back to the source material certifications, as retained by the supplier. Parts produced from a specific plate shall be marked with that plate's unique Plate Tracking Number used to reference back to the material certifications. The supplier shall maintain a documented record of the Plate Tracking Number by part number for each assembly.

Ballistic steel furnished by GDLS will normally include the Plate Tracking Number, generated and applied by GDLS prior to steel delivery. The supplier shall ensure the Plate Tracking Number is present and accompanied by the required material certifications prior to further processing.

For supplier procured steel or steel plate furnished by GDLS without a Plate Tracking Number, the Plate Tracking Number sequence shall be developed by the supplier and submitted to the GDLS buyer for approval prior to implementation. Mill certifications shall be electronically submitted by the supplier to bsteelcerts@gdls.com

The Plate Tracking Number shall be marked on the piece parts with white oil- based paint markers away from the areas to be welded. Any inspection imposed on the item, shall verify the traceability data record. Records shall be retained at the supplier, subject to periodic audit.

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QUALITY CLAUSES

QK11.2 (7/20/09) Test Data

Test Data Submittal Requirement

Supplier shall have on file for each shipment a copy of the actual chemical test results, physical test results and/or test data as required. These results shall be made available to GDLS on request within a reasonable amount of time.

QK12.0 (7/10/09) Engineering Prototype Sample Approval

Supplier shall confirm TDP compliance according to item specific PS-FRM-3.2.55 form provided by buyer. Supporting compliance data shall be submitted prior to material shipment, to the GDLS-C ED&D PA contact identified on the form. Any deviations to the TDP require ED&D PA approval prior to shipment.

QK14.0 (6/30/10) Engineering Prototype Commercial

Items under this Purchase Order do not require GDLS specified quality inspections or documentation submittal. Product shall meet the Technical Data Package (TDP) requirements, and shall be verified according to the supplier's standard quality system requirements. GDLS reserves the right to require proof of such conformance. Any deviations to the TDP require ED&D PA approval prior to shipment.

QK16.0 (11/17/04) Key Characteristics

Attributes identified as Key Characteristics shall demonstrate a process capability of 1.33 Cpk or be inspected 100%. The supplier shall have documented objective evidence on file which supports the process capability of 1.33 or greater, or the actual inspection and/or test data as verification of conformance to the drawing key characteristics. The objective evidence shall be made available to GDLS on request within a reasonable amount of time.

QL22.5 (05/09/07) Screws / Fasteners

Use of grade 5 or 8 fasteners/hardware, within products supplied to General Dynamics, must be from a manufacturer approved by GDLS.

Socket and hex head fasteners will be plated as specified. Results of required tests shall be maintained on file and available.

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QUALITY CLAUSES

Additionally, your receiving inspection criteria, on above stated list, shall include a verification of approved logo head markings to a 0.04% AQL sample as outlined in Mil-Std-105, however, acceptance is C=0. Each identifiable lot will then be subjected to laboratory testing as specified in two (2) succeeding paragraphs. Documented evidence shall be made available upon request.

Supplier shall furnish a certification with each shipment that indicates the grade

5, grade 8 hex and socket head fasteners with equivalent grade 5 and grade 8 material chemistry used in assembly(s) specified on this purchase order, meet applicable military standard requirements. This certification document must include actual material chemistry elements, core hardness (per table I of SAE J-

429) and plating requirement as specified in purchase order. The laboratory test sampling size shall be performed in accordance with section 7.3 of SAE J-429. When multiple usage of fastener dash numbers and/or manufacturer's head logo markings are utilized, the certification shall reference each type.

Laboratory sample testing may be waived (with GDLS prior approval) on assemblies specified on this purchase order if the fasteners used originate from an approved GDLS supplier.

Cap fastener must be identified with proper grade symbol markings and shall be marked with the manufacturer's identification head logo.

Subsequent lot shipments covered under this purchase order will be accepted with a copy of the original laboratory test sampling date, providing the fastener manufacturer's logo markings are traceable to the initial certification.

QL31.1 (7/20/09) Functional Test

Supplier shall furnish a certification with each shipment to indicate that the test requirements have been complied with and actual tests results are on file and available upon request. Certification must include signature, date and title of responsible supplier representative and specifically identify the shipment it relates to including serial number if applicable, for instance, by reference to the shipper number.

QL46.0 (7/10/09) CARC Paint Process Certification

The CARC process applied to this item requires certification to demonstrate compliance to the TDP requirements. Paint certification requirements as outlined in GDLS-C Form 4707, shall be submitted with FPI/PPAP for GDLS approval.

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QL86.0 (5/13/10) Non Destructive Testing (NDT) of formed radii

Supplier shall conduct either dye penetrant inspection (per ASTM E165), or magnetic particle inspection (per ASTM E1444) on the tension side of all formed radii for each item produced. Any indication of a crack shall be cause for rejection. The GDLS buyer shall be notified immediately.

Supplier shall control NDT operations including certification and qualification, as required, to ASTM E165 and/or ASTM E1444. Records shall be maintained for all personnel certified, indicating the date of certification and objective evidence of examination. Records shall be made available upon request.

QP2.2 (1/29/02) Shelf Life Requirement

The seller shall identify those items and/or assemblies which have a specific shelf life requirement. At a minimal the GDLS part number, date manufactured, shelf life, and HSDS/MSDS as applicable will be marked on each individual container. Seventy-five percent of the Product(s) shelf life is required upon receipt at GDLS

QP5.1 (12/7/06) Serialization Requirements

Each unit supplied on this purchase order must be permanently marked with a unique serial number which consists of any combination of numbers and letters. Alpha and numeric letters must be clearly distinguishable (ex. 2 and Z, 1 and I, 0 and O, etc.) The supplier must ensure that serial numbers are not duplicated for previous or future shipments of the same part number. The supplier must submit their planned serial numbering sequence to the buyer for approval prior to serial numbers being applied. The numbering sequence must be approved by the buyer on the initial purchase order and for any subsequent purchase order where the supplier intends to change the sequence of serial numbers.

QP8.0 (7/10/09) Sub-contract Requirements

All Quality Requirements of the Statement of Work (SOW) apply to this purchase order.

QP9.0 (7/10/09) Re-work Requirements

Rework product to new condition and upgrade to the specified revision. Any deviations from the specified design configuration will require prior authorization.

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QP43.1 (05/09/07) Traceability - MS Fasteners (Zinc)

Grade 5/Grade 8 hex head and socket head fasteners with equivalent Grade 5 and Grade 8 chemistry shall be purchased directly from manufacturers approved by GDLS. Approved manufacturers must supply fasteners of their own manufacture and are not allowed to procure or supply fasteners from any other approved North American manufacturer for subsequent sale to General Dynamics.

Fastener supplier shall furnish a certification with each shipment that documents the actual material chemistry, core hardness, or tensile strength (per table I or SAE J-429 for hex head or section e of FF-S-86E for socket head fasteners) and plating requirements outlined in specified in the Purchase Order. The laboratory test sampling size shall be performed in accordance with section 7.3 of SAE J-429.

Subsequent lot shipments covered under this purchase order will be accepted with a copy of the original laboratory results provided the fasteners originated from the initial raw material production run.

QP44.0 (7/10/09) North American High Strength Fasteners

All high strength fasteners offered for sale to GDLS-C shall conform to the requirements of Form 4496. Bulk fasteners shall include the Declaration (Form

4496, Appendix A) or Certification (Form 4496, Appendix B) in the FPI/PPAP submission.

Fasteners offered for sale to GDLS-C within assemblies shall conform to the following sections of Form 4496:

- A) No high strength fasteners are contained within the assembly. The FPI/PPAP submission shall include a declaration (Form 4496, Appendix A), or
- B) High strength fasteners are contained within the commercial item assembly. The FPI/PPAP submission shall include a certification (Form 4496, Appendix C) stating that the supplier's quality control system for fasteners meets the intent of Form 4496, section 2.0, or
- C) High strength fasteners are contained within the non-commercial item assembly. The FPI/PPAP submission shall include a certification (Form 4496, Appendix D) stating that the supplier's quality control system for fasteners meets all the requirements of Form 4496, section 2.0.

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QP95.0 (3/3/09) Item Unique Identification (IUID) per MIL-STD-130

The supplier shall apply Machine Readable Information (MRI) marking per MIL- STD-130, Unique Item Identifier (UII) Construct No. 2, to each item produced. Marking shall include, but not be limited to, manufacturer CAGE code, original part number and serial number (if serialization is required by drawing or specification). The supplier shall demonstrate 2D Data Matrix Symbol readability via a verifiable automatic identification device.

QP96.0 (9/27/10) Intra-company Sourcing

This is a GDLS intra-company purchase order. GDLS manufacturing plant Quality System Requirements apply to the material sourced under this purchase order.

QP97.0 (9/27/10) Incomplete Technical Data – long lead sourcing

Material cannot be delivered under this purchase order. The technical data package is incomplete. Quality Clause requirements will not be assigned until the technical requirements are fully defined, after which the purchase order will be revised.

QX22.0 (7/10/09) Weldable Appurtenances

Item shall be free of mill scale, rust and oil free. The supplier shall ensure that magnetic lifting devices are not used when handling steel.

Only water-soluble coolants, tapping fluids, etc. should be used during processing. It is required that these process fluids leave a rust-inhibiting residue when the fluid dries. If hydrocarbon coolants, tapping fluids, etc. are used, they must be followed by a post-cleaning step. The post cleaning step must consist of a hot alkaline cleaner that is based on fatty acids or amines.

Packaging must be accomplished in such a way that rusting will be minimized. Examples are sealed plastic bags in boxes, or wax-lined boxes.

QX23.2 (7/1/10) Ballistic Steel Welding - GDLS-C Weld Standard

Processes related to Welding of ballistic steel components shall be validated by GDLS prior to welding production parts. Welders must have current certification records on file at GDLS and must re-qualify periodically. Welded assemblies shall be verified compliant to D-20 "Acceptance Criteria for Weld Discontinuities", as supplied by the GDLS buyer.

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Heat Affected Zone Criteria (HAZ): The rework or addition of any ballistic weld joint outside of the print specified location is not permitted; the supplier shall consult GDLS for MRB approval prior to any such rework. Rework examples include but are not limited to: mislocated / translated appurtenances or welds, stray welds, arc strikes, and additional welds not mandated by the TDP.

TACOM 12479550 "Ground Combat Vehicle Welding Code – Steel" shall be referenced in conjunction with MIL-HDBK-1941 "Metal-Arc Welding of Homogeneous Armor", where MIL-HDBK-1941 is specified in the TDP.

Welding Procedure Specifications & Procedure Qualification Records, welder qualification records, and if requested, first off weld specimens representative of production welding, shall be submitted to:

GDLS-C Originating Contracts

General Dynamics Land Systems - Canada

1991 Oxford Street East London, Ontario, Canada

N5V 2Z7

Attn: Quality Engineering ppap.fpi@gdls.com

QX26.0 (7/1/10) Ballistic Steel Welding - TACOM 12479550

Weld joints within this assembly are to be qualified, implemented, and inspected in accordance with TACOM 12479550 "Ground Combat Vehicle Welding Code – Steel", in conjunction with MIL-HDBK-1941 "Metal-Arc Welding of Homogeneous Armor". A weld qualification data package consisting of the following elements shall be maintained by the supplier. Minimum data package requirements shall be furnished to the appropriate client address listed below, at least two (2) weeks in advance of production welding.

The weld qualification data package shall contain at a minimum:

- 1. Weld Procedure Specification (WPS).
- 2. Procedure Qualification Record (PQR) with accompanying test results.
- 3. Welder Qualification Records.

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The following elements shall be provided upon request:

- 4. Weld *map, detailing which WPS(s) apply to which weld joints.
- 5. Visual inspection criteria/instructions in place.
- 6. Weld rework instructions in place.
- 7. First off weld specimens representative of production welding.

Heat Affected Zone Criteria (HAZ): The rework or addition of any ballistic weld joint outside of the print specified location is not permitted; the supplier shall consult GDLS for MRB approval prior to any such rework. Rework examples include but are not limited to: mislocated / translated appurtenances or welds, stray welds, arc strikes, and additional welds not mandated by the TDP.

GDLS-C Originating Contracts

General Dynamics Land Systems - Canada

1991 Oxford Street East London, Ontario, Canada N5V 2Z7

Attn: Quality Engineering ppap.fpi@gdls.com

QX24.0 (7/10/09) Weld Inspection

- 1) All welds on items in this contract shall be visually inspected by Certified AWS or CWB Welding Inspectors. Weld inspectors shall:
 - i. Hold current or previous certification as an AWS Certified Welding Inspector (CWI) in conformance with the provisions of AWS QC1 (Standard and Guide for Qualification of Welding Inspectors).

OI

ii. Hold current or previous certification by the Canadian Welding Bureau (CWB) in conformance with the requirements of the Canadian Standard Association (CSA) Standard W178.2 (Certification of Welding Inspectors).

Inspection shall be conducted in accordance with the governing weld specification identified in the TDP. When no weld specification is identified the requirements shall be governed by AWS D1.1 for steel, AWS D1.2 for aluminum, or AWS D1.6 for stainless steel. Copies of inspector certifications shall be provided for FPI review; verification inspection reports shall be retained by the contractor and made available upon request.

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2) Weld Inspection NDT Quality Control Plan:

Supplier shall develop an NDT Quality Control Plan to be submitted with FPI. Welds on items shall be verified by Liquid Penetrant Testing. Penetrant testing shall be conducted in accordance with ASTM E 165 (Standard Test Method for Liquid Penetrant Examination) and ASTM E 1417 (Standard Practice for Liquid Penetrant Testing). Personnel performing penetrant testing shall be qualified in conformance to SNT-TC-1A, Mil-Std-410, NAS410, or ANSI/ASNT CP-189, and be certified to NDT Level II. Personnel performing penetrant inspection need not be certified under AWS QC1 or CSA W178.2. Copies of personnel certifications shall be provided for FPI review; penetrant testing reports shall be retained by the contractor and made available upon request.

Magnetic Particle Testing may be conducted in lieu of penetrant testing, subject to GDLS approval. Magnetic particle inspection shall be conducted in accordance with ASTM E 1444 (Standard Practice for Magnetic Particle Examination).

QX25.0 (7/10/09) Repair and Overhaul

This clause applies to customer owned material for Repair Only. Upon completion of repair, the supplier shall return the item, together with:

- A) a report indicating work performed to bring material to usable condition.
- B) a Certificate Of Conformance indicating compliance to specification(s)and completion of repaired item functional testing to original test procedure(s).
- C) appropriate test results and/or measurements supporting requirement (b) above shall be submitted with the shipment, unless otherwise specified.

Shipments must include the documentation required by this clause.

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QX118.3 (7/1/10) Commercial Welding - A.W.S.

Weld joints within this assembly are to be qualified, implemented, and inspected in accordance with the governing commercial weld specification (AWS D1.1,

AWS D1.2, AWS D1.3, or AWS D1.6). When no weld specification is identified in the TDP the requirements shall be governed by AWS D1.1 for steel, AWS D1.2 for aluminum, or AWS D1.6 for stainless steel. A weld qualification data package consisting of the following elements shall be maintained by the supplier.

Minimum data package requirements shall be furnished to the appropriate client address listed below, at least two (2) weeks in advance of production welding.

The weld qualification data package shall contain at a minimum:

- 1. Weld Procedure Specification (WPS).
- 2. Procedure Qualification Record (PQR) with accompanying test results.
- 3. Welder Qualification Records.

The following elements shall be provided upon request:

- 4. Weld map, detailing which WPS(s) apply to which weld joints.
- 5. Visual inspection criteria/instructions in place.
- 6. Weld rework instructions in place.

The weld qualification data package shall be submitted to the appropriate client:

GDLS-SHC Originating Contracts

General Dynamics Land Systems Lima Assembly Tank Plant 1161 Buckeye Road Lima, Oh 45804 GDLS-C Originating Contracts

General Dynamics Land Systems - Canada 1991 Oxford Street East London, Ontario, Canada N5V 2Z7

Attn: Material Control Laboratories

Attn: Quality Engineering ppap.fpi@gdls.com

QY11.9 (7/08/09) First Piece Inspection

A first piece inspection (FPI) is required as part of this purchase order. It is the supplier's responsibility to conduct a FPI on one of the first five pieces delivered under this order to verify conformance of all physical, chemical, and test requirements specified as part of this order. Upon completion of the inspection, the supplier shall notify the buyer and/or cognizant GDLS SQA representative. Objective evidence of this requirement shall be available and verified by GDLS prior to commencing shipments on this order. A five (5) day notice shall be required for scheduling verification.

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If supplier-developed test software is used as a means of functional product acceptance, the test software must be approved by GDLS Quality Engrg & Test. The test software shall be submitted to GDLS Quality Engrg & Test for review to facilitate software approval prior to the scheduled FPI.

In the case of distributors, the requirement can be considered satisfied by presenting the GA SQA representative with a certificate of conformation from the manufacturer as long as it states objective evidence is on file and available. Manufacturers of QPL parts are only required to produce evidence of current qualifications for QPL parts.

First piece inspection (FPI) is considered satisfied if the purchase order has an active line item for a first article inspection or it has been completed as part of the first article test requirements.

First piece inspection approval is considered extended by GDLS from one purchase order to the next provided that:

- 1. No configuration changes have occurred.
- 2. The part is manufactured at the same facility.
- 3. The manufacturing process has remained the same.
- 4. There has been no more than a one (1) year break in production.
- 5. No formal corrective action has been required.
- 6. The sub-tier suppliers and special processors have not changed.

SQA must be notified if any of the above conditions cannot be met. Objective evidence must be maintained demonstrating the above.

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QY2.9 (9/26/01) FAT-QCS-4

The supplier shall obtain First Article Approval (FAA) for this assembly or it's sub- components when a line item is included on this Purchase Order that requires the delivery of the final test report. The absence of this line item indicates that no FAA has been contracted or is required for this Purchase Order and a previous approval satisfies the Technical Data Package (TDP) requirements for FAA. First Article Approval will be granted upon successful completion of a First Article Inspection (FAI) and a First Article Test (FAT). Shipments under this Purchase Order prior to FAA are not allowed. FAI and FAT shall be conducted in accordance with the requirements of the TDP drawing, QAR/QAP, production function/fabrication specification and/or military specification and this Purchase Order.

Additional supplier instructions for FAI are contained within GDLS Supplier Instruction QCS 83-4 revision "F" dated July 2000 and for FAT within QCS-4 dated August 2001. Test sample selection shall be accomplished under the supervision of the Government. Government notification is required to allow test monitoring prior to test start (reference QCS-4, Section 4.2.1). Within 30 days of receiving the FAA requirement notification by activation of the FAA Purchase Order line item you must notify the GDLS Buyer of the test facility name, location, contact, phone number and purchase order/work authorization number.

QY-10 FLOWCHART/CONTROL PLAN (FC/CP)

If the QY-10 is required as part of the Purchase Order (PO), prior to First Piece Inspection (FPI) a Process Flow Chart/Control Plan (FC/CP) is to be developed using GDLS Work Sheet and instructions. This document is to be attached to the FPI request form. The request for FPI will not be processed without this document being completed in it's entirety in accordance with instructions. (PQA 3000 Page 24-26)

The purpose of FC/CP is to provide a logical pictorial representation of the manufacturing process flow and process control points. The Supplier develops and updates FC/CP as needed if changes occur. This document can be used as an aid for work station development, identifying process control points, defining the methods being used at these control points, and must include all Key Product Characteristics such as KPC/QARs/QAPs and all out sourcing identification.

A walk through of the manufacturing process to include a review of the FC/CP and work instructions should be anticipated as a means to validate process requirements. The FC/CP will be used as part of the Process/Product Validation at FPI and on future GDLS audits.

Summary

- FC/CP completed worksheet required as part of QY11 submittal
- · Supplier ensures FC/CP for accuracy

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- GDLS/Supplier evaluation of FC/CP to actual process
- · Requires updates when Process Flow changes
- FC/CP with sufficient detail to depict the Manufacturing Process

Additional information about Quality Clauses, associated documents, FPI submissions and other Product Assurance requirements can be found on the General Dynamics Land Systems – Canada web site.

http://www.gdlscanada.com/purchasing/

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Rev G change summary - January 3, 2006

The changes are designed to accommodate GDLS, Sterling Heights QA administration of existing Purchases Orders. The changes provide consistency through out the corporation and recognize capable processes between GDLS and GDLS-C

Clause 1 compatible with QG7.0

Clause 3 added, Identical to QG4.3

Clause 5 compatible with QJ7H.0

Clause 6 modified to reduce record retention to 5 years and to add packing slip detail. Clause 7 reference to note 3 added

Clause 8 reference to note 3 added

Clause 14 compatible with QP2.2

Clause 19 documentation submitted to Regional Manager for SHC administered SQA Clause 26 compatible with QK16

Clauses 30, 31, 33, & 34 replace PPAP with FPI for SHC administered SQA

Clause 40 documentation submitted to Regional Manager for SHC administered SQA Clause 60 modified to direct SHC source inspection request

Clause 64 compatible with QP5.1

Clause 72 documentation submitted to Regional Manager for SHC administered SQA Clause 81 compatible with QJ8

Clause 82 reference to note 3 added

Note 1 added Note 2 added Note 3 added

Rev H change summary - July 15, 2009

This is a major revision to the clause list, adopting GDLS nomenclature, adding several new clauses and deleting others. These changes incorporate all applicable GDLS, Sterling Heights QA clauses for application on GDLS-C purchase orders. These changes provide consistency throughout GDLS. Legacy GDLS-C clauses are included for reference purposes. Where the clauses have been translated to a GDLS clause, this is indicated in brackets after the numeric clause.

Rev J change summary - July 19, 2010

This revision includes minor changes to correct typos, clause revisions and dates to bring them into alignment with the SHC clause list. New clauses QX26, QL86 and QK14 added. Heat affected zone criteria added to Ballistic Welding clauses, including limited MRB authority.

Rev K change summary - September 27, 2010

This revision introduces two new clauses, QP96 to address purchase orders between GDLS plants not covered by an Intra-company Service Agreement, and QP97 to address long lead purchase orders where TDP information is incomplete or insufficient to assign production quality requirements. Legacy GDLS-C Quality Clauses have been deleted and the contact information for the weld FPI information has been updated in the GDLS-C weld clauses.

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QUALITY ASSURANCE REQUIREMENTSEXTERNALLY-THREADED STEEL FASTENERS

Section C Annex C1 Form GDLS-C 4496 Rev 03/01/2003

1.0 **SCOPE**

- * This document establishes the minimum requirements to be met by all manufacturers and/or distributors of at least Grade 5 or Property Class 8.8 externally-threaded steel fasteners, or by all suppliers of assemblies which contain externally-threaded steel fasteners. Such suppliers must comply with Section 2.0 or 3.0, as applicable.
- * Suppliers of assemblies which contain externally-threaded steel fasteners less than Grade 5 or Property Class 8.8, must submit, as part of the production Part Approval Process (PPAP), the declaration shown in Appendix A. The remainder of this document does not apply to such suppliers.

1.1 DEFINITIONS

1.1.1 High Strength Fasteners

An externally-threaded steel fastener of at least Grade 5, as defined by SAE J429, or Property Class 8.8 (metric equivalent), as defined by SAE J1199 or ISO 898.

1.1.2 Externally-Threaded Fasteners

These include bolts, screws, studs, sems, and u-bolts. **Nuts** are **internally-threaded** and, as such, are **not subject** to the requirements of this document.

1.1.3 <u>Lot</u>

A quantity of fasteners of the same part number from that manufacturer having had the same operations/processes performed, that are submitted for inspection/test at the same time.

1.1.4 <u>Homogeneous Lot</u>

A lot showing uniformity in all of the following aspects: chemical composition, mechanical properties, dimensional characteristics, plating, and manufacturer.

1.1.5 <u>Manufacturer's Symbol (Logo)</u>

The marking on the fastener which identifies the manufacturer. This symbol shall be registered with the Defense Supply Center Philadelphia (DSCP) – www.dscp.dla.mil/gi/prod_services/logoreg.html (site name subject to change).

1.1.6 <u>Grade/Property Class</u>

Grade or Property Class markings identify the fastener Grade or Property Class, as described in SAE J429, SAE J1199 or ISO 898. These systems allow standardized mechanical and chemical properties to be associated to a fastener through recognizable markings.

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QUALITY ASSURANCE REQUIREMENTS

EXTERNALLY-THREADED STEEL FASTENERS

Section C Annex C1 Form GDLS-C 4496 Rev 03/01/2003

2.0 REQUIREMENTS FOR HIGH STRENGTH FASTENERS SHIPPED LOOSE

* The supplier must implement and maintain a quality assurance system which ensures lot traceability back to the fastener manufacturer and provide objective evidence of the **homogeneity** of the lot. This objective evidence shall be prepared, maintained and provided to Buyer with each shipment, as detailed in Section 2.2.

2.1 COMPLIANCE REQUIREMENTS

To determine the conformance of fastener lots with the marking and dimensional requirements, a sample from each lot will be taken in accordance with MIL-STD-105, General Inspection Level II (Section 4.1). In determining compliance to chemical, mechanical and plating requirements, sampling shall be IAW MIL-STD-105, Special Inspection Level S-2 (Section 4.2). The following acceptance criteria shall apply: **Accept** lot zero (0) defects. **Reject** lot with one (1) defect. Each sample shall be examined for the following:

2.1.1 Manufacturer's Trademark (Logo)

Every fastener in the lot shall be marked with the manufacturer's trademark; the specified manufacturer's identification symbol as registered with DSCP. Where size of the piece prohibits such marking, marking shall be in accordance with MIL-STD-130 or commercial equivalent.

2.1.2 **Grade**

The Grade (or Property Class) markings shall be the same for each bolt and comply with specified head marking requirements.

2.1.3 **Dimensional Characteristics**

All dimensional requirements must be met.

2.1.4 **Chemical Composition**

Testing of chemical composition shall include, as a minimum, percent by weight analysis of all elements as detailed by the applicable material specification.

2.1.5 Mechanical Properties

Hardness as specified.

Tensile Strength as specified.

2.1.6 **Plating**

Plating and/or finish as specified.

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QUALITY ASSURANCE REQUIREMENTS

Section C Annex C1 Form GDLS-C 4496 Rev 03/01/2003

EXTERNALLY-THREADED STEEL FASTENERS

2.2 <u>DOCUMENTATION REQUIREMENTS</u>

- 2.2.1 A certification (Appendix B) stating that fasteners in a given lot meet all requirements shall be provided with each shipment.
- 2.2.2 Test reports confirming that the fasteners meet the following technical requirements, as applicable, shall be provided with each shipment: Chemical Composition, Hardness, Tensile Strength, and Plating. The name of the test laboratory shall be stated on the corresponding test report/certification.
- 2.2.3 Lot traceability shall be maintained and ensured by referencing the lot identification code on all corresponding documentation.

3.0 REQUIREMENTS FOR HIGH STRENGTH FASTENERS AS PART OF AN ASSEMBLY

Assemblies containing high strength fasteners as defined in Section 1.0 will fall into one of two classes:

- (1) Commercial; or
- (2) Non-commercial.

A *commercial* item will be defined as an item (end item or component of an end item), procured by the Government or the buyer, with the same or similar configuration and performance as sold or traded to the general public at the time of contract award.

Those items that do not fall within the above definition will be considered non-commercial.

3.1 COMMERCIAL ASSEMBLY COMPLIANCE REQUIREMENTS

- 3.1.1 Suppliers of commercial assemblies, as defined above, must provide certification (Appendix C) with PPAP only, stating that:
- (a) the item is a commercial item, as defined in Section 3.0, and
- (b) the fastener quality assurance system meets the intent of Section 2.0 and will prevent delivery of substandard product.
- 3.1.1 These requirements allow for the utilization of proven contractor Quality Assurance systems. These systems must assure fastener conformance to all requirements as defined in Section 2.0 above. Objective evidence of conformance shall be kept on file with the supplier and may be subject to review by the buyer.

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QUALITY ASSURANCE REQUIREMENTS

Annex C1 Form GDLS-C 4496 Rev 03/01/2003

Section C

EXTERNALLY-THREADED STEEL FASTENERS

3.2 NON-COMMERCIAL ASSEMBLY COMPLIANCE REQUIREMENTS

- * Suppliers of non-commercial assemblies must prepare and maintain a fastener quality assurance system that meets the requirements as outlined in Section 2.0.
- Suppliers of non-commercial assemblies must provide certification with PPAP only stating that their quality control systems for fasteners meet all requirements of Section 2.0 (Appendix D); and
 - 3.2.2 Inspection and test reports must be kept on file with the supplier and be provided to the buyer upon request. These records may be subject to periodic review by Quality Assurance.

4.0 SAMPLING SIZE DETERMINATION USING MIL-STD-105

4.1 <u>INSPECTION LEVEL II</u>

Knowing the lot (shipment) size, use Table II to determine the sample size code letter, i.e. given lot of batch size = 1000 and Table II, General Inspection Level II, provides a sample size code letter of J.

Knowing the sample size code letter, use Table III to determine the sample size, i.e. given sample size code letter J and Table III, provides a sample size of 80.

4.2 <u>INSPECTION LEVEL S-2</u>

This is a special inspection level for batch sampling of product produced by a monitored and controlled process. Table II & III have been used in the method as described above, using the S-2 Special Inspection Level, to produce Table I. Table I also provides test allocations within the sample size(s) as follows: chemical composition, core hardness, tensile strength and plating.

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QUALITY ASSURANCE REQUIREMENTS

EXTERNALLY-THREADED STEEL FASTENERS

TABLE 1 – Sample sizes for technical requirements testing

LOT	SAMPLE	CHEMICAL	CORE	TENSILE	
SIZE	SIZE	COMPOSITION	HARDNESS	STRENGTH	PLATING
2-25	2	1	1	1	1
26-150	3	1	1	1	1
151-1200	5	2	2	1	1
1201-35000	8	3	3	1	1
35001-OVER	13	6	3	3	1

TABLE II - Sample size code letters

LOT SIZE	SPECIAL INSPECTION LEVELS				GENERAL INSPECTION LEVELS		
	S-1	S-2	S-3	S-4	I	II	III
2-8	A	A	A	A	A	A	В
9-15	A	A	A	A	A	В	C
16-25	A	A	В	В	В	C	D
26-50	A	В	В	C	C	D	E
51-90	В	В	C	C	C	E	F
91-150	В	В	C	D	D	F	G
151-280	В	C	D	E	E	G	Н
281-500	В	C	D	E	F	Н	J
501-1200	C	C	E	F	G	J	K
1201-3200	C	D	Е	G	Н	K	L
3201-10000	C	D	F	G	J	L	M
10001-35000	C	D	F	Н	K	M	N
35001-150000	D	Е	G	J	L	N	P
150001-500000	D	Е	G	J	M	P	Q
500001-OVER	D	E	H	K	N	Q	R

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QUALITY ASSURANCE REQUIREMENTS

Section C Annex C1 Form GDLS-C 4496 Rev 03/01/2003

EXTERNALLY-THREADED STEEL FASTENERS

TABLE III - Single sampling plans for normal inspection

SAMPLE SIZE CODE LETTER	SAMPLE SIZE	
A	2	
В	3	
C	5	
E	8	
D	13	
F	20	
G	32	
Н	50	
J	80	
K	125	
L	200	
M	315	
N	500	
P	800	
Q	1250	
R	2000	
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GENERAL DYNAMICS Land Systems - Canada

QUALITY ASSURANCE REQUIREMENTS EXTERNALLY-THREADED STEEL FASTENERS

Section C Annex C1 Form GDLS-C 4496 Rev 03/01/2003

APPENDIX A

DECLARATION

We have rev	viewed all externally-threaded steel fasteners used in asse-	mbly part number
ISO 898.	and have determined that they are less than Grade 5 or Pro	operty class 8.8, as defined in SAE J429, SAE J1199 or
	SIGNATURE DATE	
	COMPANY ADDRESS	

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GENERAL DYNAMICS Land Systems - Canada

QUALITY ASSURANCE REQUIREMENTS EXTERNALLY-THREADED STEEL FASTENERS

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APPENDIX B

CERTIFICATION

We hereby certify that this shipment of fastener part number has been found to meet all requiremen reports are attached.	
These fasteners are traceable to the shipment by the following lot identifica	tion code:
LOT CODE	
The required tests were performed by the following laboratory(s):	
TEST LABORATORY	
	
	SIGNATURE
	TITLE DATE
	DATE
	COMPANY
	ADDRESS
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Land Systems - Canada

QUALITY ASSURANCE REQUIREMENTSEXTERNALLY-THREADED STEEL FASTENERS

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APPENDIX C

COMMERCIAL ASSEMBLY CERTIFICATION

COMMERCIAL ASSEMI	BLI CERTIFICATION	
We hereby certify that assembly part numberas defined in Section 3.0 of Form 4496. Our quality assurance system for prevent delivery of substandard product.		
	SIGNATURE TITLE DATE COMPANY ADDRESS	
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Land Systems - Canada

QUALITY ASSURANCE REQUIREMENTSEXTERNALLY-THREADED STEEL FASTENERS

Section C Annex C1 Form GDLS-C 4496 Rev 03/01/2003

APPENDIX D

NON-COMMERCIAL ASSEMBLY CERTIFICATION

We hereby certify that assembly part number		
	SIGNATURE TITLE DATE	
	COMPANY ADDRESS	
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Subcontract PO 35334144 Section E Rev 10/16/2009

SECTION E

CANADIAN INDUSTRIAL AND REGIONAL BENEFITS REQUIREMENTS

An important factor in the evaluation of proposals is the offeror's commitment for Canadian Industrial and Regional Benefits (IRBs).

The Buyer has made substantial commitments to the Canadian Government in the area of Industrial and Regional Benefits. We will be making commitments in the areas of:

- · Canadian Content both direct and indirect
- Regional Distribution:
 - Atlantic Region
 - Quebec Region
 - Western Region
 - Northern Ontario
- Small Business Participation

As guidance in the formulation of your IRB proposal, the following is our philosophy and approach to establishing Canadian IRBs.

- 1. Canadian participation will equal, as a minimum, 100% of the contract value through work performed on the contract or through other activities.
- 2. Our objective is to establish long-term supplier relationships that extend beyond the current contract. Our approach is to select companies that we can use in the export market.
- 3. To survive in the export market, our suppliers must be cost and quality competitive.
- 4. IRB transactions must make business sense; otherwise, they cannot be sustained in the long term.
- 5. We ensure that our major subcontractors, both Canadian and foreign, provide IRBs that are commensurate with the value they receive from the contract. They use the same approach as we do in establishing long-term relationships that extend beyond the current contract. As a result, we allow our subcontractors to make their own business decisions as to how IRBs will be met.
- 6. We support the approach of spreading benefits across Canada and our objective is to provide a balanced commitment to all regions.

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OFFEROR'S IRB PROPOSAL

As a minimum, the following information should be included in the offeror's IRB proposal.

- 1. Commitment on Direct Canadian Content, stated as a percentage (%) of the value of the contract. Identify how you plan on achieving this content. Please provide details of planned work scope or components in response to the RFQ/RFP.
- 2. Commitment of Indirect Canadian Content, stated as a percentage (%) of the value of the contract. Identify how you plan on achieving this content. Please provide details of planned work scope or components and the timeframe in which the work will be accomplished in response to the RFQ/RFP.
- 3. <u>Commitment on Regional Activity.</u> Identify if any of the activities listed in items 1 and 2 will be performed in one of the designated regions of Canada.
- 4. <u>Commitment on Small Business Activity.</u> Identify any of the activities, listed in items 1 and 2 that will be performed by a "Canadian Small Business".

INDUSTRIAL AND REGIONAL BENEFITS - TERMS & DEFINITIONS

1.0 INTERPRETATION

- (1) For the purpose of this Section entitled INDUSTRIAL AND REGIONAL BENEFITS, unless the context otherwise requires, the following terms shall have the meanings set out beside them:
 - "Achieve", "Achieved" or "Achievement" in relation to a commitment for an Industrial and Regional Benefit, means the accomplishment of all or any part of the Canadian Content of the work of a Transaction;
 - "Canadian Content" or "Canadian Content Value" (CCV) is described in Paragraph 1.2.
 - "Commit", "Committed" or "Commitment" in relation to a Transaction, means the promise by the Subcontractor to achieve the Canadian Content contained in any IRB Transaction on or before the times as set out in this Annex and to achieve the undertakings thereof; the Subcontractor agrees that all such obligations are covenants of this Subcontract;
 - "Current Technology" means the latest or most recent advancement in a given scientific field, which is sufficiently developed to permit exploitation in the appropriate markets;
 - "Eligible Party" means those corporate entities providing the Industrial and Regional Benefit Transactions.
 - "Industrial and Regional Benefit" or "IRB" or "IRBs" means a commercial or business activity that is carried out by means of a contract, including any purchase order sales agreement, license agreement, letter of agreement or other similar instrument in writing, that has an identified dollar value, meets the Eligibility Criteria in accordance with Paragraph 1.3 and has been approved by the Contractor;

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"Industrial and Regional Benefit Authority" or "IRB Authority" - means the Minister of Industry or any other person designated by the Minister of Industry to act on the Minister's behalf. The IRB Authority is responsible for evaluating, monitoring and accepting IRBs, and for assessing the Subcontractor's IRB performance under this Contract;

"Industrial and Regional Benefit Transaction" or "IRB Transaction" - means an Industrial and Regional Benefit Direct Transaction or an Industrial and Regional Benefit Indirect Transaction, that has been determined by the Contractor to meet the eligibility criteria for Industrial and Regional Benefits transactions as set out in Paragraph 1.3.

"Industrial and Regional Benefit Direct Transaction" or "IRB Direct Transaction" – means an Industrial and Regional Benefit Transaction that is entered into for the performance of any part of the Work under this Contract;

"Industrial and Regional Benefit Indirect Transaction" or "IRB Indirect Transaction" – means an IRB Transaction that is entered into for a business activity unrelated to the performance of any Part of the Work under this Contract;

"Designated Regions of Canada", "Designated Region", "Designated Regions", "Region" or "Regions" means the following regions:

- a. The "<u>Atlantic Region</u>", consisting of the Provinces of Newfoundland and Labrador, Prince Edward Island, New Brunswick and Nova Scotia:
- b. The "Quebec Region", consisting of the Province of Quebec;
- c. The "Northern Ontario Region", consisting of that part of the Province of Ontario northward from the southern limits of Nipissing and Parry Sound Districts; and
- d. The "Western Region" consisting of the Provinces of Manitoba, Alberta, Saskatchewan, and British Columbia;

"Small Business" - means either:

- a. A Canadian-based, independently-owned and operated <u>manufacturer</u> with fewer than <u>250 full-time personnel</u> as of the date of issue of the RFP; or
- A Canadian-based, independently-owned and operated <u>service company</u> with less than <u>250 full-time personnel</u> as of the date of issue of the RFP; or
- Agents and distributors of foreign goods and services as well as subsidiaries of large firms do not qualify as small business;

1.1 DETERMINATION OF CANADIAN CONTENT

- (1) The Cost Aggregate Method of accounting shall be used to determine the Canadian Content Value (CCV) of IRB Transactions. This method shall be subjected to an aggregate of the following:
 - a. The cost of parts produced in Canada, and the cost of materials to the extent that they are of Canadian origin, that are incorporated in the equipment in the factory of the manufacturer in Canada, including parts or materials to the extent that the Contractor can verify that they are of Canadian origin and have been exported from Canada and subsequently imported into Canada as parts or materials.

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- b. Transportation costs, including insurance charges incurred in transporting parts and materials from a Canadian supplier or frontier port of entry to the factory of the manufacturer in Canada for incorporation in the equipment, to the extent that such costs are not included in Paragraph 1.2(1)(a);
- c. Such part of the following costs, exclusive of Goods and Services and Excise Taxes, and royalties and license fees paid outside of Canada, as are reasonably attributable to the production or implementation of the equipment, service or activity:
 - Wages and salaries paid for direct and indirect production and non- production labour in Canada paid to Canadians or to permanent residents as defined in the *Immigration Act, RSC 1985, Chapter 1-2*;
 - 2. Materials used in the work but not incorporated in the final products;
 - 3. Light, heat, power and water;
 - 4. Workers compensation, employment insurance and group insurance premiums, pension contributions and similar expenses incurred with respect to labour referred to above in Paragraph 1.2(1)(c)(i);
 - 5. Taxes on land and buildings in Canada;
 - 6. Fire and other insurance premiums relative to production inventories and the production plant and its equipment, paid to a company authorized by the laws of Canada or any province to carry on business in Canada or such province;
 - 7. Insurance purchased specifically from a company authorized by the laws of Canada or any province to carry on business in Canada or such province;
 - 8. Rent of factory or office premises paid to a registered owner in Canada;
 - 9. Maintenance and repairs to buildings, machinery and equipment used for production purposes that is executed in Canada;
 - 10. Tools, dies, jigs, fixtures and other similar plant equipment items of a non-permanent nature that have been designed, developed or manufactured in Canada;
 - 11. Engineering and professional services, experimental work and product or process development work executed in Canada;
 - 12. Pertinent miscellaneous factory and office expenses, such as administrative and general expenses, including profits earned in Canada that are reasonably attributable to the work, depreciation with respect to production machinery and permanent plant equipment and the installation costs of such machinery and equipment to the extent that such depreciation is reasonably attributable to the work; and a capital allowance not exceeding five per cent of the total capital outlay incurred for buildings in Canada owned by the producer of the work to the extent that such allowance is reasonably attributable to the production of the work;
 - 13. Travel expenses attributable to the work expended in Canadian dollars using Canadian carriers; and profit in accordance with the Contract relating to the product, service or activity.

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- 14. Fees paid for services attributable to the work not elsewhere specified; and profit in accordance with the Contract relating to the product, service or activity.
- (2) In determining the Canadian Content of an IRB Transaction where components only are to be supplied, the following rules shall also apply:
 - a) "Canadian Content" means the aggregate of those costs of producing the components and those depreciation and capital cost allowances that are included in the calculation of Canadian Content as in the above PARAGRAPH 1.2(1);
 - b) For the purpose of components mentioned in the above PARAGRAPH 1.2(2)(a), one of the following would apply:
 - i. The cost reasonably and properly incurred in Canadian dollars of parts and materials acquired by a manufacturer from its parent corporation or form any subsidiary wholly-owned corporation or subsidiary controlled corporation of the manufacturer or of its parent corporation shall be deemed to be the value of the Canadian Content of the parts or the materials to the extent that they are of Canadian origin; or
 - ii. The cost reasonably and properly incurred of parts and materials acquired by manufacturer from a supplier other than a corporation described in the above PARAGRAPH 1.2(2)(b)(i) shall be deemed to be the selling price of the parts and materials to the manufacturer, less the duty paid value of imported goods used in the production thereof and foreign charges applicable thereto.
- (3) Canada's IRB policies promote high quality IRBs in high technology sectors of the Canadian economy. Amounts claimed for IRBs shall therefore exclude:
 - i. The value of materials, labour and services imported into Canada;
 - ii. The value of raw materials and semi-processed goods (in the case of indirect IRBs) exported from Canada;
 - iii. The value of any travel, living, relocation costs, or remuneration paid to individuals classified as non-Canadians who may work on the project;
 - iv. Any amount claimed as an IRB Credit for the achievement of the Subcontractor's IRB Commitment during the Definition Phase Contract;
 - v. The amount of all Canadian Excise Taxes, Import Duties, Federal and Provincial Sales Taxes, and Goods and Services Taxes or administration duties;
 - vi. The value of goods and services with respect to which credit has been received or is being claimed by the Subcontractor or its Eligible Parties as an Industrial and Regional Benefit to Canada under any other agreement;
 - vii. Any proposal or bid preparations costs;
 - viii. All transportation costs except for the costs of transportation via Canadian carriers;
 - ix. Obligations of the federal government e.g. government furnished equipment; payments;

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- x. Licence fees paid by the Canadian IRB recipient and any on-going royalty payments;
- xi. IRB Transactions claimed by the Subcontractor that pertain to the Subcontractor influence or that of one of its Eligible Parties over their own country's Purchasing Agent/Department or the Purchasing Agent/Department of another country shall be disallowed. The decisions of the Purchasing Agents/Departments of democratically elected governments are the responsibility of their elected Officials. The Subcontractor claim or that of its Eligible Parties to have influence can neither be confirmed or denied; and
- xii. Interest costs associated with Letters of Credit or other financial instruments to support IRB Investments are not eligible for IRB consideration.
- 4) Except in the case of goods related to the current project or any versions thereof wherever sold, where any IRB Indirect Transaction is for the purchase of goods that are essentially similar to those acquired from Canada by the same purchaser prior to the effective date of the contract then in determining the Canadian Content of the IRB Transaction, the Industrial and Regional Benefit Authority shall include only the increase that the IRB Transaction will provide over the average amount spent by the purchaser for those essentially similar goods during the previous three year period.

1.2 ELIGIBILITY CRITERIA FOR IRB TRANSACTIONS

- Each IRB Transaction must be one, which was clearly and demonstrably brought about by either the Subcontractor's efforts or the efforts of one of the Subcontractor's Eligible Parties as a result of the specific project against which the transaction is being claimed. It must not be one, which probably would have been entered into if the project had not existed. It should be noted that the Subcontractor must provide evidence of causality in situations where IRB commitments are flowed down to Subcontractors. In these cases, the Subcontractor must prove that the recipient Canadian company would not have achieved the export sales as a result of its own marketing efforts. In any case, the Subcontractor is 100% responsible for IRB Commitments, regardless of flow down to Subcontractors. In addition, to demonstrate causality to this Contract/project, Contractor approval for a proposed IRB Transaction must be obtained prior to the Subcontractor making public announcements, media or press releases related to the proposed business activities. Failure to do so will result in the rejection of the business activity as an IRB under this Contract.
- Where an Indirect IRB Transaction is for the purchase of goods or services that are similar to those that the purchaser has acquired in Canada prior to the effective date, then in determining the Canadian Content Value of the IRB Transaction there shall be included only the increase that the transaction will provide over the average amount spent by that purchaser for those goods or services after program award specified by the Buyer, unless it can be clearly shown that such purchases would have been less than such average without the intervention of the Contractor.
- Timing is an important factor in the determination of eligibility of individual transactions. Normally, IRB Transactions must be implemented after the date of signing of the Prime Contract and should be concluded by the completion date of the Contract. However, if a long-term business relationship can be developed but exceeds the end of the Contract, then the Contractor may consider a longer performance period for that specific transaction.

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4) As per the definition stated above in this Contract, IRB Transactions must be undertaken by an eligible party as defined in the Contract.

1.3 REPORTS

The Supplier commits to report twice per year – March 1 and September 1 showing progress in each of the above types of transactions.

1.4 DAMAGES

In the event that there should be a shortfall or failure to meet the Canadian Content requirement, then liquidated damages will be assessed at 10% of the shortfall. In the event that the commitment in the prime contract is satisfied and no liquidated damages are payable, then the subcontractor will not be held liable for the liquidated damages resulting from a subcontractor shortfall.

1.5 Examination of Records by Canadian Government

- 1) The Subcontractor shall keep proper records and documentation relating to the determination of the Canadian Content of the work provided under this Contract, including invoices and proofs of payment. The Subcontractor shall not, without the prior written consent of the Contractor, dispose of any such records or documentation until the expiration of two (2) years after final payment of this Contract, seven (7) years after the claim against the transaction or until settlement of all outstanding claims and disputes, whichever is earlier. All such records and documentation shall at all times during, the aforementioned retention period be open to verification, inspection and examination by the Contractor or his/her delegate, who may make copies thereof and take extracts there from.
- 2) In addition, the Contractor may request, from time to time, that the Subcontractor provide copies of all such information via mail or courier for a random sample of IRB Transactions.
- 3) Where, subsequent to the verification action taken pursuant to this Article, the Contractor determines that the records are insufficient to verify the Subcontractor's achievements in respect of any IRB Commitment; the Subcontractor shall provide such additional information as may be required by the Contractor.
- 4) Where it cannot be verified that an IRB Transaction has provided the IRB claimed, that portion of the IRB, which cannot be verified, shall be considered as not having been achieved and the Contracting Authority shall give Notice to the Subcontractor of the Shortfall.
- 5) Should the Subcontractor disagree with a decision delivered pursuant to the above Subarticle 4, the Subcontractor, within twenty (20) Business Days from the notification of the said decision, may appeal the above decision by describing fully the issue, all relevant factors and the reasons for its disagreement with the said decision. The Contractor, on subsequent review of the factors surrounding the disagreement, shall issue a final determination, identifying the amount of any such IRB achieved.

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The Subcontractor's overall IRB commitments, claims and achievements; direct, indirect, small business, and regional information shall be available to Parliament. Information pertaining to individual IRB Transactions will not be made available to the public unless the Subcontractor has already made a public announcement in this regard. It is recognized that the release of transaction specific information may prejudice contract negotiations between a prime Contractor and its Subcontractors. However, in situations where transactional information is requested through the formal Access to Information and Privacy Act of the Government, the Contractor will identify this information as "company confidential" when submitting it to the ATIP office for final release determination.

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Subcontract PO 35334144 Section G - Statement of Work Rev NR

Section G - Statement of Work

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Subcontract PO 35334144 Section G - Statement of Work Rev NR

- G.1 GENERAL
- G.1.1 This Subcontract is issued in support of General Dynamics Land Systems Canada's (GDLS-C) Contract with Canadian Department of National Defence (DND) and The Public Works and Government Services Canada (PWGSC) to upgrade the Canadian LAV III vehicle fleet with improved protection, mobility and lethality
- **G.1.1.1 Description.** This Subcontract is for the supply, integration, and related support of CSS Commander's Sighting System (CSS) described in the Statement of Work (SOW) herein and the Performance Specification.
- **G.1.1.2 Background.** GDLS-C produces the Light Armoured Vehicle III (LAVIII) for the Canadian Forces. CSS The specific requirements for the CSS are defined under Section G, Annex G1, Performance Specification, of this Statement of Work.
- **G.1.2 Order of Precedence.** The order of precedence for the Subcontract shall be as per Part A, Purchase Order Terms and Conditions, Article 2, The Contract.
- G.1.3 Security of Work. The security classification of the work being performed under the Subcontract may be considered to be "CLASSIFIED UP TO SECRET". The Subcontractor shall provide personnel suitably security cleared to handle the classified information involved if needed. The Subcontractor shall be responsible for acquiring original classified source documentation referred to in GDLS-C specifications, from the Department of National Defence, as and where required.
- G.1.4 Licensing. The Subcontractor shall be responsible for obtaining and maintaining all technical data, and associated license agreements including any Canadian Controlled Goods Registration Program (CGRP), International Traffic in Arms Regulations (ITAR) and any other Canadian and/or US Department of State regulations (TAA etc.) that are required to satisfy the requirements of this contract, including technical deliverables.
- **G.1.5 Language**. All documentation shall be in English.
- **G.1.6 Period of Performance**. The period of performance shall be six (6) years with design/integration phase in 2011 and production phase from 2012 through 2017.
- G.1.7 Roles and Responsibilities
- **G.1.7.1** The Subcontractor shall carry out all the necessary Work to design, manufacture, test, and deliver the CSS in support of this Subcontract including the requirements of this Statement of Work and all referenced attachments.
- G.1.7.2 The Subcontractor shall manage and execute the work detailed in this SOW, for the delivery of the CSS and its associated support items, as well as associated documentation. The product requirements description of the CSS is described in Section G, Annex G1.
- **G.1.7.3** The Subcontractor shall maintain and update all data deliverables, including plans and documents, as required for the duration of the Subcontract.

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G.1.8 Scope of Work

G.1.8.1 The Subcontractor shall be required to complete all Non-Recurring and Qualification requirements detailed under this Subcontract as well as the Production Requirements outlined herein.

G.1.9 Program Schedule

G.1.9.1 The Program milestones shall be progressed according to the following schedule:

	Reference			
Activity	(if required)	Location	Date	Duration
Prototype Unit	G.4.3.1	GDLS WTC	02 Aug 2011	
Award of Contract (AOC)			October 2011	
Master Program Management Schedule	G.2.4		With Proposal 15 April 2011	
Start of Work Meeting (concurrent with System Functional Review and Production Start of Work meeting)	G.2.5.1 G.4.11 G.6.4.1	Subcontractor's Facility	1 WAC	2 Days
Deliver Two (2) Updated Prototype Units	G.4.3.2	GDLS WTC	3 WAC	
Project Management Review #1 (PMR) (concurrent with Preliminary Design Review and Production Readiness Review meeting)	G.2.5.2 G.4.12 G.6.4.3	GDLS WTC	1 MAC	2 Days
Deliver Two (2) EDUs	G.4.3.3	GDLS WTC	3 MAC	
Project Management Review #2 (PMR) (concurrent with Critical Design Review)	G.2.5.2 G.4.13	Subcontractor's Facility	3 MAC	2 Days
Deliver One (1) PRU	G.4.3.4	GDLS WTC	17 WAC	
Project Management Review #3 (PMR)	G.2.5.2	Subcontractor's Facility	5 MAC	1 Day
Deliver Two (2) Final PRUs	G.4.3.5	GDLS WTC	8 MAC	
Initial Delivery of Production Units	Section H	Refer to Purchase Order	9 MAC	

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G.2 PROGRAM MANAGEMENT

- **G.2.1 General.** The Subcontractor shall implement the management tools and resources required in order to ensure that the overall program is executed in accordance with the Performance Specification and with the scope of work described herein.
- **G.2.2** Program Management.
- G.2.2.1 The Subcontractor shall be responsible for overall program management. The Subcontractor shall prepare a Project Management Plan (PMP) indicating its approach and structure to manage the work together with a description of the work content and the means to ensure its orderly progress. The PMP shall be prepared, submitted and maintained in accordance with SDRL PM-001. This plan includes a requirement for the Subcontractor to identify by name, the staff that will be assigned to this program. If GDLS-C deems that a critical level of skill has been lost by the substitution of personnel which cannot be rectified to the satisfaction of GDLS-C through the use of the other staff members, the Subcontractor shall Subcontract the impacted work scope to a suitably qualified out-of-house resource.
- G.2.2.2 The PMP shall be presented at the initial Start of Work Meeting following Subcontract award. Data provided may relate to the Subcontractor's internal work breakdown and scheduling systems, and be presented in Gantt or bar chart form. Critical activities and expected problem areas shall be identified together with intended methods of achieving "on schedule" completion of work.
- **G.2.2.3** The PMP shall identify all additional deliverables (plans, reports, equipment, services, etc).
- **G.2.2.4** The Subcontractor shall implement, operate and maintain the program in accordance with the PMP. GDLS-C will use the PMP as the principal standard by which to monitor the Subcontractor's performance, achievement and schedules.
- G.2.3 Reserved.
- **G.2.4** Master Project Management Schedule
- G.2.4.1 The Subcontractor shall establish, maintain and use a Master Project Management Schedule (MPMS). The MPMS shall allow the Subcontractor to report to GDLS-C and to schedule the Work, determine and allocate resources, assess the impact of schedule slippage, and measure schedule performance of the Subcontractor's departments and principal sub-contractors.
- G.2.4.2 The Subcontractor shall develop, deliver and amend the MPMS in accordance with SDRL PM-003.
- G.2.4.3 The Subcontractor shall report on scheduling activities and status of the MPMS in the Progress Reports (SDRL PM-008).
- G.2.5 Meetings, Reviews and Audits

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- G.2.5.1 Start of Work Meeting (SOW-M). The Subcontractor shall host a Start of Work Meeting at the Subcontractor's facility, no later than five (5) working days after contract award. The Subcontractor shall present an overview of its entire contractual effort to include, as a minimum: the program WBS to the third level, design and integration schedules, detailed paths/entrance and exit criteria for each milestone leading to full capability for CSS supply including integration to vehicle requirements; detailed delivery schedules including those that satisfy the qualification, and development; any required testing; Logistics Engineering (LE) efforts; Risk Registry, Compliance Matrix; Subcontractor award schedules/status, and the Production Management Plan.
- **G.2.5.2 Project Management Reviews (PMRs).** The initial PMR shall be conducted one (1) MAC, the second PMR shall be three (3) MAC, and the third PMR shall be five (5) MAC. GDLS-C reserves the right to request additional PMRs on an as required basis, based on the performance of the program.
- G.2.5.2.1 The Subcontractor shall, in the PMRs, identify all progress and risks as related to Project Management, Engineering, Test and Evaluation, Logistics Engineering, Configuration Management, and Serial Production, under this Subcontract. This shall include cost, performance and schedule metrics for each major element of the Subcontract work.
- **G.2.5.3 Weekly Action Item Reviews.** Weekly teleconferences will be held at the discretion of GDLS-C to monitor resolution of critical issues and to identify pending issues. The teleconferences shall be initiated by the GDLS-C designated Subcontract Authority and the Subcontractor will participate as required.
- G.2.5.4 Meetings, Reviews, Audits. The Subcontractor shall schedule and conduct all meetings that are identified in the Statement of Work. The GDLS-C designated Subcontract Authority shall be notified in advance of any plans for or meetings held between GDLS-C and the Subcontractor.
- **G.2.5.4.1 Informal Reviews.** Informal reviews between GDLS-C and the Subcontractor are encouraged to facilitate the flow of information between the parties and to foster effective working relationships. Such meetings help to provide to GDLS-C visibility with respect to the conduct and progress of the Work.
- **G.2.5.5 Special Meetings.** In addition to the formal and informal reviews, GDLS-C, at its sole discretion, may call upon the Subcontractor to provide representation at special meetings. Special meetings are intended to address matters of a serious nature that cannot reasonably be delayed until the next schedule formal review.
- **G.2.5.6 Meeting Agendas.** The Subcontractor shall provide agendas for all meetings, reviews and audits, for approval by GDLS-C, five (5) days in advance of the meeting. Meeting agendas shall be provided in accordance with *SDRL PM-006*.
- **G.2.5.7 Meeting Minutes.** The Subcontractor shall provide minutes for all meetings, reviews and audits, for approval by GDLS-C, five (5) days after the conclusion of the meeting. Meeting minutes shall be provided in accordance with *SDRL PM-007*.
- G.2.5.8 System Functional Review (SFR), Preliminary Design Review (PDR) and Critical Design Review (CDR). The Subcontractor shall host a SFR, PDR, and CDR at the Subcontractor's facility.

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- **G.2.5.8.1** System Functional Review (SFR). There shall be an SFR concurrent with the Start of Work Meeting.
- G.2.5.8.2 Preliminary Design Review (PDR). There shall be a PDR one (1) month after Subcontract award concurrent with PMR #1.
- G.2.5.8.3 Critical Design Review (CDR). There shall be a CDR concurrent with PMR #2 at three (3) months after Subcontract award.
- G.2.6 Reports
- **G.2.6.1 Progress Reports.** The Subcontractor shall prepare, amend and deliver monthly Progress Reports in accordance with *SDRL PM-008*. Progress Reports shall describe the progress made by the Subcontractor in performing both Subcontracted and directed Work. The Progress Report shall be used by the Subcontractor as the basis for developing the agenda for the PMRs.
- **G.2.7** Organizational Arrangements.
- 2.7.1 The Subcontractor shall designate an individual as the "Program Manager", who shall be the single point of contact within the Subcontractor's organization for all substantive matters related to the Subcontract. The Subcontractor's Program Manager shall have Terms of Reference that clearly establish his/her responsibilities.
- **G.2.7.2** The Subcontractor shall designate points of contact for the exchange of information in each of the following areas:
 - a. Project Management;
 - b. Engineering Management;
 - c. Senior Design Engineer;
 - d. Configuration Management;
 - e. Quality Assurance Management;
 - f. LEM Management;
 - g. Financial Management;
 - h. Procurement and Subcontract Management;
 - i. Production Management;
 - i. Obsolescence Management
- **G.2.7.3** The Subcontractor's organizational arrangements and associated lines of communication shall recognize the interfacing and liaison necessary with GDLS-C.
- **G.2.7.4** The Subcontractor shall report their Organizational Structure in the PMP.
- **G.2.7.5** The Subcontractor shall advise GDLS-C in writing of any changes to the organizational structure fourteen (14) days prior to any such change.
- **G.2.7.6 Subcontracting Authority.** All Subcontract correspondence and unclassified document deliverables shall be addressed to the GDLS-C Subcontract Authority at:

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General Dynamics Land Systems-Canada Corporation 2035 Oxford Street East London Ontario

Canada N5V 2Z7

Attn: Heath Brown

Senior Subcontract Administrator Supply Chain Management

G.2.7.7 Classified Documentation. Classified documentation shall be sent to the following contact at the Government of Canada prior to reaching the Company Security Officer for GDLS-C:

International Industrial Security Directorate 2745 Iris Street, 5th Flloor Ottawa, Ontario K1A 0S5

Attn: Ms.Jenny Wheatley

Visits and Document Control Officer

G.2.7.7.1 The Subcontractor shall include a cover letter to the Government of Canada stating that the classified documentation shall be sent to the following Company Security Officer at GDLS-C upon receipt:

General Dynamics Land Systems-Canada Corporation 1991 Oxford Street East London Ontario Canada N5V 2Z7

Attn: Fay McCague

Company Security Officer

General Dynamics Land Systems-Canada Corporation.

- **G.2.7.7.2** Notification shall be provided to the GDLS-C Subcontract Authority pending classified documentation is sent.
- G.2.8 Data Management System
- G.2.8.1 The Subcontractor shall use a data management system for the identification, acquisition, distribution, delivery and control of data and the maintenance of an overall status and record keeping system of project data as part of the work. The data management system shall be in accordance with the Subcontractor's current process.
- **G.2.8.2** The Subcontractor shall describe the Subcontractor's data management process in the PMP and shall report on data management in Progress Reports.
- G.2.9 Risk Management
- **G.2.9.1 Risk Management Plan.** The Subcontractor shall develop and implement a Risk Management Plan that identifies the risks associated with this project, in accordance with *SDRL PM-011*. The Risk Management Plan shall include Risk Management Planning, Risk Identification, Qualitative and Quantitative Risk Analysis, Risk Response Planning, and Risk Monitoring and Control through an integrated approach involving cost, schedule, and technical performance. Risk mitigation shall be an integral part of all reviews, and meetings.

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- **G.2.9.2** The Subcontractor shall report on all identified risks in the Progress Reports (*SDRL PM-008*). The Subcontractor shall report risks that satisfy at least one of the following potential impacts:
 - a. CAD\$100,000 variation on Subcontract Price;
 - b. Two (2) weeks or more schedule slippage in any of the elements identified in the MPMS;
 - c. One (1) week variance to the MPMS Critical Path, and/or
 - d. Specification or Statement of Work non-compliance.
- G.2.11 Subcontract/Material Management
- G.2.11.1 Reserved.
- **G.2.11.2** The Subcontractor shall establish, maintain and use procedures that control, manage and track all Subcontracts and procurements in accordance with the Approved Subcontract Management Plan.
- **G.2.12 Subcontract Change Proposal.** When requested by GDLS-C, the Subcontractor shall submit Subcontract Change Proposals (SCPs) in accordance with *SDRL PM-013*.

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G.3 CONFIGURATION MANAGEMENT (CM)

G.3.1 Applicable Documents. The following documents, of the issue or revision in effect at Subcontract Award, unless otherwise specified, form a part of this statement of work to the extent specified herein.

STANAG 4569 AEP-55, Vol.2 Procedures for Evaluating Protection Levels MIL-STD-130N Identification Marking of U.S. Military Property

MIL-HDBK-61A Configuration Management Guidance

MIL-STD-31000 Technical Data Packages
ASME Y14.100-2004 Engineering Drawing Packages

ANSI/EIA-649-1998 National Consensus Standard for Configuration

Mgt

DoD DID DI-CMAN-80639C Engineering Change Proposal DoD DID DI-CMAN-80556A Configuration Audit Plan

DoD DID DI-CMAN-81022C Configuration Audit Summary Report
DND-STD-D-02-001/SG-001 Identification Marking of Canadian Military

Property

- G.3.2 Configuration Identification. The Subcontractor shall develop a technical data package to the extent required for effective manufacture, and quality assurance purposes, and shall provide GDLS-C sufficient specification details for GDLS-C to detail requirements in appropriate drawings of the CSS. The Subcontractor shall document and maintain Configuration Items (CI's) to ensure complete identification, status accounting, configuration control, and audits.
- **G.3.2.2 Part Marking Identification.** The CSS shall be marked in accordance with Canadian DND standard DND-STD-D-02-002-001/SG-001-Identification Marking of Canadian Military Property (English/French).
- **G.3.3** Configuration Documentation
- G.3.3.1 Reserved
- **G.3.3.2 Product Configuration Documentation (PCD).** The PCD is defined as the combined performance and/or design documentation utilized for the production and/or procurement of the CSS. The PCD includes documentation that describes functional, performance, interoperability and interface requirements, and the verifications necessary to confirm the achievement of those specific requirements.
- **G.3.3.3 Functional Configuration Documentation (FCD).** The FCD includes only those documents that describe the functional and performance requirements and the verifications necessary to confirm the achievement of those specific requirements. The PCD and FCD shall document the hardware that successfully passes the Physical Configuration Audit (PCA).
- **G.3.4** Configuration Baselines
- **G.3.4.1 Initial Configuration Baseline.** An initial Configuration Baseline shall be established upon initial release of the Technical Data Package (TDP) following the / each CDR. Any changes made to the hardware or TDP during the period prior to establishing the Functional Configuration Baseline and the Product Configuration Baseline shall be submitted to GDLS-C in accordance with *SDRL CM-002* for informational purposes.

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- **G.3.4.2. Functional Configuration Baseline.** The Functional Configuration Baseline (FCB) shall be established upon successful completion of Subcontractor Functional Configuration Audit (FCA) Ref. Para G.3.7.
- **G.3.4.3. Product Configuration Baseline.** The Product Configuration Baseline (PCB) shall be established upon successful completion of the Physical Configuration Audit (PCA) -Ref. Para G.3.7. Following the establishment of the PCB, changes that affect the PCD shall be submitted to GDLS-C for approval or concurrence as required.
- **G.3.5** Configuration Management.
- G.3.5.1 The Subcontractor shall maintain a discrete configuration management department within its manufacturing facility. The Subcontractor shall assign a senior CM point of contact throughout the life of the contract with whom GDLS-C can communicate any configuration management related issues.
- G.3.5.2 The Subcontractor's CM department personnel shall be responsible for configuration identification, control, and status accounting (for hardware and documentation) using MIL- HDBK-61A and/or ANSI/EAI 649-1998 as a guide.
- G.3.5.3 Engineering Change Proposals (ECPs). Should engineering changes occur upon completion of each CDR, the Subcontractor shall submit ECPs to GDLS-C for informational purposes. After establishment of each PCB, the Subcontractor shall prepare and submit formal ECPs to identify and record any and all new drawings/specifications and changes to existing CSS documentation. ECPs shall be submitted in accordance with SDRL CM-002. All formal changes regardless of classification shall be submitted to GDLS-C for approval prior to implementation. GDLS-C shall either approve or disapprove Class I changes and provide concurrence of Class 2 changes prior to implementation.
- **G.3.5.3.1 Classification of Engineering Changes.** The change shall be Class I if it affects:
 - a. The item performance as it relates to Section G, Annex G1, Performance Specification
 - b. The Product Configuration Documentation (PCD), once established;
 - c. Safety:
 - d. Retrofits: and
 - e. Item fit, form, function
- **G.3.5.4 Request For Deviation (RFD).** The Subcontractor shall prepare RFDs in accordance with *SDRL CM-006*, using MIL-HDBK-61A Section 6.3 as a guide. An RFD shall be used to obtain authorization to deliver nonconforming material which may not meet an item's approved documentation but is nevertheless suitable for use "As is" or after a repair and/or retrofit. GDLS-C shall have approval authority for all classifications of RFD's.
- G.3.6 Serialization. All supplied CSSs and attaching hardware, shall be marked in accordance with Canadian DND standard DND-STD-D-02-002-001/SG-001-Identification Marking of Canadian Military Property. The Subcontractor shall ensure each CSS is uniquely identified. A part number (GDLS-C and Supplier), serial number, and Subcontractor Cage Code shall be permanently applied to the CSS and the Subcontractor shall maintain serialization records as part of its CSA whereby each CSS has traceability.

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- **G.3.6.1 Lot Traceability.** The Subcontractor shall also ensure that there will be batch/lot traceability such that the production batch from which the CSSs are manufactured can be traced.
- **G.3.7. Configuration Audits.** If requested by GDLS-C, the Subcontractor shall identify, schedule and conduct the following configuration audits:
 - a. Functional Configuration Audit (FCA) using MIL-HDBK-61A Section 8 as a guide
 - b. Physical Configuration Audit (PCA) in accordance with MIL HDBK-61A Section 8 as a guide
- G.3.7.1 Functional Configuration Audit. If requested by GDLS-C, the FCA(s) shall be conducted which will verify the CSS performance to the requirements as defined in the Performance Specification. Test data presented and reviewed during the FCA(s) shall be that collected from the analysis, inspections and tests delineated in the Inspection and Test Summary Matrix found in the Performance Specification. All inspections and tests shall be those conducted on a production representative Article. Subject to mutual agreement between the Subcontractor, GDLS-C and the Crown as the case may be, the FCA(s) may be conducted in increments or progressively to ensure that all requirements of the FCA have been satisfied while minimizing the risk of generating ECPs and retrofits after the PCB has been established. In cases where the item verification can only be completely determined after system level integration and testing, a final FCA shall be conducted using the results of these tests. MIL-HDBK-61A Section 8 shall be used as a guide in planning and performing the FCA(s). The FCA(s) shall be conducted following the/each scheduled CDR. Each FCA shall not exceed one (1) day in duration.
- **G.3.7.1.1 FCA Verification Matrix.** To support the FCA(s), the Subcontractor shall provide an FCA Verification Matrix. The Matrix shall be prepared and delivered in accordance with *SDRL CM-009*.
- G.3.7.2 Physical Configuration Audit. If requested by GDLS-C, the PCA(s) shall consist of the formal physical examination of the "As-Built" production configuration of a Configuration Item against its technical documentation and any related data. All end product configuration items shall be audited. The audit shall be performed on the First Production Article which will be the CSS Configuration Items submitted for First Article Testing. MIL-HDBK-61A Section 8 shall be used as a guide in planning and performing the PCA(s). A PCA candidates list shall be provided with the PCA Agenda (SDRL CM-004) for each audit, The list shall include all CI's that will be audited against their design documentation, estimated duration being four (4) days for the/each PCA.
- **G.3.7.3 FCA/PCA Plan.** The Subcontractor shall provide a set of audit procedures in the form of an FCA and PCA plan. DI-CMAN-80556A shall be used as a guide in the preparation of the Configuration Audit plan. The FCA and PCA plan shall be submitted in accordance with *SDRL CM-003*.
- G.3.7.4 Audit Agenda and Report.
- **G.3.7.4.1** The Subcontractor shall prepare a separate Audit Agenda and Audit Report for each FCA and PCA conducted.
- G.3.7.4.2 Each Audit Agenda shall be submitted to GDLS-C in accordance with SDRL CM-004.

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- **G.3.7.4.3** An Audit Report shall be submitted to GDLS-C thirty (30) days after successful completion of the audit. The Audit Report shall be submitted in accordance with *SDRL CM-005*.
- **G.3.8 Technical Data Package.** The Subcontractor shall deliver a Technical Data Package (TDP) in accordance with the following:
- **G.3.8.1 Existing Drawings.** Existing Subcontractor drawings are acceptable provided they meet the requirements as stated in MIL-STD-31000 Technical Data Packages. CSS
- **G.3.8.2 New Drawings.** New drawings and parts lists created by the Subcontractor in support of the CSS contract shall meet the requirements of MIL-STD-31000. Drawings shall be prepared in accordance with ASME Y14.100-2004 Engineering Drawing Packages.
- **G.3.8.3 TDP Delivery.** The Subcontractor shall provide CSS TDPs as follows:
 - a. Preliminary TDP the preliminary TDP shall include drawings, associated lists, and supporting data. The
 technical/engineering data required by GDLS-C shall be prepared by the Subcontractor in the form of a Technical Data
 Package (TDP). The TDP shall be prepared and delivered prior to each PCA conducted in accordance with SDRL CM-010.
 - b. Final TDP The final TDP shall include all updates to the Preliminary TDP resulting from the FCA/PCA. The final TDP shall be prepared and delivered in accordance with *SDRL CM-010*.
 - c. Drawing Revisions Within 15 days of receipt of GDLS-C approval of Subcontractor Class I and Class II ECP's, the Subcontractor shall revise the associated drawings to include the changes shown on such ECP's."
- G.3.9 Configuration Status Accounting (CSA). The Subcontractor shall implement and maintain Configuration Status Accounting (CSA) processes and procedures as part of the CM Program, for the duration of the Subcontract. The Subcontractor shall prepare and deliver CSA Reports in accordance with *SDRL CM-007*, to provide the information required to effectively manage the Configuration of the CSS and provide visibility of CM activities including status of deviations and engineering changes (proposed and approved).
- **G.3.10 Indented Bill of Material (IBOM).** The Subcontractor shall develop an Indented Bill of Material for each CSS and CSS as applicable in accordance with *SDRL CM-008*. The IBOM shall be submitted concurrently with the preliminary and Final TDP delivery (s).

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G.4 ENGINEERING

G.4.1 Engineering Management

G.4.1.1 The Subcontractor shall conduct the engineering activities required to ensure that the CSS procured under this Subcontract meet all the requirements of the Performance Specification, as included under Section G, Annex G1 of this Subcontract.

G.4.2 Project Engineering

G.4.2.1 The Subcontractor shall provide an Engineering Point of Contact to oversee the engineering activities under the Subcontract including: design engineering, reliability and maintainability engineering, human factors engineering, safety engineering, obsolescence management, and design reviews.

G.4.3 Prototypes and Engineering Units

- **G.4.3.1** The Subcontractor shall provide one (1) Prototype Unit and deliver to GDLS-C in accordance with the program schedule at Para 1.9. This unit will be used for evaluation and will remain with GDLS.
- G.4.3.1.1 The Prototype Unit shall be at Test Readiness Level (TRL) 6. TRL 6 is defined as a system or prototype that has been demonstrated in a relevant environment. The system is beyond the breadboard tested for TRL 5 and has been tested in a relevant environment. It represents a major step up in a technology's demonstrated readiness. Examples include testing a prototype in a high fidelity laboratory environment or in simulated operational environment.
- G.4.3.2 The Subcontractor shall provide two (2) updated Prototype Units incorporating any changes from design and integration in accordance with the program schedule at Para 1.9. These units shall represent the expected hardware and software production configuration. One unit upgrades or replaces the prototype previously delivered.
- **G.4.3.3** The Subcontractor shall provide two (2) Engineering Development Units (EDU) in accordance with the program schedule at Para 1.9. These units upgrade or replace the prototypes previously delivered.
- **G.4.3.3.1** The EDU shall be at TRL 7. TRL 7 is defined as a prototype near or at planned operational system. It represents a major step up from TRL 6, requiring the demonstration of an actual system prototype in an operational environment, such as in an aircraft, vehicle or space. Examples include testing the prototype in a test bed aircraft.
- **G.4.3.4** The Subcontractor shall provide one (1) Production Representative Unit (PRU) in accordance with the program schedule at Para 1.9. This unit upgrades or replaces a prototype previously delivered and shall be in the same configuration as units going through qualification.
- G.4.3.5 The Subcontractor shall provide two (2) Final Production Representative Units (PRU) with any changes resulting from qualification in accordance with the program schedule at Para 1.9. These units upgrade or replace any prototypes previously delivered.

G.4.4 Current Specification

G.4.4.1 The Subcontractor is requested to provide a copy of any readily-available Specification per SDRL ENG-001.

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G.4.5	Updated Specification
G.4.3	U puateu Specification

- **G.4.5.1** The Subcontractor shall submit updated CSS Specifications as required per *SDRL ENG-001*.
- **G.4.6** Software Requirements Specification (SRS)
- G.4.6.1 The Subcontractor shall submit a SRS. An initial and updated version of the SRS shall be delivered per SDRL ENG-002.
- G.4.7 Envelope and Installation Drawing
- G.4.7.1 The Subcontractor shall provide an Envelope and Installation Drawing per SDRL ENG-006.
- **G.4.8** Interface Control Drawing
- G.4.8.1 The Subcontractor shall provide an Interface Control Drawing per SDRL ENG-006
- G.4.9 CAD Model
- G.4.9.1 The Subcontractor shall provide a CAD model of CSS in either Unigraphics or Pro-E per SDRL ENG-004.
- G.4.10 Design Reviews
- **G.4.10.1** The GDLS-C design process includes, at a minimum, three (3) major milestone events. If necessary, an In-Process Design Review (IPDR) may be requested between any of the major design reviews.
 - a. System Functional Review (SFR);
 - b. Preliminary Design Review (PDR);
 - c. Critical Design Review (CDR).
- G.4.10.2 The Subcontractor shall conduct the Design Reviews (SFR, PDR, and CDR) at the Subcontractor's facilities. In order to minimize the number of design review meetings, the Subcontractor shall be permitted, with prior approval from GDLS-C, to combine the design review milestone events. The Design Reviews shall include, but are not limited to, the items as described as per the following discussion points and shall use the Design and Production Review Checklist at Annex G4 as a guide:
 - a. progress of ongoing activities, special issues, and the resolution of problems;
 - b. status of the design and the development of the TDP and other schedule milestones;
 - c. any new problems and recommended solutions;
 - d. activities planned until the next Design Review;
 - e. explanation of any schedule variation and the corrective action to be taken; and
 - f. review of changes to the design as presented at Prior Design Review shall be carried forward to the next Design Review for approval and tracking.

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- **G.4.11** System Functional Review (SFR)
- **G.4.11.1** The Subcontractor shall host an SFR in accordance with the program schedule at Para 1.9.
- **G.4.11.2** The Subcontractor shall conduct a System Functional Review (SFR) to the extent that all aspects of the review may be addressed. The SFR shall include, but is not limited to;
 - a. an in-depth review of the performance and technical requirements and a presentation of the Subcontractor's design approach to satisfy the technical requirements of the CSS, and its integration with the GDLS-C supplied turret configuration data;
 - b. a presentation of the Subcontractor's concept of design to include solid/math model representation(s) and trade off studies as appropriate;
 - c. a detailed review of the Subcontractor's development and integration schedules;
 - d. present draft sub system specification/ICD documentation;
 - e. present budget estimates for weight;
 - f. a completed, formal check list for the content of the SFR/PDR/CDR
 - g. present and status the Performance Specification Qualification matrix in accordance with SDRL ENG-013; and, present and status the Risk Registry.
- **G.4.11.3 SFR Material.** The Subcontractor shall submit the materials to be presented at the design review, in accordance with *SDRL ENG-014*, five (5) days before the SFR.
- **G.4.11.4 SFR Action Items.** The Subcontractor shall respond to action items as assigned in the SFR Meeting Minutes.
- **G.4.11.5 SFR Exit Criteria.** The Subcontractor shall meet the SFR requirements including:
 - a. GDLS-C approval of the CAD model submitted in accordance with SDRL ENG-004.
 - b. GDLS-C approval of SFR action item responses as assigned in the SFR Meeting Minutes.
 - c. Completed, formal check list for the content of the Design Review.
- G.4.12 Preliminary Design Review (PDR)
- **G.4.12.1** The Subcontractor shall host a PDR in accordance with the program schedule at Para 1.9.
- G.4.12.2 The Subcontractor shall conduct a Preliminary Design Review (PDR) to the extent that all aspects of the review may be addressed. The PDR shall include but not be limited to:
 - a. present the CSS design, integration and requirements compliance;
 - b. evaluate the progress, technical adequacy, and risk resolution (on a technical, cost, and schedule basis) of the Subcontractor's design approach;
 - c. present and status the Performance Specification Qualification Matrix in accordance with SDRL ENG-013;
 - d. evaluate the degree of definition and assess the technical risk associated with the Subcontractor's design approach;
 - e. establish the existence and compatibility of the physical and functional interfaces of the Subcontractor's preliminary designs with the turret;
 - f. present models of the complete design for the CSS, including its integration;
 - g. present sub system specification/ICD documentation;
 - h. support the design decision making process with trade off studies and qualification data reports;

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- i. present budget performance against initial estimates for weight;
- j. present the status of the release of the TDP;
- k. present suggested manufacturing/ processing information
- **G.4.12.3 PDR Material.** The Subcontractor shall submit the materials to be presented at the design review, in accordance with *SDRL ENG-014*, five (5) days before the PDR.
- **G.4.12.4 PDR Action Items.** The Subcontractor shall respond to action items as assigned in the PDR Meeting Minutes.
- **G.4.12.5 PDR Exit Criteria.** The Subcontractor shall meet the PDR requirements including:
 - a. GDLS-C acknowledgement of receipt of the preliminary drawings submitted in accordance with SDRL ENG-006.
 - b. GDLS-C approval of PDR action item responses as assigned in the PDR Meeting Minutes.
 - c. GDLS-C acknowledgement of receipt of the CAD model submitted in accordance with SDRL ENG-004.
 - d. Completed, formal check list for the content of the Design Review.
- G.4.13 Critical Design Review (CDR)
- **G.4.13.1** The Subcontractor shall host a CDR in accordance with the program schedule at Para 1.9.
- **G.4.13.2** The Subcontractor shall conduct a Critical Design Review (CDR) to the extent that all aspects of the review may be addressed. During the CDR, the Subcontractor shall:
 - a. present the complete, detailed CSS design, integration and requirements compliance;
 - b. present a detailed review of the hardware breakdown and Bill of Material ("BOM");
 - c. present final Performance Specification Qualification Matrix in accordance with SDRL ENG-013
 - d. present the qualification documentation and verification in accordance with SDRL ENG-018 for the system;
 - e. assess configuration risk areas (on a technical, cost, and schedule basis);
 - f. present final sub system specification/ICD documentation;
 - g. present the status of the release of the final TDP.
- **G.4.13.3 CDR Material.** The Subcontractor shall submit the materials to be presented at the design review, in accordance with *SDRL ENG-014*, five (5) days before the CDR.
- **G.4.13.4 CDR Action Items.** The Subcontractor shall respond to action items as assigned in the CDR Meeting Minutes.
- **G.4.13.5 CDR Exit Criteria.** The Subcontractor shall meet the PDR requirements including:
 - a. GDLS-C acknowledgement of receipt of the final drawings submitted in accordance with SDRL ENG-006.
 - b. GDLS-C approval of CDR action item responses as assigned in the CDR Meeting Minutes
 - c. GDLS-C acknowledgement of receipt of the CAD model submitted in accordance with SDRL ENG-004.
 - d. Completed, formal check list for the content of the Design Review.

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- **G.4.14** Engineering Support
- **G.4.14.1** The Subcontractor shall be available to provide any hardware/software integration support on an as required basis.
- **G.4.14.2** The Subcontractor may be required to travel to support hardware and software integration at GDLS sites in Woodbridge, Virginia; London, Ontario; and Edmonton, Alberta.
- **G.4.15** Qualification
- **G.4.15.1 Qualification.** The Subcontractor shall conform to Section G, Annex G1, Performance Specification and shall provide objective evidence that the requirements have been satisfied according to the final Qualification Matrix. The Subcontractor shall manage the Qualification Matrix in accordance with *SDRL ENG-013* that shall summarize current compliance status, as well as planned and completed qualification activities.
- **G.4.15.2 Qualification Test Plan.** The Subcontractor shall provide a Qualification Test Plan in accordance with *SDRL ENG- 017* and fifteen (15) days prior to conducting any new qualification activity. GDLS reserves the right to witness any of the required qualification activities. The Subcontractor shall support GDLS on-site qualification attendance.
- G.4.15.3 Qualification Test Report. The Subcontractor shall provide a Qualification Test Report in accordance with SDRL ENG-018.
- **G.4.16** Hazardous Materials
- **G.4.16.1** The Subcontractor shall not use the hazardous materials identified the Hazardous Materials section of the Performance Specification.
- **G.4.16.2 Hazardous Materials Management Report.** The Subcontractor shall submit Hazardous Material Management Reports in accordance with *SDRL ENG-008* which, at a minimum, shall identify all hazardous materials required for system production, a listing of prioritized hazardous materials for minimization/elimination per the criteria established in the Hazardous Materials Management Plan, and identify those hazardous materials/processes for which non-hazardous substitute materials/technologies may be available for implementation.
- **G.4.17** Human Factors Engineering
- G.4.17.1 The Subcontractor is responsible for implementing a Human Factors program that incorporates effective design principles and practices in order to meet the performance and HFE requirements of the Performance (or other) Specification. Changes and modifications to current design affecting the soldier-machine interface and soldier performance (for operator, maintainer and support personnel) shall meet the appropriate HFE criteria and requirements, defined in MIL-STD-1472 and MIL-HDBK-759. As part of the human factors program, the Subcontractor shall complete the necessary activities to generate the data requested by GDLS-C.
- **G.4.17.2 Human Factors Data Report.** The Subcontractor shall report the results of the above activities in a Human Factors Data Report in accordance with *SDRL ENG-011*. The Human Factors Data Report (HFDR) shall detail the following information, consistent with MIL-STD-46855.

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- a. Detail a Task Description & Analysis (TD&A) of activities performed by each operator of the equipment during normal operations.
- b. Detail the type and frequency of interaction with each man-machine interface.

Detail the results from a workload analysis, detailing the task loading for each operator during normal operation of the equipment. Software such as WinCrew ® is recommended but manual application of Subjective Workload Assessment Technique (SWAT) or NASA-TLX will also be accepted.

G.4.18 System Safety Engineering

- **G.4.18.1 Safety Program.** The Subcontractor shall develop and implement a safety program using MIL-STD-882C in determining whether safety engineering objectives are met. The Subcontractor shall complete a safety assessment, in accordance with MIL-STD-882C, Task 301. As a minimum, the Subcontractor shall do the following:
 - Identify hazards associated with the product by conducting safety analyses and hazard evaluations. Analyses shall include both operational and maintenance aspects of each component.
 - b. Eliminate or reduce significant hazards by appropriate design or materiel selection. If hazards to personnel are not avoidable or eliminated, take steps to control or mitigate those hazards.

Ensure that revisions, upgrades and modifications meet safety requirements.

- G.4.18.2 Safety Assessment Report (SAR). The Subcontractor shall develop a Safety Assessment Report (SAR) which documents all safety analyses completed to support system design development. The SAR shall also identify all safety features and inherent hazards associated with the system. The SAR shall be generated in accordance with SDRL ENG-012. Further, the SAR shall identify special procedures and/or precautions to be observed by test agencies and product item users. As an appendix to the SAR, the Subcontractor shall identify and incorporate Health Hazards associated with the product. The Subcontractor shall provide a description and discussion of each potential or actual health hazards of concern for each subsystem or component.
- **G.4.18.3 Health Hazards.** The Subcontractor shall identify potential health hazards that are indigenous to and generated by the product and eliminate or reduce such health hazards to an acceptable level as determined by GDLS-C. Health hazards shall be reported as a part of the Safety Assessment Report in accordance with *SDRL ENG-012*. The following are examples of some areas of concern that may contain safety and health hazards. This is not an all-inclusive list:
 - a. Fire prevention issues b. Toxic gases
 - c. Noise levels
 - d. Electrical issues
 - e. Radiation Hazards (HERO/HERP/HERF)
 - f. Radioactive Materials (if any)

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- **G.4.19** Finite Element Analysis (FEA).
- **G.4.19.1** The Subcontractor shall submit the results of the Finite Element Analysis (FEA) which was conducted on the system in accordance with *SDRL ENG-015*. This shall be delivered ten (10) days prior to the PDR and CDR and as required.

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- G.5 QUALITY ASSURANCE
- **G.5.1** Quality Management System
- **G.5.1.1** The Subcontractor shall have a quality system that meets the requirements of ISO 9000 and demonstrates continuous improvement. The Subcontractor's system may be audited for evidence of compliance.
- G.5.1.2 The Subcontractor shall make available to GDLS-C, a record of all their annual Internal Audit Reports and any third party audit reports for the duration of this Subcontract.
- **G.5.2** Quality Assurance Plan
- G.5.2.1 The Subcontractor shall prepare and submit to GDLS-C for approval, a detailed Quality Plan that describes its QA Program. This plan shall include as a minimum a plan to control suppliers, Subcontractors, and internal and external quality processes that will be used to assure the quality of the product. The plan should make specific provisions for the delivery and inspection of the production representative hardware to be delivered in accordance with this subcontract. The plan and associated revisions shall be in accordance with *SDRL QA-001*. This document will form part of this contract and cannot be changed without GDLS-C approval.
- G.5.2.2 Once approved, compliance with the requirements of the Quality Plan shall be subject to audit and surveillance by GDLS-C.
- G.5.2.3 The plan must take into consideration that Government Quality Assurance is a requirement of this order. Arrangements must be made promptly with the Quality Assurance representative for the Subcontractor's area or facility so that appropriate Government Quality Assurance can be accomplished prior to release authorization. Government Quality Assurance shall not be used by the Subcontractor as evidence of effective control of quality. Government Quality Assurance shall not absolve the Subcontractor of the responsibility to provide acceptable product.
- G.5.2.4 Quality Assurance Clauses EQD2A.0, QG5.2, QJ7H.0, QJ21.1, QK12.0, QP5.1, QY-10, QG7.0, QY11.9, QP44.0, QP8.0, QL46.0 apply to this contract. Refer to Section C, Quality Clauses, GDLS-C Form 4417, Rev K, for a detailed description of the below:

EQD2A.0 (01/01/99) GD Source Inspection QG5.2 (04/18/00) C = O Sampling Plan QJ7H.0 (10/5/98) Government GSI QJ21.1 (12/8/97) Inspection Delegation QP5.1 (12/7/06) Serialization Requirements QY-10 FLOWCHART/CONTROL PLAN (FC/CP) QG7.0 (9/26/01) ISO 9000 System Requirement QY11.9 (7/08/09) First Piece Inspection QP44.0 (07/10/09) North American High Strength Fasteners QP8.0 (7/10/09) Sub-Contract Requirements QL46.0 (7/10/09) CARC Paint Process Certification

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- **G.5.3** First Piece Inspection (FPI)
- **G.5.3.1** FPI is GDLS-C's first piece inspection process. The FPI submission must be accepted prior to parts being released for shipment, unless otherwise authorized by GDLS-C. FPI documentation will be submitted in accordance with *SDRL QA-004*.
- G.5.3.2 The submission shall be in accordance with GDLS PQA3000, QY11. The Subcontractor shall retain a warrant, design records, change documents, dimensional results, checking aids, test results and process flow charts. The other requirements are only applicable when directed in writing by GDLS-C.
- **G.5.3.3** The Subcontractor shall notify GDLS-C ten (10) working days prior to the FPI submission. The FPI shall be conducted in accordance with the requirements defined in the TDP.
- **G.5.3.4** During production, FPI resubmission may be required. The reasons for FPI resubmission are:
 - Initial submission
 - GDLS-C engineering changes, ECO;
 - Tooling: transfer, replacement, refurbishment;
 - · Correction of discrepancy;
 - Change to optional construction or material;
 - · Sub-supplier or material source change;
 - Change in part processing;
 - · Parts produced at additional location; and,
 - Other

Clarification or examples for the above may be found in the GDLS PQA3000, QY11 - First Piece Inspection.

- **G.5.4** First Article Inspection
- **G 5.4.1 First Article Test Plan.** The Subcontractor shall develop and provide a First Article Test Plan for GDLS approval in accordance with *SDRL QA-005* that completely addresses the First Article (FA) verification requirements detailed in the technical specification outlined in the subcontract.
- **G.5.4.2 First Article Test Report.** The Subcontractor shall provide a First Article Test Report per *SDRL QA-008* that fully documents the results of the First Article (FA) verification of the requirements detailed in the technical specification outlined in the subcontract
- **G.5.4.3 Testing Notification.** Prior to the commencement of any Subcontractor tests, special inspections or demonstrations intended to prove compliance with requirements of the Subcontract Specification, the Subcontractor shall furnish in advance, written notification to GDLS. The required notifications shall be not less than fifteen (15) days in advance of the planned activity. GDLS reserves the right to witness any of the required verification activities. The Subcontractor shall support GDLS onsite Acceptance Test and First Article attendance.
- **G.5.4.4 Documentation.** Upon request, the Subcontractor shall make available to GDLS, at the time of product inspection, the applicable product inspection records, drawings, Engineering Change Orders/Engineering Change Requests (ECOs/ECRs), specifications, Request for Deviations (RFDs), Request for Waiver (RFWs), to which the product was manufactured.

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These documents shall be of the revision used to produce the product. Upon completion of product inspection and acceptance by the GDLS inspector, all documents will be returned to the Subcontractor.

- **G.5.4.5 Inspection Equipment.** Inspection equipment shall be made available to GDLS upon request for any GDLS end item or component inspections at the subcontractor's facility. Upon completion of the inspection by GDLS such inspection equipment will be returned to the Subcontractor.
- **G.5.4.6 Inspection and Test Equipment.** Except as otherwise expressly provided for under this subcontract, the Subcontractor is responsible for the supply and maintenance of all inspection and test equipment necessary to ensure that the end item/end item components (including GFM) conform to contract requirements. All Subcontractor furnished inspection equipment shall be available for use on or before the start of production.
- **G.5.5 Production Representative Hardware.** The unit provided as production representative will be in accordance with the specifications of this statement of work. The unit will represent a production configuration and will be subject to inspection criteria as outlined in the system specification which should be clearly defined in the Subcontractors quality plan **SDRL QA-001**.
- G.5.6 Subcontractor Inspection & Test
- G.5.6.1 The Subcontractor shall implement and maintain a product acceptance system to ensure production compliance with the TDP requirements prior to offering any product to GDLS-C for acceptance. The Subcontractor shall ensure that all production material including purchased products conforms to the TDP and applicable specifications. An Inspection and Test Plan in accordance with SDRL QA-002 shall be provided by the Subcontractor. The Inspection and Test Plan shall be subject to approval by GDLS-C. Manufacturing activities shall not commence until the approval of the relevant Inspection and Test Plan.
- **G.5.6.2** The inspection and certification requirements of the approved Quality Plan are to apply to all work associated with the product.
- **G.5.6.3** GDLS-C and Government Quality Assurance Representatives (GQARs) shall be permitted access to all records, documentation, test pieces and samples, suppliers test data / results for audit purposes.
- **G.5.6.4** Inspection & Test Equipment. Except as otherwise expressly provided for under this Subcontract, the Subcontractor is responsible for the supply and maintenance of all inspection and test equipment necessary to ensure end item conformance to the Subcontract requirements. All Subcontractor furnished inspection and test equipment shall be available for use on or before the start of production and shall be made available to GDLS-C or the Government at the Subcontractor's facility upon request for any GDLS-C or Government tests and inspections.
- **G.5.6.5** Test Deficiencies
- **G.5.6.5.1 Failure.** A failure is defined as an event, or state, in which the system or a component of the test set does not or would not perform as specified in the applicable specification.

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- **G.5.6.5.2 Defect.** A defect is defined as a nonconformance to a technical requirement. Defects are classified as critical, major and minor, as defined in the applicable specification.
- G.5.6.5.3 In the event of component failure, GDLS-C reserves the right to retest the component upon correction of the defects by the Subcontractor to the complete extent and duration specified in the test program, or to such a lesser extent as GDLS-C shall consider appropriate at their sole discretion. The Subcontractor shall be responsible for delays in the program. Delays caused by defective items shall not be a basis for adjustment of the Subcontract delivery schedule or the Subcontract price. Any Subcontractor modifications to the system shall first be approved by GDLS-C. The Subcontractor, at no additional cost to GDLS-C, shall correct defects.
- **G.5.6.6** Control of Nonconforming Product
- **G.5.6.6.1** The Subcontractor shall document all inspection and test failures and take appropriate corrective action. The Subcontractor shall document all rework and record re-inspection and re-test results.
- **G.5.6.6.2** The Subcontractor does not have the authority to deviate from the applicable Technical Data Package. All deviation requests classified as Class I as described in G.3.5.2.1 shall require GDLS-C approval prior to implementation. All other deviations or waivers will be made available to GDLS-C upon delivery as referenced in G.5.4.4.
- **G.5.6.6.3** The Subcontractor shall establish and maintain a functional system to maintain traceability of non-conforming material released with GDLS-C authority.
- **G.5.6.7** Quality Records. The Subcontractor shall retain quality records for a period of seven (7) years after completing of the subcontract.
- G.5.7 Supplier/Subcontractor Evaluation and Approval Survey
- **G.5.7.1** The Subcontractor shall complete and return a copy of GDLS-C Form 4615 in accordance with SDRL QA-003.
- **G.5.7.2** The Subcontractor shall support a QA site visit / audit prior to start of production build.
- **G.5.8** Acceptance Testing.
- G.5.8.1 Acceptance Test Plan/Report. The Subcontractor shall develop and implement an Acceptance Test Procedure (ATP) for the units delivered under this contract in accordance with SDRL QA-006 and QA-007. GDLS-C will validate the ATP used for acceptance. The Subcontractor shall notify GDLS-C prior to making any procedural changes to the ATP. GDLS-C reserves the right to require revalidation of any ATP changed/modified by the Subcontractor. If revalidation is required, it shall be coordinated such that no hardware is offered for acceptance until the change has been incorporated and validated by GDLS-C. A completed copy of the ATP shall be retained by the Subcontractor for all units produced.

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G.6 PRODUCTION MANAGEMENT

- **G.6.1** General. The Subcontractor shall supply a CSS that meets the requirements of this Statement of Work, and the Performance Specification. The Subcontractor shall have system responsibility as defined herein and in the Performance Specification for all CSS supplied for this program.
- **G.6.2 Production Plan.** The Subcontractor shall develop and implement a Production Management Plan. The plan shall address all efforts required to produce a CSS in accordance with the schedule set forth in Section H. The Subcontractor shall deliver the Production Management Plan in accordance with *SDRL PM-014*. Amendments to the Production Management Plan are to be approved by GDLS-C prior to the amended Plan being executed by the Subcontractor.
- G.6.2.1 **Production Program.** The Subcontractor shall establish, implement and maintain a program for the production and delivery of the CSS in accordance with the Approved Production Plan. GDLS-C will use the plan as the principal standard by which to monitor the Subcontractor's performance, achievement and schedules with respect to the Production Program.
- **G.6.2.2 Line of Balance.** The Subcontractor shall submit a Line of Balance in accordance with SDRL PM-015 to detail deliveries of major Line Replaceable Units (LRUs) to the Subcontractor's facility and final deliveries.
- **G.6.3 Schedule.** The Subcontractor shall execute the program in accordance with the deliveries and performance schedule provided in Section H.
- **G.6.4** Production Meetings and Reviews
- **G.6.4.1 Production Start of Work (SOW) Meeting.** As part of the project, the Subcontractor shall present the Production Management Plan concurrent with the Start of Work Meeting. As a minimum, this plan shall include an overview of the Subcontractors' production plans, production locations, facility status, material lead-time assessment, detailed production schedules.
- G.6.4.2 Reserved.
- G.6.4.3 Production Readiness Review (PRR). The Subcontractor shall host a PRR concurrent with PMR #1. The PRR shall address the management and technical discipline areas: design maturity, item configuration, facilities, equipment, production line status, and overall production readiness of the system. The Subcontractor shall provide the personnel and facilities necessary to support the review team. The Subcontractor shall make available the working papers, documents, and data developed and/or utilized under this contract. During the PRR, the Subcontractor shall status the following production activities and shall use the Design and Production Review Checklist at Annex G4 as a guide::
 - Program Overview

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- Production Plan and Requirements
- · Material Delivery and Status
- Personnel Requirements
- Training Requirements
- Security Requirements
- Review of Facility Start-up Checklist
- Lessons Learned from Previous Builds
- Pre-Operational Safety Assessment
- Potential Risk and Mitigation Plans
- Quality Issues
- Engineering/Technical Issues
- TDP Baseline Review
- Tour and Inspection of the Production Facilities
- **G.6.4.3.1 Rate Capability.** At the PRR, the Subcontractor shall demonstrate, through analysis, the capability to meet the required delivery rate of 10 vehicle sets per month.

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- G.7 LOGISTICS ENGINEERING (LE)
- **G.7.1 Supportability Technical Data Request**. The Subcontractor shall complete and return the Supportability Data Requested Form, *SDRL LE-001*.
- G.7.2 Indented Engineering Bill of Materials. The Subcontractor shall provide an indented Engineering Bill of Material (EBOM) for the system. The EBOM shall be documented to the depth of the Line Replaceable Unit (LRU / Shop Replaceable Assembly (SRA). The document shall be in Microsoft Excel 2003 format (.xls). The EBOM shall be delivered in accordance with *SDRL LE-002*.
- G.7.3 Technical Data Documentation. The Subcontractor shall deliver TDP/SPTD down to the Line Replaceable Unit (LRU) / Shop Replaceable Assembly (SRA) per the maintenance philosophy established for the system. The TDP/SPTD may be altered to conceal proprietary information critical to manufacturing, as long as the required information listed above is provided. TDP/SPTD is not required for parts that are identified by a Military Standard or Government Specification. SPTD delivered to GDLS-C shall comply with MIL-PRF-49506 (Logistics Management Information) and DOD 4100.38.M. The Subcontractor will submit TDP/SPTD in order to catalogue new items into the supply system, and to assign NATO Stock Numbers (NSN) to procurable items. All Technical data delivered to GDLS-C shall be free of any restrictive markings or legends and be delivered in accordance with SDRL LE-003.
- **G.7.4 Spare Parts.** Spare parts may be procured by GDLS-C in conjunction with the production buy of the system. The Subcontractor shall complete and deliver a list of all procurable LRUs, SRAs, repair piece parts, hardware, and consumables in accordance with *SDRL LE-004*.
- G.7.5 Technical Manuals. The Subcontractor shall deliver existing commercial or military standard technical publications examples include but are not limited to; installation and removal instructions, operation, maintenance, and illustrated parts manuals. The Subcontractor shall provide with all delivered manuals, a written copyright-release for GDLS-C to use the data in the development of technical manuals that are required by the customer. The technical publications shall be delivered in electronic format (MS Word or SGML/XML format, SGML/XML preferred). The technical publications shall be delivered in the English, and in accordance with SDRL LE-005.
- **G.7.6 Technical Illustrations**. The Subcontractor shall deliver parts illustrations for the system and associated down components to the LRU/SRA level. The illustrations shall be provided in electronic medium and in a format in accordance with *SDRL LE-006*.
- **G.7.7 Support Equipment List.** The Subcontractor shall provide a list of all the tools required to install/remove and repair the system/assembly in question. The list of tools shall include all Special Tools and Test Equipment (STTE). Available part numbers, NSNs, drawings, and pricing shall be provided. The data shall be delivered in Subcontractor format and in accordance with *SDRL* **LE-007**.

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- G.7.8 LEM Impact Statement. The Subcontractor shall have in place a procedure for assessing and providing impact statements to GDLS-C with respect to Subcontract Change Proposals (SCPs) and Engineering Change Proposals (ECPs), including deviations and waivers. The Subcontractor shall prepare and include LEM Impact Statements for each change proposal to identify the impact on the program. The Logistic Impact Statements shall identify the specific nature and impact of the proposed change, including but not limited to impacts to Subcontractor provided technical data, support equipment requirements, and schedule impacts. The LE Impact Statements shall be delivered in accordance with the Configuration Management requirements outlined in this Subcontract.
- **G.7.9 Subcontractor Technical Support.** The Subcontractor shall provide technical support to GDLS-C during the supportability data development period. Technical support shall include telephone and e-mail support to technical questions related to the product and/or the supportability data provided. Technical support shall be made available, as required, to support customer validation/verification activities and logistics demonstrations.
- **G.7.10** Reliability and Maintainability Support Data. The Subcontractor shall deliver the results of the reliability and maintainability analysis that has been conducted such that GDLS-C can substantiate repair policies and produce vehicle level reliability prediction and Life Cycle Cost (LCC) estimates for the end customer. The data shall be provided in accordance with *SDRL LE-008*.
- G.7.11 Diagnostic Support Data. If the data is not made available within the Subcontractor provided technical/commercial manuals, the Subcontractor shall provide documentation to enable GDLS-C to create accurate and complete troubleshooting manuals. Such information includes a list of error messages and/or fault codes that the systems produces and how to interpret and diagnose the problem related to the error message/fault code. For powered systems (for instance electrical or hydraulic systems), a schematic shall be provided that is suitable for troubleshooting purposes. If special diagnostic equipment/software has been developed for the system in question, the Subcontractor shall provide instructions how to properly and safely use the equipment to diagnose the system. Diagnostic supporting data shall be provided in accordance with SDRL LE-009.

G.7.12 Definitions.

Corrective Maintenance

All actions performed as a result of failure, to restore an item to a specified condition. Corrective maintenance can include any or all of the following steps: localization, isolation, disassembly, interchange, re-assembly, alignment and checkout.

Life Cycle Cost (LCC)

The total cost of acquisition and ownership of the system over its full life. It includes the cost of development, acquisition, operation, support, and where applicable, disposal.

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Line Replaceable Unit (LRU)

A Line Replaceable Unit (LRU) is an essential support item which is removed and replaced at field level maintenance to restore the end item to an operationally ready condition. An LRU must be part of the engineering bill of material breakdown.

Logistics Engineering

Those systems engineering activities aimed at improving mission reliability, maintainability, supportability, human factors and safety. Logistics engineering is an integral part of the design process.

Logistic Support Analysis (LSA)

Logistic Support Analysis (LSA) is the selective application of scientific and engineering efforts undertaken during the acquisition process, to assist in causing support considerations to influence design; defining support requirements that are related optimally to design and to each other; acquiring the required support; and providing the required support during the in- service phase at the lowest possible cost.

LSA Candidate Item

An LSA Candidate Item is a portion of the system/equipment identified for the purpose of conducting LSA tasks to determine the logistic requirements of introducing and supporting that item throughout the life cycle of the equipment.

Maintenance Concept

The Maintenance Concept constitutes a series of statements and/or illustrations identifying the broad, planned approach to be employed in sustaining the system/equipment at a defined level of readiness in support of the operational requirement. The Maintenance Concept is used as the basis for the maintenance plan by defining criteria covering maintenance levels, major functions accomplished at each level of maintenance, basic support policies, and primary logistic support requirements.

Maintenance Plan

The Maintenance Plan is a detailed plan specifying the methods and procedures to be followed for system support throughout the life cycle. The Maintenance Plan is developed from LSA data (Task 401 of MIL-STD 1388-2B). Each repairable item in the system should have a Maintenance Plan derived from the LSA data.

Preventive Maintenance

All actions performed in an attempt to retain an item in specified condition by providing systematic inspection, detection, and prevention of incipient failures.

Shop Replaceable Assembly (SRA)

A Shop Replaceable Assembly (SRA) is a down part from an LRU. The parts which comprise the LRU which are repaired or replaced as authorized in the detailed maintenance plans are SRAs.

System or Equipment

System or equipment refers to all the equipment supplied by the Subcontractor, including all LRUs and SRAs.

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G.7.13	Abbreviations
(T./.1.)	Appreviations

CBIL Consumable and Bulk Item List
CCP Contract Change Proposal
CDRL Contract Data Requirements List
DID Data Item Description

EBS Equipment Breakdown Structure ECP Engineering Change Proposal

FACAR Failure Analysis Corrective Action Report

FFP Firm Fixed Price

FMECA Failure Modes Effect and Criticality Analysis GDLS-C General Dynamics Land Systems - Canada

IBM Indented Bill of Material ILS Integrated Logistics Support

ILSMT Integrated Logistics Support Management Team

IP Initial Provisioning LCC Life Cycle Cost

LCN Logistics Control Number
LE Logistics Engineering
LLRC Long Life Reusable Container
LORA Level of Repair Analysis
LRR Logistics Requirements Review
LRU Line Replaceable Unit
LSA Logistic Support Analysis

LSA Logistic Support Analysis
LSAR Logistic Support Analysis Record
MSDS Material Safety Data Sheet
MTA Maintenance Task Analysis
NSN NATO Stock Number

PHST Packaging, Handling, Storage and Transportability

PM Preventative Maintenance POC Point of Contact

PPL Provisioning Parts List
RCM Reliability Centered Maintenance

RFP Request for Proposal

RSCL Reusable Shipping Containers List

RSERL Recommended Support Equipment Requirements List

RSPL Recommended Spare Parts Lists
RPSTL Repair Parts and Special Tools List

RTAEL Recommended Training Aids and Equipment List

SOW Statement of Work

SPTD Supplemental Provisioning Technical Documentation

SRA Shop Replaceable Assembly STTE Special Tools and Test Equipment

TDP Technical Data Package

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G.8 OBSOLESCENCE MANAGEMENT

- **G.8.1 General** The Subcontractor shall provide Obsolescence Management (OM) Services for the Equipment. The intent of this service is to ensure that the potential impacts of obsolescence in terms of equipment supply, effectiveness and support costs are mitigated by proactive management activities completed by the Subcontractor. These activities and reporting requirements are described below. The Subcontractor shall be responsible, at their expense, for resolving obsolescence on their delivered equipment in a timely manner such that the equipment availability due to obsolescence is not impacted for the duration of this contract + 2 years.
- **G.8.2 OM Plan.** The Subcontractor shall deliver an Obsolescence Management Plan in accordance with *SDRL OM-001*.
- **G.8.3 OM Candidates List.** The subcontractor shall develop and deliver for approval an Obsolescence Management Candidate List in accordance with *SDRL OM-002*. Once approved, the list shall be updated quarterly and the subcontractor shall perform proactive OM on items listed on the OM Candidates List.
- **G.8.4 OM Issues Report.** The Subcontractor shall provide GDLS an Obsolescence Management Issues Report for the Equipment in accordance with *SDRL OM-003*. The OM Issues Report shall outline the specifics of a pending issue for all high-risk LRUs or component parts. A component shall be considered to be high risk if it will become obsolete within one year or less.
- G.8.5 Critical OM Issues Advisement. If the Subcontractor, through daily proactive obsolescence management, is made aware of a critical OM issue that is time-sensitive in nature and requires immediate action in order to take advantage of any risk-mitigating available opportunity, they are to promptly notify GDLS-C via email. The Subcontractor shall provide all pertinent and available details pertaining to the OM issue, and their recommended course of action.
- **G.8.5.1.** Upon arriving at a proposed course of action to resolve a given obsolescence issue, the Subcontractor shall provide a proposed corrective action plan to GDLS-C for their review and concurrence.
- **G.8.6 Quarterly OM Issues Review Meeting.** The Subcontractor will host a quarterly teleconference to review the OM Candidates List and OM Issues Report with GDLS-C.

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** CONFIDENTIAL TREATMENT REQUESTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED WITH THE U.S. SECURITIES AND EXCHANGE COMMISSION. OMITTED PORTIONS HAVE BEEN FILED SEPARATELY WITH THE COMMISSION.

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Land Systems - Canada

Subcontract PO 35334144 Section G, Annex G2 - SDRL Rev NR

Subcontracts Data Requirements List (SDRL)

SDRL	Description	Subcontract	Initial Delivery	Frequency	No. of	Format	Approval
No.		Reference	Date		Copies		
Comments:			•				

H: Hard Copy E: Electronic File A: Approval Required A / XX: Approval within XX days One / R: Initial Submission plus revisions as required

I: Information Only AOC: Award of Contract

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Land Systems - Canada

Subcontract PO 35334144 Section G, Annex G2 - SDRL Rev NR

SDRL	Description	Subcontract	Initial Delivery	Frequency	No. of	Format	Approval
No.		Reference	Date		Copies		
PM-001	Program Management Plan	SOW G.2.2.1	With Proposal	Final 15 days AOC. Updates as required		Subcontractor Format	Final A/30
Refer to DID	PM-001						
PM-003	Master Project Management Schedule (MPMS)	SOW G.2.4.2	With Proposal	Final 15 days AOC. Updates as required	1-E	Subcontractor Format	Final A/30
Refer to DID	PM-003						
PM-006	Meeting Agenda	SOW G.2.5.6	5 days prior to planned meeting date	N/A	1-E	Subcontractor Format	A/2
	PM-006. Meeting Agenda slomments within 2 working d						te. GDLS-C
PM-007	Meeting Minutes		Within 5 working days following meeting completion.		1-E	Subcontractor Format	A/10
	PM-007. Minutes shall be prin 10 working days. Updates						
	Progress Reports	SOW G.2.4.3 G.2.6.1 G.2.9.2	1 Month AOC	Monthly	1-E	Subcontractor Format	Ī
Refer to DID	PM-008			-			

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Land Systems - Canada

Subcontract PO 35334144 Section G, Annex G2 - SDRL Rev NR

SDRL	Description	Subcontract	Initial Delivery	Frequency	No. of	Format	Approval
No.		Reference	Date		Copies		
PM-011	Risk Management Plan	SOW G.2.9.1	With Proposal	Final 15 days AOC. Updates as required	1-E	Subcontractor Format	Final A/30
Refer to DID	PM-011						
PM-013	Subcontract Change Proposal	SOW G.2.12	As Required	As Required	1-E	Refer to DID	A/30
Refer to DID	PM-013						
PM-014	Production Management Plan	SOW G.6.2	With Proposal	Final 15 days AOC. Updates as required		Subcontractor Format	Final A/30
Refer to DID	PM-014	•	•	Fraguero		•	
PM-015	Line of Balance	SOW G.6.2.2	Refer to DID	Weekly	1-E	Refer to DID	I
See DID PM	1-015	•	•	•		•	
CM-002	Engineering Change Proposal (ECP)	SOW G.3.4.1 G.3.5.3	From Completion of CDR	As Required	1-E	Refer to DID	Refer to DID
Refer to DID	CM-002						
CM-003	FCA/PCA Plan	SOW G.3.7.3	With Proposal	See comments	1-E	Subcontractor Format	Final A/15
Refer to DID	CM-003. – 30 days prior to	Configuration A	udit				
CM-004	Audit Agenda	SOW G.3.7.2 G.3.7.4.2	See comment	Refer to DID	1-E	Subcontractor Format	A/30

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Land Systems - Canada

Subcontract PO 35334144 Section G, Annex G2 - SDRL Rev NR

SDRL	Description	Subcontract	Initial Delivery	Frequency	No. of	Format	Approval
No.		Reference	Date		Copies		
shall	CM-004. Initial Audit Agen					_	dit. Agenda
CM-005	Audit Report	SOW G.3.7.4.3	30 days after successful completion of FCA/PCA	As Required	1-E	Subcontractor Format	A
Refer to DID	CM-005.						
CM-006	Request for Deviation (RFD)	SOW G.3.5.4	As Required	As Required	1-E	Subcontractor Format	A/Refer to DID
See DID CM	1-006	•	•	•		•	•
CM-007	Configuration Status Accounting Report	SOW G.3.9	10 days prior to PCA	See comment	1-E	Subcontractor Format	I
Refer to DID	CM-007. Deliveries to be m	onthly until 30 d	lays after the last deliv	very concurrent w	ith SDRI	L CM-008.	
CM-008	Indented Bill of Material (IBOM)	SOW G.3.10	Refer to DID	See Comment	1-E	Subcontractor Format	A/10
Refer to DID	CM-008. Deliveries to be m	onthly until 30 d	lays after the last deliv	very concurrent w	ith SDRI	L CM-007.	•
CM-009	FCA System Spec Verification Matrix	SOW G.3.7.1.1	With Proposal	Concurrent with delivery of FCA Plans	1-E	Refer to DID	A/30
Refer to DID	CM-009 for Preparation ins	tructions	_				_
CM-010	Technical Data Package (TDP)	SOW G.3.8.3	With Proposal	See Comment	1-E	Refer to DID	A/10

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Land Systems - Canada

Subcontract PO 35334144 Section G, Annex G2 - SDRL Rev NR

SDRL	Description	Subcontract	Initial Delivery	Frequency	No. of	Format	Approval
No.		Reference	Date		Copies		
Refer to DID CM-010 for Preparation instructions. TDPs shall be delivered 10 days prior to PCA. Final TDP shall be delivered not later than							
30							
days after Final Delivery. Updates are required as a result of ECP activity. Updated drawings shall be delivered no later than 15 days after							
approval or cla	assification concurrence of EC	Ps.					

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Land Systems - Canada

Subcontract PO 35334144 Section G, Annex G2 - SDRL Rev NR

SDRL	Description	Subcontract	Initial Delivery	Frequency	No. of	Format	Approval
No.		Reference	Date		Copies		
ENG-001	Current Specification	SOW G.4.4.1 G.4.5.1	With Proposal	As Required.	1 – E	Subcontractor Format	I
No DID.							
ENG-002	Software Requirements Specification (SRS)	SOW G.4.6.1	With Proposal	As Required.	1 – E	Subcontractor Format	I
No DID.							
ENG-004	CAD Model	SOW G.4.9.1	With Proposal	At SFR, PDR, CDR and As Required.	1 – E	Refer to DID.	I
Refer to DII	D ENG-004.						
ENG-006	Drawings	SOW G.4.7.1 G.4.8.1	With Proposal	At SFR, PDR, CDR and As Required.	1 – E	Refer to DID.	I
Refer to DII	D ENG-006.						
ENG-008	Hazardous Material Management Report	SOW G.4.16.2	30 days after AOC	One/R	1-E	Refer to DID	A/30
Refer to DII	D ENG-008.						
ENG-011	Human Factors Data Report (HFDR)	SOW G.4.17.2	5 days before GDLS-C SFR	Final: 20 days before GDLS-C PDR	1 - E	Refer to DID	A/30

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Land Systems - Canada

Subcontract PO 35334144 Section G, Annex G2 - SDRL Rev NR

SDRL	Description	Subcontract	Initial Delivery	Frequency	No. of	Format	Approval
No.	•	Reference	Date	1 ,	Copies		
Refer to DII	D ENG-011.						
ENG-012	Safety Assessment Report (SAR)	SOW G.4.18.2 G.4.18.3	5 days before GDLS-C SFR	Final – 20 days before GDLS-C PDR	1 – E	Refer to DID.	A/30
Refer to DII	D ENG-012.						
ENG-013	Qualification Matrix	SOW G.4.11.2 G.4.12.2 G.4.13.2 G.4.15.1	With Proposal	Refer to DID	1 – E	Refer to DID.	A/30
Refer to DII	D ENG-013.						
ENG-014	Design Review Presentation Material	SOW G.4.11.3 G.4.12.3 G.4.13.3	5 days prior to SFR	At PDR, CDR, & as required	1 – E	Refer to DID.	I
Refer to DII	D ENG-014.						
ENG-015	Finite Element Analysis (FEA) Report	SOW 4.19.1	Refer to DID	Refer to DID	1 – E	Refer to DID.	I
Refer to DII	D ENG-015.						
ENG-017	Qualification Test Plan	SOW G.4.15.2	4 MAC	Refer to DID	1 – E	Refer to DID.	A/30
Refer to DII	D ENG-017.		•			•	

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Subcontract PO 35334144 Section G, Annex G2 - SDRL Rev NR

SDRL	Description	Subcontract	Initial Delivery	1		Format	Approval
No.		Reference	Date		Copies		
ENG-018	Formal Qualification	SOW G.4.15.3		Refer to DID	1 – E	Refer to DID.	A/15
	Report		8 MAC				
Refer to DID ENG-018.							

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Subcontract PO 35334144 Section G, Annex G2 - SDRL Rev NR

SDRL	Description	Subcontract	Initial Delivery	Frequency	No. of	Format	Approval
No.		Reference	Date		Copies		
QA-001	Quality Assurance Plan	SOW G.5.2.1 G.5.5	With Proposal	Refer to DID	1- E	Subcontractor Format	Final A/30
Refer to DII	QA-001						
QA-002	Quality Assurance Inspection and Test Plan	SOW G.5.6.1	With Proposal	Refer to DID	1 – E	Subcontractor Format	Final A/15
Refer to DII	QA-002						
QA-003	Supplier / Subcontractor Evaluation & Approval Survey	SOW G.5.7.1	With Proposal	N/A	1-E	Subcontractor Format	See DID
Refer to DII	QA-003						
QA-004	First Piece Inspection	SOW G.5.3.1	14 days prior to first shipment of production material.	Refer to DID	1-H	Refer to DID	A/15
Refer to DII	O QA-004						
QA-005	First Article Test Plan	SOW G.5.4.1	30 days prior to First Article production.	N/A	1-E	Subcontractor Format	A/30
Refer to DII	O QA-005.						
QA-006	Acceptance Test Plan	SOW G.5.8.1	Refer to DID	Refer to DID	1-E	Subcontractor Format	A/7
Refer to DII	QA-006						

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Land Systems - Canada

Subcontract PO 35334144 Section G, Annex G2 - SDRL Rev NR

SDRL No.	Description	Subcontract Reference	Initial Delivery Date	Frequency	No. of Copies	Format	Approval
QA-007	Acceptance Test Report	SOW G.5.8.1	Refer to DID	Refer to DID	1-E	Subcontractor Format	A/30
Refer to DID	QA-007						
QA-008	First Article Test Report	SOW G.5.4.2	Refer to DID	N/A	1-E	Subcontractor Format	A/30
Refer to DID	QA-008						

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Subcontract PO 35334144 Section G, Annex G2 - SDRL Rev NR

SDRL	Description	Subcontract	Initial Delivery	Frequency	No. of	Format	Approval
No.		Reference	Date		Copies		
LE-001	Supportability Technical	SOW	With Proposal	One/R	1-E	Refer to DID	A/5
	Data Request	G.7.1	, and the second				
Refer to DIE	D LE-001.		•	•		•	•
LE-002	Indented Bill of	SOW	10 Days prior to	Refer to DID	1-E	Refer to DID	A/5
	Materials (IBOM)	G.7.2	PDR				
Refer to DIE	O CM-008.		•	•	•	•	•
LE-003	Technical Data Package	SOW G.7.3	10 Days prior to PDR	30 Days post CDR	1-E	Refer to DID	A/30
Refer to DIE	D LE-003.						
LE-004	List of Spare Parts	SOW G.7.4	10 Days prior to PDR	30 Days post CDR	1-E	Refer to DID	A/30
Refer to DIE	D LE-004						
LE-005	Technical Publications	SOW G.7.5	10 Days prior to PDR	30 Days post CDR	1-E	Refer to DID	A/5
Refer to DIE	D LE-005.						
LE-006	Technical Illustrations	SOW G.7.6	30 Days post CDR	One/R	1-E	Refer to DID	A/10
Refer to DIE	D LE-006.						
LE-007	Support Equipment List	SOW G.7.7	10 days prior PDR	10 days post CDR	1-E	Refer to DID	A/5
Refer to DIE	D LE-007.						
LE-008	Reliability and	SOW	10 days prior	10 Days	1-E	Subcontractor	A/5
	Maintainability Support Data	G.7.10	PDR	prior to CDR		Format	
Refer to DIE	D LE-008.	•	•	•		•	·

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Subcontract PO 35334144 Section G, Annex G2 - SDRL Rev NR

SDRL No.	1		Initial Delivery Date	1.1	No. of Copies	Format	Approval
LE-009	Diagnostic Support	SOW	10 Days prior to	30 days	1-E	Subcontractor	A/10
	Data	G.7.11	CDR	post CDR		Format	
Refer to DID LE-009.							

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Land Systems - Canada

Subcontract PO 35334144 Section G, Annex G2 - SDRL Rev NR

Description	Subcontract	Initial Delivery	Frequency	No. of	Format	Approval
	Reference	Date		Copies		
OM Plan	SOW G.8.2	With Proposal	1MAC	1-E	Subcontractor Format	I
D OM-001						
OM Candidates List	SOW G.8.3	With Proposal	C		Subcontractor Format	A/15
D OM-002						
OM Issues Report	SOW G.8.4	With Proposal	C		Subcontractor Format	A/15
	OM Plan OM-001 OM Candidates List O OM-002	Reference OM Plan SOW G.8.2 O OM-001 OM Candidates List SOW G.8.3 O OM-002 OM Issues Report SOW	Reference Date OM Plan SOW With Proposal O OM-001 OM Candidates List SOW With Proposal G.8.3 With Proposal O OM-002 OM Issues Report SOW With Proposal	Reference Date OM Plan SOW With Proposal 1MAC O OM-001 OM Candidates List SOW G.8.3 With Proposal Quarterly — Concurrent with OM Issues Report O OM-002 OM Issues Report SOW With Proposal Quarterly — Concurrent with OM Issues Report O OM-002 OM Issues Report SOW G.8.4 With Proposal Quarterly — Concurrent with OM Candidates	Reference Date Copies	Reference Date Copies

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DID PM-001

Data Item Descriptions

1. TITLE: 2. IDENTIFICATION NO.:

Program Management Plan (PMP) DID PM-001

3. **DESCRIPTION/PURPOSE:** 4. **APPLICABLE REFERENCES:**

The PMP shall describe how the Subcontractor intends to provide effective Program Management

conducted and the methods, procedures and controls used to assure effective Program Management.

TO BE SUBMITTED TO:

6. APPROVAL LIMITATION:

GDLS-Canada Subcontracts Management A/30

7. INITIAL DELIVERY: 8. REVISIONS/FREQUENCY:

Initial copy with proposal Final copy 15 days after a ward of contract. Updates as

required.

SDRL PM-001

SOW G.2.2.1 of the Work, how it is organized, how it

9. **PREPARATION INSTRUCTIONS:**

SECTION

5.

- 9.1 <u>General</u>. The format shall be suitable for the use of the PMP as an overview of the system for Subcontractor personnel as well as detailing the Subcontractor's arrangements for management and control of the Work. Where identified, annexes shall be prepared, delivered and amended in accordance with their respective DIDs.
- 9.2 <u>Content</u>. The following represents the recommended content of the PMP. GDLS- Canada may approve Subcontractor proposed alternatives to this PMP as long as the requirements of this DID are met.

<u>BLC HOIL</u>	ITTEE
1.0	Introduction, Purpose and Scope
2.0	Organisational Arrangements
3.0	Program Management Approach and Processes
4.0	Spare Parts Management
5.0	Risk Management
6.0	Data Management
7.0	Production Management
8.0	Procurement and Subcontract Management

TITI E

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Land Systems - Canada

9.3

Subcontract PO 35334144 Section G, Annex G2 - SDRL Rev NR

9.0	Engineering
10.0	Configuration Management
11.0	Quality Assurance
12.0	Logistics Engineering Management
13.0	Business and Financial Management
	ANNEXES
A	Work Breakdown Structure
В	Master Program Management Schedule
C	Delivery Schedule
D	Cash Flow Forecasts
Е	List of Figures
F	List of Acronyms
G	Master Review and Audit Plan
Н	Risk Management Plan
I	Subcontract Management Plan

GDLS-C Proprietary Information

DID PM-003

Data Item Descriptions

1. TITLE: 2. IDENTIFICATION NO.:

Master Project Management Schedule (MPMS)

DID PM-003

3. <u>DESCRIPTION/PURPOSE:</u> 4. <u>APPLICABLE REFERENCES:</u>

THE MPMS shall schedule and report all elements of the SDRL PM-003 subcontractor's Work defined by the approved WBS. SOW G.2.4.2.

5. TO BE SUBMITTED TO: 6. APPROVAL LIMITATION:

General Dynamics Land Systems-Canada Corporation A/30 Subcontract Management

7. <u>INITIAL DELIVERY:</u> 8. <u>REVISIONS/FREQUENCY:</u>

Initial draft due with proposal Final copy due 15 days AOC Updates as required.

9. **PREPARATION INSTRUCTIONS:**

9.1 The subcontractor shall ensure the MPMS clearly identifies:

- a) all activities necessary to complete each WBS
- b) actual performance for each activity completed or in progress for all previous and current reporting period
- c) detailed activity scheduling for the next reporting period
- d) key milestones beyond the next reporting period e) the expected duration for all scheduled activities

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DID PM-006

Data Item Descriptions

1. TITLE: 2. IDENTIFICATION NO.:

Meeting Agenda DID PM-006

3. **DESCRIPTION/PURPOSE:** 4. **APPLICABLE REFERENCES:**

To provide an agenda to General Dynamics Land Systems-Canada Corporation in support of meetings and reviews.

SOW G.2.5.6

SDRL PM-006

5. TO BE SUBMITTED TO: 6. APPROVAL LIMITATION:

General Dynamics Land Systems-Canada Corporation A/2 Subcontract Management

7. <u>INITIAL DELIVERY:</u> 8. <u>REVISIONS/FREQUENCY:</u>

5 days prior to planned meeting date NA

9. **PREPARATION INSTRUCTIONS:**

- 9.1 The agenda shall address the following:
 - a) the scope, purpose and objectives of the review or meeting,
 - b) time, date, location and anticipated duration
 - c) suggested Government attendees
 - d) General Dynamics Land Systems-Canada Corporation attendees e) Subcontractor attendees
 - f) Need for any General Dynamics Land Systems-Canada Corporation or Government documentation to be presented at the review or meeting
 - g) Alternative dates and location for General Dynamics Land Systems-Canada Corporation consideration
 - h) Security classification and visit clearance requirements
 - i) Review and acceptance of the minutes of the previous meeting
 - j) Status and update of current items under review
 - k) New subject items to be introduced by the subcontractor and/or the Government
 - 1) Other business

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DID PM-007

Data Item Descriptions

1. TITLE: 2. IDENTIFICATION NO.:

Meeting Minutes DID PM-007

3. <u>DESCRIPTION/PURPOSE:</u> 4. <u>APPLICABLE REFERENCES:</u>

Minutes shall describe the content of the reviews and meetings between General Dynamics Land Systems-Canada Corporation and the subcontractor.

Within 5 working days following meeting completion.

6. **APPROVAL LIMITATION:**

SDRL PM-007

SOW G.2.5.7

General Dynamics Land Systems-Canada Corporation

Subcontracts Management

INITIAL DELIVERY:

TO BE SUBMITTED TO:

5.

7.

REVISIONS/FREQUENCY:

A/10

8.

Revisions due within 3 wc rking days of General Dynamics Land Systems-Canada Corporation revisions

or comments.

9. **PREPARATION INSTRUCTIONS:**

- 9.1 The format shall provide for the clear identification of requests for action items resulting from such reviews and meetings and the individual, group or organisation responsible for pursuing such action and the schedule time for response to each action request.
- 9.2 Meeting Minutes shall be prepared in a brief narrative form aligned to the topics and sequencing of the discussions.
- 9.3 Meeting Minutes shall include hard copies of any presentation material used during the review.
- 9.4 Meeting Minutes shall be a true reflection of the discussions and shall not be construed as agreed until signed by the Project Authority.
- 9.5 Meeting Minutes shall, in addition to the above requirements, identify, as a minimum:
 - a) scope, purpose, meeting reference code and objectives of the review
 - b) time, date, location and attendees

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- c) security classification of the minutes
- d) proposed timing and location of any follow-up reviews
- e) distribution list
- 9.6 Meeting Minutes shall summarise the requests for action items, the assigned responsibility for responding to such requests and the schedule time for response.

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DID PM-008

Data Item Descriptions

1. TITLE:

IDENTIFICATION NO.: 2.

> Progress Report **DID PM-008**

DESCRIPTION/PURPOSE: 3.

The Progress Reports shall describe the progress made by the subcontractor in performing both subcontracted and directed work. The Progress Report shall be used by the subcontractor as the basis for developing PSR agendas.

4. **APPLICABLE REFERENCES:**

> SDRL PM-008 SOW G.2.4.3, G.2.6.1, G. 2.9.2.

REVISIONS/FREQUENCY:

5. **TO BE SUBMITTED TO:**

General Dynamics Land Systems-Canada Corporation Subcontracts Management

6. **APPROVAL LIMITATION:**

I

8.

7. **INITIAL DELIVERY:**

Monthly

One month after award of contract

9. **PREPARATION INSTRUCTIONS:**

- 9.1 Progress Reports shall present, in an easily readable form, a summary of, as a minimum:
 - Project Status: shall include an objective status of, but not limited to, the following:
 - subcontract value summary
 - ii) subcontract invoicing status
 - iii) milestone payment status
 - status of SCPs iv)
 - subcontract deliverable status v)
 - warranty status vi)
 - schedule status vii)
 - retrofit status viii)
 - ECP status ix)
 - waiver and deviation status x)
 - action item status xi)
 - risk status xii)
 - xiii) technical issue status
 - xiv) part order status

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- b) <u>Project Issues</u>: shall include a summary report, from Program Management, Engineering, Configuration Management, Quality Assurance, Production, and Logistics Engineering Management of all known project issues and concerns relating to subcontracted and directed Work.
- C) <u>Line of Balance Report:</u> shall be prepared, and provided as a separate attachment, for all subcontract activity and graphically depicted with supporting narrative.

The graph shall indicate the following elements:

- i) The Objective the cumulative delivery schedule
- ii) The Program the planned production
- iii) Progress the current performance
- iv) Comparison program progress to objective

The narrative shall contain the following:

- i) Explanation of variances from scheduled to actual
- ii) Statement of problems which resulted in variances
- iii) Corrective action taken
- iv) Proposed recovery schedules
- v) Impact on delivery schedule

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DID PM-011

Data Item Descriptions

1. TITLE: 2. IDENTIFICATION NO.:

Risk Management Plan DID PM-011

3. **DESCRIPTION/PURPOSE:** 4. **APPLICABLE REFERE**

The Risk Management Plan shall describe how the subcontractor intends to provide effective Risk Management for the System, how it is organized, how it will be conducted and the methods, procedures and controls used to assure effective management of risk.

SDRL PM-011 SOW G.2.9.1

A/30

5. TO BE SUBMITTED TO: 6. APPROVAL LIMITATIO

General Dynamics Land Systems-Canada Corporation

Subcontracts Management

7.

INITIAL DELIVERY: 8. REVISIONS/FREQUENC

Draft due with proposal. Final copy 15 days AOC. Updates as required.

9. **PREPARATION INSTRUCTIONS:**

- 9.1 The subcontractor shall establish, implement and maintain a Risk Management Plan that provides:
 - a) early identification of potential risk elements
 - b) monitoring of risk elements for significant trends that would indicate an increase or decrease in risk significance
 - c) Risk Data Management to identify and classify risk
 - d) Quick action to determine the extent of risk, to assess the options available to eliminate risk, to implement a preferred course of action, to monitor progress until a satisfactory solution is achieved and then report the results to management
 - e) A periodic review of unresolved problems and the conduct of a thorough analysis of the impact of these problems of the program
 - f) A review of all problems and their solutions utilising a "lessons learned" philosophy to improve early problem detection, improve methods of correcting and reducing the financial or schedule impact of future problems to the program.

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9.2 The Risk Management Plan shall include Risk Management Planning, Risk Identification, Qualitative and Quantitative Risk Analysis, Risk Response Planning, and Risk Monitoring and Control through an integrated approach involving cost, schedule, and technical performance, and shall contain as a minimum the following sections:

<u>SECTION</u>	TITLE
1.0	Scope, Application and Definitions
2.0	Risk Management Requirements
3.0	Risk Management Overview
4.0	Risk Management Process
5.0	Documentation
Annexes	As Required

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DID PM-013

Data Item Descriptions	

1. <u>TITLE:</u> 2. <u>IDENTIFICATION NO.:</u>

Subcontract Change Proposal DID PM-013

3. <u>DESCRIPTION/PURPOSE:</u> 4. <u>APPLICABLE REFERENCES:</u>

The purpose of this DID is to establish a standard content and form for the subcontractor or General Dynamics Land Systems-Canada Corporation to use when requesting a change to the subcontract.

poration to use when requesting a change to the subcontract. SOW G.2.12.

6.

SDRL PM-013

APPROVAL LIMITATIO N:

General Dynamics Land Systems-Canada Corporation Subcontracts

A/30

Management Stand Systems-Canada Corporation Subcontracts

7. <u>INITIAL DELIVERY:</u> 8. <u>REVISIONS/FREQUENC Y:</u>

As required As required

9. **PREPARATION INSTRUCTIONS:**

TO BE SUBMITTED TO:

5.

9.1 Submission shall be in accordance with the attached template.

9.2 All SCPs shall be accompanied by supporting data addressing the impact of the proposed change in the following areas:

- a) Operational
- b) Technical/Production
- c) Systems Engineering
- d) Logistics Engineering
- e) Quality Assurance
- f) Program Management
- g) Cost
- h) Risk
- i) Implication if not approved
- j) Other relevant factors and considerations
- 9.3 All SCPs shall be numbered sequentially by the subcontractor. ECPs shall be referenced in the SCPs to which they correspond.
- 9.4 Revisions to SCPs shall be allocated a revision number by the subcontractor.

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		PRIORITY (Tick as appropriate)	
		EMERGENCY	
SUBCONTRACT PURCHASE ORDER	USA	URGENT	
SUBCONTRACT CHANGE PROPOSA	AL	ROUTINE	
SUBCONTRACT REFERENCE:	SERIAL NU	JMBER:	
WBS NO:	ECP REFER	ENCE:	
ITEM IDENTIFICATION:			
TITLE AND SUMMARY OF PROPOSED CHANGE:			
DETAIL OF PROPOSED CHANGE AND REASON:			
SUBCONTRACT DOCUMENTATION AFFECTED:			
LIST OF REVISED SUBCONTRACT DOCUMENTATION	ION PAGES A	FFECTED:	
GDL	S-C Proprietar	y Information	
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			Page 2 of 3

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		HASE ORDER		
	SUBCONTRACT	CHANGE PROPOSA	L SERIAL Y	NO:
IMPACT (Tick as appropriate)			J. J	
SCH Yes COST	Yes WEIGHT	Yes PERFOR MANCE	Yes OTHER	Yes
No 🔲	No	No	No	No
AII Yes RISK	Yes ILS	Yes PROD	Yes ENG	Yes
No 🔲	No	No	No	No
DESCRIPTION OF IMPACT: (At	tach Details)			
ORIGINATOR'S SIGNATURE			TITLE	
ORGANISATION			DATE	
SUBCONTRACTOR AUTHORIS	ED SIGNATORY		Approve	d 🔲
	Signature		Not Appr	roved
	_ Title		Date	
GENERAL DYNAMICS LAND S CANADA CORPORATION RESI	A100 (100 (100 (100 (100 (100 (100 (100	APPROVED	NOT APPRO	OVED
REMARKS:	ı			
		CORPORATION AU	THROISED SIGNAT	ORY
Date				
	GDLS	S-C Proprietary Inform	ation	

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Subcontract PO 35334144 Section A Rev 03/10/2011

DID PM-014

Data Item Descriptions

1. TITLE: 2. IDENTIFICATION NO.:

Production Management Plan DID PM-014

3. <u>DESCRIPTION/PURPOSE:</u> 4. <u>APPLICABLE REFERENCES:</u>

The Production Management Plan shall describe how the subcontractor intends to provide effective Production Management for the subcontractor's work, how it is organized, how it will be conducted and the methods, procedures and controls used to assure effective production management.

SDRL PM-014

SOW G.6.2

5. TO BE SUBMITTED TO: 6. APPROVAL LIMITATION:

General Dynamics Land Systems-Canada Corporation Subcontracts Management

A/30

7. <u>INITIAL DELIVERY:</u> 8. <u>REVISIONS/FREQUENCY:</u>

Draft due with Proposal Final copy 15 days AOC. Updates as required.

- 9. **PREPARATION INSTRUCTIONS:**
- 1 The Production Plan shall include the following information and data:
- a) Overview of Manufacturing Organisational Arrangements. The Plan should explain the manufacturing management organisation, which will implement and maintain surveillance over all elements of manufacturing. Provide organizational charts and explain functional responsibilities of the manufacturing manager and other key manufacturing personnel to be assigned.
- b) Resource and Manufacturing Capability. This section shall include:
 - i) Industrial Facilities
 - Provide a breakdown of Subcontractor facilities to be used in support of the System.
 - List facilities required by the Subcontractor including modification of existing facilities. This listing will contain the items, lead time and required date related to the Master and Support Schedules.

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- ii) **Manpower (Tooling and Manufacturing).** Prepare Charts or tables with forecasts at monthly intervals of tooling and manufacturing (direct and indirect) personnel resources required to support the manufacturing program.
- iii) Materials Identify any special or hard-to-get material to be utilized on the manufacturing program which relate to previous applications. Present data to justify the selection of new or critical alloys and lead time required to ensure their availability to meet the proposed schedule
- iv) **Components** Identify new major units of assemblies to be developed and existing ones that require redesign. Depict their development/testing and production lead times within the MPMS.
- v) Tooling Plan and special tooling Submit details on tooling philosophy covering planning, fabrication, control and manufacturing, identifying clearly the extent of 'soft' (limited) and/or 'hard' (durable) tooling. The plan will identify each item of special tooling which could be considered as 'common' to manufacturing requirements or maintenance support. The duration of use for this property to support production will be explained, together with an estimated use upon completion of the effort to be carried out by the Subcontractor and Sub-Subcontractors.
- c) Identify by category the special tooling that should be retained for spares support, after phase-out of the production program.
- **d) Production Planning**. This section shall include details on the following:
 - Delivery schedule. Depict the production schedule that will support the contracted delivery schedule for all Deliverable End Items to be produced.
 - ii) **Production Work Breakdown Structure (PWBS)**. Provide a logical framework to describe all the production activities and to support schedule monitoring. This shall be traceable to the Approved WBS.
 - iii) **Manufacturing Lead Time**. Depict the relationship of time-phased milestones for in-plant and subcontracted effort from the Effective Date of the Subcontract to the delivery of all Deliverable End Items.
 - iv) **Production Control**. Provide an explanation of the existing or proposed production control system. Details of the system should be outlined to ensure that the planned project can be accomplished. The relationship between configuration control, quality control and production control shall be explained.
 - v) **Plant Utilization**. Describe any other production scheduled to occur concurrently. In particular identify anticipated production constrictions as a basis for determining any production rate tooling costs.

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DID PM-015

Data Item Descriptions

1. <u>TITLE:</u> 2. <u>IDENTIFICATION NO.:</u>

Line of Balance DID PM-015

3. <u>DESCRIPTION/PURPOSE:</u> 4. <u>APPLICABLE REFEREN CES:</u>

To provide details on major LRUs being delivered to the Subcontractor's facility in support of final system deliveries.

SDRL PM-015

SOW G.6.2.2

I

5. <u>TO BE SUBMITTED TO:</u> 6. <u>APPROVAL LIMITATION:</u>

General Dynamics Land Systems-Canada Corporation Subcontracts Management

7. <u>INITIAL DELIVERY:</u> 8. <u>REVISIONS/FREQUENCY:</u>

1 MAC Weekly

PREPARATION INSTRUCTIONS:

- 9.1. The Subcontractor shall submit a line of balance showing top level kit part number and deliveries to GDLS by date.
- 9.2. The kit part number will then be broken down to next level of indenture showing dates of completion in Subcontractor's facility.
- 9.3. The Subcontractor shall include a listing of all major LRUs for the seat and associated hardware showing detailed deliveries dates from their down suppliers to the Subcontractor's facility in support of final kit delivery. Example as follows:

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			Due Date #1	Due Date #2
Kit P/N			Quantity of Kits Due	Quantity of Kits Due
	Item #1 P/N (# per kit)		Date Completed, Quantity Date Completed, Quantity, etc.	Date Completed, Quantity Date Completed, Quantity, etc.
		Major LRU #1 (# per Item #1)	Delivery Date, Quantity Delivery Date, Quantity, etc.	Delivery Date, Quantity Delivery Date, Quantity, etc.
		Major LRU #2, etc. (# per Item #1)	Delivery Date, Quantity Delivery Date, Quantity, etc.	Delivery Date, Quantity Delivery Date, Quantity, etc.
	Item #2 P/N (# per kit)		Date Completed, Quantity Date Completed, Quantity, etc.	Date Completed, Quantity Date Completed, Quantity, etc.
		Major LRU #1 (# per Item #2)	Delivery Date, Quantity Delivery Date, Quantity, etc.	Delivery Date, Quantity Delivery Date, Quantity, etc.

9.4. The line of balance shall be updated as changes occur and submitted to GDLS on a weekly basis clearly showing any delta changes from one week to the next. Any changes shall be discussed during telecons with GDLS.

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DID CM-002

Data Item Descriptions

1. **TITLE:**

2. **IDENTIFICATION NO.:**

Engineering Change Proposal

DID CM-002

3. <u>DESCRIPTION/PURPOSE:</u>

4. <u>APPLICABLE REFERENCES:</u>

An engineering Change Proposal (ECP) includes both the engineering change and the documentation by which the change is described and suggested. An ECP describes the changes to the configuration items and associated configuration documentation that are affected by the proposed engineering change.

DID DI-CMAN-80639C Engineering Change Proposal(ECP)

SDRL CM-002

SOW G.3.4.1, 3.5.3

5. **TO BE SUBMITTED TO:**

GDLS-C Subcontract Management

6. **APPROVAL LIMITATION:**

Submission of ECPs for information purposes shall be initiated from date of completion of each CDR.

Formal submission of ECPs shall occur upon establishment of the PCB. Approval limitations for formal submissions are as follows:

Class I changes:

Emergency 96 Hours ,Urgent 30 days,Routine:90 days

Class II ECPs: shall be submitted to GDLS-C for concurrence of classification

7. <u>INITIAL DELIVERY:</u>

8. **REVISIONS/FREQUENCY:**

As required

From Completion of CDR

9. **PREPARATION INSTRUCTIONS:**

9.1 Format and content: The Engineering change proposal shall be prepared in Subcontractor format. The ECP shall include, as applicable, the information as delineated in DID DI-CMAN-80639C.

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Subcontract PO 35334144 Section A Rev 03/10/2011

DID CM-3

Data Item Descriptions

1. <u>TITLE:</u> 2. <u>IDENTIFICATION NO.:</u>

Functional Configuration Audit (FCA) / Physical Configuration Audit (PCA) Plan

DID CM-003

3. <u>DESCRIPTION/PURPOSE:</u> 4. <u>APPLICABLE REFERENCES:</u>

The Subcontractor's FCA/PCA Plan (CMP) shall provide the Contractor with an overview of the preparation and planning for the FCA/PCA activity.

MIL-HDBK-61A Configuration Management Guidance (Section 8)

DID DI-CMAN-80556A

SDRL CM-003

SOW Para. G.3.7.3

5. <u>TO BE SUBMITTED TO:</u> 6. <u>APPROVAL LIMITATION:</u>

GDLS-C Subcontract Management A/15

7. <u>INITIAL DELIVERY:</u> 8. <u>REVISIONS/FREQUENCY:</u>

Due with proposal 30 days prior to Configuration Audit

9. **PREPARATION INSTRUCTIONS:**

9.1 The FCA/PCA Plan shall be prepared using DI-CMAN-80856A as a Guide.

9.2 MIL-HDBK-61A Section 8 shall be used as guidance in identifying those areas of the audit planning process and pre-audit preparation that should be identified in the Plan.

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DID CM-4

Data Item Descriptions

SDRL CM-004

SOW G.3.7.2, G.3.7.4.2

1. TITLE: 2. IDENTIFICATION NO.:

Audit Agenda DID CM-004

3. <u>DESCRIPTION/PURPOSE:</u> 4. <u>APPLICABLE REFERENCES:</u>

Configuration Audit Agendas are documents that describe particulars with regard to scheduled audit dates, attendance and events during the course of the audit. Audit Agendas are provided in accordance with the requirements of the FCA and PCA Plan (Ref DID CM-003)

5. TO BE SUBMITTED TO: 6. APPROVAL LIMITATION:

GDLS-C Subcontract Management A/30

7. <u>INITIAL DELIVERY:</u> 8. <u>REVISIONS/FREQUENCY:</u>

10 days prior to schedule date of the Configuration Audit.

10 days prior to scheduled date of all other FCA/PCA audits

9. **PREPARATION INSTRUCTIONS:**

9.1 Contractor Subcontractor format for the agenda is acceptable; the minimum content of each document is as follows:

- 9.2 Audit Agenda: The agenda shall contain as a minimum the following agenda items and reference material:
 - a. Audit date, location and a list of attendees
 - b. Duration
 - c. Daily Chronological listing of events which are to take place.
 - d. PCA candidates list shall be provided with the PCA Agendas

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DID CM-5

	Data Item Descriptions		
TITLE:	2.	IDENTIFIC	

3. **DESCRIPTION/PURPOSE:**

Audit Report

1.

A Configuration Audit Report details the results of the audit and is provided in accordance with the requirements of the FCA/PCA Plan. **IDENTIFICATION NO.:**

DID CM-005

APPLICABLE REFERENCES: 4.

> DID DI-CMAN-81022C Configuration Audit Report

SDRL CM-005

SOW G.3.7.4.3

5. **TO BE SUBMITTED TO:**

GDLS-C Subcontract Management

6. **APPROVAL LIMITATION:**

7. **INITIAL DELIVERY:**

30 days after successful completion of FCA/PCA

REVISIONS/FREQUENCY: 8.

As required

9. **PREPARATION INSTRUCTIONS:**

- 9.1 The contractor shall prepare audit reports in accordance with DI-CMAN-81022C.
- 9.2 Contractor format for the agenda and report is acceptable; the minimum content of the audit report is as follows:
 - Identification of hardware and/or documentation audited a.
 - b. Identification of reference documents used during the conduct of the audit
 - Identification of the audit agenda c.
 - d. List of personnel involved
 - Action items identified, responsible individuals assigned to each action item, e.
 - Status and schedule date for clearing each action item.
- 9.3 Revisions shall be provided until all outstanding FCA/PCA discrepancies are addressed and closed.

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DID CM-6

Data Item Descriptions

8.

1. <u>TITLE:</u> 2. <u>IDENTIFICATION NO.:</u>

Request for Deviation (RFD)

DID CM-006

3. <u>DESCRIPTION/PURPOSE:</u>

A request for deviation describes the proposed(prior to manufacture) departure from configuration documentation for a specific number of units or for a specified period of time. A request for Deviation enables GDLS-C to determine the impact on performance, operational readiness, logistics support, or other affected areas.

4. <u>APPLICABLE REFERENCES:</u>

MIL-HDBK-61A Configuration Management Guideline Section 6.

SDRL CM-006

SOW G.3.5.4

5. **TO BE SUBMITTED TO:**

GDLS-C Subcontract Management

6. **APPROVAL LIMITATION:**

GDLS-C Approval Limitations are:

REVISIONS/FREQUENCY:

Critical: 2 Days Major: 5 Days Minor: 10 Days

7. <u>INITIAL DELIVERY:</u>

As Required As Required

9. **PREPARATION INSTRUCTIONS:**

Subcontract format for the Request for Deviation (RFD) is acceptable. Classification of RFDs shall be in accordance with MIL-HDBK-61A Section 6.3.1

- 9.1 All classification of RFDs shall be submitted to GDLS-C for approval.
- 9.2 Recurring Deviations are discouraged and may result in the submittal of a Class I ECP.
- 9.3 RFD content shall be in accordance with MIL-HDBK-61A Table 6-9

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Subcontract PO 35334144 Section A Rev 03/10/2011

DID CM-007

Data Item Descriptions

1. <u>TITLE:</u> 2. <u>IDENTIFICATION NO.:</u>

Configuration Status Accounting Reports DID CM-007

3. <u>DESCRIPTION/PURPOSE:</u> 4. <u>APPLICABLE REFERENCES:</u>

Configuration Status Accounting Reports document the SDRL CM-007 configuration status (including proposed changes, deviations) of the configuration items and their related documentation SOW Para. G.3.9

5. <u>TO BE SUBMITTED TO:</u> 6. <u>APPROVAL LIMITATION:</u>

GDLS-C Subcontract Management N/A

7. INITIAL DELIVERY: 8. REVISIONS/FREQUENCY:

10 days prior to PCA or FPI Monthly until 30 days after the last End Product delivery

9. **PREPARATION INSTRUCTIONS:**

9.1 General: The Subcontractor shall provide Configuration Status Accounting Reports which shall include the following:

- a. An ECP index listing the ECPs (number, revision, correction, date raised, title, type, class, status and the Configuration Items (CI), part number and documentation affected.
- b. A Deviation index listing the deviations (number, date raised, title, status and affectivity.

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Subcontract PO 35334144 Section A Rev 03/10/2011

DID CM-008

Data Item Descriptions

1. TITLE: 2. IDENTIFICATION NO.:

Indented Bill of Material (IBOM)

DID CM-008

3. <u>DESCRIPTION/PURPOSE:</u> 4. <u>APPLICABLE REFERENCES:</u>

The IBOM defines the Product <u>Baseline</u> of the Equipment/System and shall provide a complete indentured breakdown to individual piece part. Both hardware and software items are to be shown. Amendments to the IBOM shall be required to reflect all approved configuration changes. If there are no changes to the IBOM then the applicable quarterly update is not required.

6.

APPROVAL LIMITATION:

SDRL CM-008

SOW G.3.10

GDLS-C Subcontract Management A/10

7. <u>INITIAL DELIVERY:</u> 8. <u>REVISIONS/FREQUENCY:</u>

Concurrent with initial delivery of CM-007 CSA/LE-002 Delivery and

Monthly concurrent with CM-007 CSA Delivery , LE-002 and / or TDP Updates

9. **PREPARATION INSTRUCTIONS:**

TO BE SUBMITTED TO:

5.

9.1 The IBOM shall as a minimum include the following:

- (a) Cover sheet to include;
 - (1) Title of report,
 - (2) System nomenclature,
 - (3) Contract number,
 - (4) Issue date,
 - (5) Contractor's name and address, and

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- (6) Section identifier (if sections are separately bound);
- (b) A forward that briefly explains the purpose/intent of the IBOM, followed by: a definition of data elements used in the IBOM; a list of applicable CAGE Codes; and a list of non-standard abbreviations;
- (c) The IBOM shall be a top-down generation breakdown of each System or major equipment.
- 9.2 The IBOM shall be submitted on CD-ROM or a mutually agreed delivery media.
- 9.3 The data shall be in a common data format, preferable Excel or Access. The data shall not be write-protected and shall allow filtering and sorting.
- 9.4 Data elements to include in the IBOM are not restricted. The Subcontractor can include any other data elements that are judged necessary as a management tool:
 - (a) As a minimum the following data elements are required;

DATA ELEMENT DEFINITION

Part Number Part Number;

Item Nomenclature Item Nomenclature;

Indenture Level Breakdown Level;

Revision Level of Document:

Parent Part Number Part Number and Parent Assembly; [CCP 20]

Document Number Document Identification

Number (must be unique);

Quantity Per Assy Number found in each parent assembly;

(b) The following data elements will also be included if available at the time of preparation:

DATA ELEMENT DEFINITION

Model Model of Item; NSN NATO Stock Number; STD-Unit-Price Standard Unit Price; CI-Acronym CI Acronym;

9.5 The Subcontractor can use any code already in use, but these codes must be explained.

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DID CM-009

Data Item Descriptions

1. <u>TITLE:</u> 2. <u>IDENTIFICATION NO.:</u>

Functional Configuration Audit (FCA) System Spec Verification

DID CM-009

3. <u>DESCRIPTION/PURPOSE:</u> 4. <u>APPLICABLE REFERENCES:</u>

The FCA Verification Matrix identifies the method of verification used for compliance to the System Spec Performance. The Matrix shall be used for each FCA.

Performance Specification

SDRL CM-009

SOW G.3.7.1.1

5. TO BE SUBMITTED TO: 6. APPROVAL LIMITATION:

GDLS-C Subcontract Management A/30

7. <u>INITIAL DELIVERY:</u> 8. <u>REVISIONS/FREQUENCY:</u>

FCA verification Matrix Template to be provided with proposal Provided concurrent with each FCA Plan

9. **PREPARATION INSTRUCTIONS:**

9.1 The Subcontractor shall prepare the System Specification Compliance Matrix for System Specification verification. All requirements of the System Specification must be addressed

As a minimum the Compliance matrix shall include the following:

a. Title of Verification Matrix with revision control

Columns arranged to depict the following:

- b. Item#
- c. Performance Specification
- d. Specification Description
- e. Title of the Specification Section
- f. The method of verification i.e.,
 - Government Test (GT)
 - Subcontractor Test (ST)
 - Subcontractor Demo (Sd)
 - Subcontractor Analysis

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- Inspection/Test (X)
- Certification (X*)

Note: Each method may be a separate column

g. Subcontractor Documentation

(This column should identify the Subcontractor documentation to be audited for Specification compliance)

h. Discrepancy

(This column to identify whether a discrepancy is raised against the Specification paragraph. Should there be a discrepancy, the discrepancy number should be identified in this column otherwise it should be indicated that no discrepancy was observed).

- i. Status(Open or Closed)
- j. Comments k. Actionee
- 1. Closure Date

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DID CM-010

Data Item Descriptions

1. <u>TITLE:</u> 2. <u>IDENTIFICATION NO.:</u>

Technical Data Package (TDP)

DID CM-010

3. <u>DESCRIPTION/PURPOSE:</u> 4. <u>APPLICABLE REFERENCES:</u>

The TDP comprises the final, baseline, engineering drawings, associated lists and supporting data

MIL-STD-31000 Technical Drawing Packages

ASME Y14.100-2004 Engineering Drawing

Packages

SDRL CM-010

SOW G.3.8.3

5. <u>TO BE SUBMITTED TO:</u> 6. <u>APPROVAL LIMITATION:</u>

GDLS-C Subcontract Management A/10

7. <u>INITIAL DELIVERY:</u> 8. <u>REVISIONS/FREQUENCY:</u>

Samples Drawings with proposal (hard copy one soft copy). As required, no later than 15 days after ECP

approval. 60 days after CDR

9. **PREPARATION INSTRUCTIONS:**

9.1 The TDP drawings and associated lists and supporting data for the System shall be prepared in accordance with the following:

a. Existing Drawings will be acceptable if they meet the requirements of MIL-STD- 31000.

b. New Drawings and parts lists created by the Subcontractor in support of the subcontract shall meet the requirements of MIL-STD-31000 Drawings shall be prepared IAW ASME Y14.100-2004 Engineering Drawing Packages.

9.2 The TDP should be supplied in digital format. TIF or PDF format are acceptable but must meet 200 dpi minimum resolution.

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9.3 The naming convention for the Drawing files being delivered under the SDRL that comprise the TOP shall be mutually agreed agreed before submittal.

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DID CM-004

Data Item Descriptions

TITLE: **IDENTIFICATION NO.:** 1. 2.

CAD Model DID ENG-004

APPLICABLE REFERENCES: DESCRIPTION/PURPOSE: 3. 4.

SDRL ENG-004 The CAD Model shall be generated for the System.

Revisions to the CAD Model shall be required to reflect all G.4.9.1 configuration changes.

5. **TO BE SUBMITTED TO:**

7.

6. **APPROVAL LIMITATION:**

General Dynamics Land Systems-Canada Corporation Subcontract I

Management

INITIAL DELIVERY 8. **REVISIONS/FREQUENCY:**

With Proposal At SFR, PDR, CDR and as required.

9. PREPARATION INSTRUCTIONS

- The subcontractor shall submit a concept design 10 days following the SFR and 10 days prior to PDR and CDR. The CAD model 9.1 showing the proposed System integration shall form the basis of the design review.
- 9.2 The subcontractor shall provide one (1) electronic copy (UG.PRT files to version 18 or earlier) at each revision and/or issue.
- 9.3 General. The CAD Model shall, as a minimum, include the following:
 - The CAD Model shall represent all the elements of the System as defined by the program requirements including Interface Control Document (ICD) information.
 - b. The CAD Model shall be a representation of the System in its entirety.
 - The CAD Model shall indicate the current revision status at each issue under an agreed configuration management regime.
- 9.4 The Subcontractor shall deliver, to the GDLS, the CAD Model as follows:

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- a. In STEP format compatible with version 18 (or earlier) of UniGraphics engineering software package and Safework human modeling package.
- b. File sizes shall be restricted to TBD.
- c. CAD files shall be delivered on CD or over secure email/web system.
- 9.5 Data elements included in the CAD Model are not restricted. The Subcontractor may include other data elements that are judged necessary as a management tool.
 - a. As a minimum the following data elements are required;

<u>DATA ELEMENT</u> <u>DEFINITION</u>

Part Number Part Number; Item Nomenclature Item Nomenclature; Indenture level Breakdown Level;

Revision Level of Document;

b. The following data elements may be included if available at the time of preparation:

c.

<u>DATA ELEMENT</u> <u>DEFINITION</u>

NSN NATO Stock Number;

NSCM NATO Supply Code for Manufacturers

9.6 Subcontractor can use any code already in use, but these codes must be explained.

9.7 If the Subcontractor has an CAD Model system in place, a copy of the format shall be submitted for GDLS-C approval but shall be compatible with version 18 (or earlier) of the UniGraphics engineering software package.

GDLS-C Proprietary Information

DID ENG-006

Data Item Descriptions

1. **TITLE:**

7.

2. **IDENTIFICATION NO.:**

Drawings

DID ENG-006

3. **DESCRIPTION/PURPOSE:**

4. APPLICABLE REFERE NCES:

SDRL ENG-006 G.4.7.1, G.4.8.1

To provide drawings for review.

6. APPROVAL LIMITATIO N:

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5. **TO BE SUBMITTED TO:**

General Dynamics Land Systems-Canada Corporation Subcontract Management

INITIAL DELIVERY

8. REVISIONS/FREQUENC Y

At SFR, PDR, CDR and as required

With Proposal

9. **PREPARATION INSTRUCTIONS**

- 9.1 The Subcontractor shall submit preliminary drawings depicting the System in its entirety. Drawings, if preliminary, must include all dimensions, bills of material, material specifications, Interface Control Document (ICD) information, and other engineering notes that would be needed for manufacturing. These drawings shall be available for review with proposal.
- 9.2 The subcontractor shall submit a drawing package containing any updates needed since the proposal 10 days prior to a Design Review. The drawing package submitted for the CDR shall be complete and ready for release pending any required changes driven by the CDR. Review of these drawings will form a part of the CDR agenda.

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DID ENG-008

Data Item Descriptions

1. **TITLE:**

Hazardous Material Management Report

3. **DESCRIPTION/PURPOSE:**

To provide report, based on Hazardous Material Management Plan.

5. **TO BE SUBMITTED TO:**

General Dynamics Land Systems-Canada Corporation Subcontracts Management

7. <u>INITIAL DELIVERY:</u>

30 days after award of contract

2. <u>IDENTIFICATION NO.:</u>

DID ENG-008

4. **APPLICABLE REFERE NCES:**

SDRL ENG-008

SOW G.4.16.2

6. **APPROVAL LIMITATIO N:**

A/30

8. **REVISIONS/FREQUENC Y:**

One/R

9. **PREPARATION INSTRUCTIONS:**

If a material fits one or more of these categories, it will require reporting in the HMMR. This list is not all encompassing, but should identify most of the targeted products.

- All liquids, gases, pastes, powders, gels, aerosols, and many solids.
- Any product which generates dust, fumes, fog, vapor, etc. during shipping, storage, handling, production, use or disposal.
- Any product which is recommended for use with specific ventilation requirements.
- Any material recommended for use with personal protective equipment (PPE).
- Any material stored in a pressurized cylinder or container.
- Any plating methods that contain hazardous materials
- Any radioactive material

Examples of these products include (but are not limited to):

- (1) Adhesives, Bonding Agents, Glues, Loctites, etc.
- (2) Aerosols
- (3) Castings, Forgings, which are machined on-site
- (4) Cleaners
- (5) Coal
- (6) Compressed Gases
- (7) Construction Steel (e.g. angle iron, flat stock, channel iron, l-beams)
- (8) Coolants

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- (9) Cutting Oils
- (10) Drawing Compounds
- (11) Epoxies
- (12) Flux (soldering flux, welding flux, furnace flux)
- (13) Fuels (gasoline, kerosene, diesel fuel)
- (14) Furnace Refractory Material
- (15) Insulation (e.g. fiberglass)
- (16) Lubricating Oils and Greases
- (17) Metalworking Fluids
- (18) Paint and Related Items (e.g. thinners, varnishes)
- (19) Pesticides
- (20) Plastic Resin
- (21) Sealers
- (22) Shot (for shot peening)
- (23) Soaps
- (24) Solder
- (25) Solvents
- (26) Tapping Compounds
- (27) Welding Rods and Wires
- (28) Plating

Report Content. The Hazardous Materials Management Report (HMMR) shall include the following information:

Table of contents -State in narrative form the purpose of the HMMR

Executive Summary, basic, less than a page, overview of report, should include BRIEF history of part, BRIFF research methodology, and overview of findings.

Section 1: History and Purpose

- a) Introduction Description of the document and its overall status. Basic assemblies require about a paragraph of information.
- b) Purpose and scope The scope and goals of the document, and what it will achieve and include, again a paragraph is fine with a basic assembly.

Section 2: System Description and Purpose

Important, this overview (~ half a page) will detail the system itself, what its role will be and what its expected performance is. This will help in the analysis of what hazardous materials are actually required for it to perform its job function.

Section 3: Hazardous Materials

- a) Overview the how, what, where, when, and why of their hazardous materials.
- b) Determination of Hazard or Analysis Methods this documents how your company determines the level of hazard associated with a material, and methods of determining how a material gets included as a hazardous material.
- Research Methodology detailed information explaining how parts are captured using your described criteria and how they
 are controlled or tracked.

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- d) Results of Analysis As a result of a hazardous materials analysis, summary tables are to be included in this report. For each part/item identified as hazardous, the following information shall also be included:
 - The part number you are detailing to include, were applicable, both your companies number and the GM part number
 - The Nomenclature of that part
 - The Hazardous Material component for that part
 - Its application in the completed assembly
 - If the material poses a serious threat to human health or the environment, indicate whether or not there is an alternate material option for that part/application
 - Where applicable the Variant for which the part is being supplied

Each part/item identified as hazardous shall be grouped into 1 of 3 categories.

- (i) Construction Materials Consumables. These would be materials that once used to assemble the system would not require to be reapplied in the future and would have no adverse effects on human/environmental health after delivery.
- (ii) Maintenance Materials Consumables. These would be materials that would be required for the ongoing maintenance of the vehicle, and therefor may come in contact with personnel in its reapplication during maintenance or repair.
- (iii) Construction Materials Persistent. These are materials that once applied will remain hazardous and present throughout the life of the part/assembly/vehicle, and may cause adverse health effects through release or exposure into the environment whether it is during operation or disposal.

<u>Section 4: Closure</u> - If there are any final points or information that is relevant but does not warrant it own are please include that here, along with any summary information you feel is necessary.

Appendices - Include anything you feel is relevant to ensure full information capture in your report.

- a) Documentation Any reference materials used in the creation of the report
- b) List of Abbreviation Where not clear in the document, or where there are large numbers of Abb. a list can be included
- c) Anything else as required.

The subcontractor shall provide one (1) electronic copy (in Microsoft Office compatible file formats).

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DID ENG-011

Data Item Descriptions

1. **TITLE:**

Human Factors Data Report

3. <u>DESCRIPTION/PURPOSE:</u>

To support General Dynamics Land Systems-Canada Corporation (GDLS-C) HFE Program

5. **TO BE SUBMITTED TO:**

General Dynamics Land Systems-Canada Corporation Subcontract Management

7. **INITIAL DELIVERY:**

5 days before General Dynamics Land Systems-Canada Corporation SFR 2. <u>IDENTIFICATION NO.:</u>

DID ENG 011

4. **APPLICABLE REFERENCES:**

SDRL ENG-011 SOW G.4.17.2

6. **APPROVAL LIMITATION:**

A/30

8. **REVISIONS/FREQUENCY:**

Final due 20 days before General Dynamics Land Systems-Canada Corporation PDR

9. **PREPARATION INSTRUCTIONS:**

<u>Contents.</u> The Human Factors Data Report (HFDR) shall include the following information: <u>Introduction.</u> State in narrative form the purpose of the HFDR.

<u>System Description.</u> This section may be developed by referencing other program documentation, such as technical manuals, etc., and shall include the following:

- a) The purpose and intended use of the system.
- b) A brief historical summary of system development.
- c) A brief description of the system and its components. Include name, type, model number, and general physical characteristics of the overall system and its major subsystems and components.
- d) A brief description of all human factors features associated with the system.
- e) As applicable, either photos, charts, flow/functional diagrams, sketches, orschematics to support the system description, task, or operation. <u>Human Factors Data.</u> This section shall include the following:
- Summarize the task description & analysis of activities performed by each Operator
- b) Summarize the type and frequency of interaction with each man-machine interface during normal operation

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c) Summarize the workload analysis for each operator during normal operation

<u>Conclusions and Recommendations.</u> Include a short assessment of the results of the HFE program efforts. Include a list of all major HFE tradeoffs during design development.

References. List all pertinent references such as Test Reports, Preliminary Operating

Manuals and Maintenance Manuals.

The subcontractor shall provide one (1) electronic copy (in Microsoft Office compatible file formats).

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DID ENG-012

Data Item Descriptions

1. **<u>TITLE:</u>**

2. **IDENTIFICATION NO.:**

Safety Assessment Report

DID ENG-012

3. <u>DESCRIPTION/PURPOSE:</u>

4. <u>APPLICABLE REFERENCES:</u>

The SAR is a comprehensive evaluation of the safety risks being assumed at contract completion. It identifies all safety features of the system, design and procedural hazards that may be present in the system being acquired, and specific procedural controls and precautions that should be followed.

Task 301 of MIL-STD-882 C

SOW G.4.18.2, G.4.18.3

5. **TO BE SUBMITTED TO:**

6. **APPROVAL LIMITATION:**

General Dynamics Land Systems-Canada Corporation Subcontract Management A/30

7. **INITIAL DELIVERY:**

8. **REVISIONS/FREQUENCY:**

5 days before General Dynamics Land Systems-Canada Corporation SFR Final due 20 days before General Dynamics Land Systems-Canada Corporation PDR

9. **PREPARATION INSTRUCTIONS:**

<u>Contents.</u> The Safety Assessment Report (SAR) shall include the following information:

Introduction. State in narrative form the purpose of the SAR.

System Description. This section may be developed by referencing other program documentation, such as technical manuals, etc., and shall include the following:

- a) The purpose and intended use of the system.
- b) A brief historical summary of system development.
- c) A brief description of the system and its components. Include name, type, model number, and general physical characteristics of the overall system and its major subsystems and components.
- d) As applicable, a description of any other system(s) which will be tested or operated in combination with this system.
- e) As applicable, either photos, charts, flow/functional diagrams, sketches, or schematics to support the system description, task, or operation.

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System Operations.

- a) Briefly describe or reference the procedures for operating the system. Discuss the safety design features and controls incorporated into the system as they relate to the operating procedures.
- b) Describe any special safety operational procedures needed to ensure safe operations, including emergency procedures.
- c) Describe anticipated operating environments, and any specific skills required forsafe operation, maintenance, and disposal.
- d) Describe any special facility requirements or personal equipment to support the system.

System Safety Engineering. This section shall include the following:

- a) Briefly summarize or reference the safety criteria and methodology used to classify and rank hazardous conditions.
- b) Describe or reference analyses and tests performed to identify hazardous conditions inherent in the system.
- c) List all hazards that have been identified and considered from the inception of the program in an appendix to this SAR. The list should be broken down to the subsystem or major component level.
- d) Discuss the hazards and the actions that have been taken to eliminate or control these hazards.
- e) Discuss the effects of these controls on the probability of occurrence and severitylevel of the potential mishaps.
- f) Discuss or reference results of tests conducted to validate safety criteria requirements and analyses.

Conclusions and Recommendations.

- a) Include a short assessment of the results of the safety program efforts. Include a list of all significant hazards along with specific safety recommendations or precautions required to ensure the safety of personnel and property. Categorize the list of hazards as to whether or not they may be expected under normal or abnormal operating conditions.
- b) For all hazardous materials generated by or used in the system, the following information shall be included:
 - Material identification as to type, quantity, and potential hazards.
 - Safety precautions and procedures necessary during use, storage, transportation, and disposal.
 - A copy of the Material Safety Data Sheet (or equivalent)
- c) Conclude with a statement signed by the Contractor System Safety Manager and the Contractor Program Manager stating that all identified hazards have been eliminated or controlled and that the system is ready to operate. In addition, the contractor shall make recommendations applicable to the safe interface

References. List all pertinent references such as Test Reports, Preliminary Operating Manuals and Maintenance Manuals.

The subcontractor shall provide one (1) electronic copy (in Microsoft Office compatible file formats).

GDLS-C Proprietary Information

DID ENG-013

Data Item Descriptions

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IDENTIFICATION NO.:

Performance Specification

APPLICABLE REFERE NCES:

SOW G.4.11.2, G.4.12.2, G.4.13.2,

APPROVAL LIMITATION:

REVISIONS/FREQUENCY

DID ENG-013

G.4.15.1,

A30

1. TITLE:

Qualification Matrix

DESCRIPTION/PURPOSE: 3.

> To provide a Qualification Matrix to all sections within the Performance Specification

5. TO BE SUBMITTED TO:

> General Dynamics Land Systems-Canada Corporation Subcontract Management

7. **INITIAL DELIVERY**

As Required

With Proposal

PREPARATION INSTRUCTIONS 9.

- 9.1 The subcontractor shall provide a Qualification Matrix indicating current compliance as well as planned and completed qualification activities for each requirement of the Performance Specification.
- 9.2 Initial delivery shall include requirement qualification assessment as well as any planned dates available. PDR delivery shall include updated qualification assessment, qualification plan document references, planned qualification dates, planned qualification report submittal dates, as well as any completed qualification data. CDR delivery shall include updated qualification assessment, and qualification results and report references.
- 9.3 All qualification activities required during the QUAL Phase shall be planned for completion prior to CDR.
- 9.4 The subcontractor shall provide an electronic copy of the qualification Matrix (inMicrosoft Office compatible format).
- 9.5 The format of the Qualification Matrix shall be as follows:

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DID ENG-013 Engineering Qualification Matrix - "Project Name"						Date:			Rev:			
				Subcontractor Verification				Subcontractor Verification				
Performance	:			Plan/Procedure	Planned		Report	Report		Discrepancy,		
Specificatio	nRequirement	Verification	Method of	Document	Verification	Verifcation	Submittal	Document		Actions or		Status
Para. Ref.	Description	Phase	Verification	(Rev./date)	Date	Location	Date	(Rev./Date)	Compliance	Comments	Actionee	(Open/Closed)

Qualification Categories = Qualification Achievable (requirements are not assessed compliant until verified), Compliant, Partial Compliant, Non-Compliant

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DID ENG-14

Data Item Descriptions

1. **TITLE:**

Design Review Presentation Material

3. **DESCRIPTION/PURPOSE:**

To provide advanced copies of presentation material for review at SFR, PDR and CDR.

5. **TO BE SUBMITTED TO:**

General Dynamics Land Systems-Canada Corporation Subcontract Management

7. <u>INITIAL DELIVERY</u>

5 days prior to SFR

2. <u>IDENTIFICATION NO.:</u>

DID ENG-014

4. <u>APPLICABLE REFERE NCES:</u>

SDRL ENG-014 SOW G.4.11.3, G.4.12.3, G.4.13.3

6. **APPROVAL LIMITATION:**

I

8. **REVISIONS/FREQUENCY**

At PDR, CDR and as req uired

9. **PREPARATION INSTRUCTIONS**

- 9.1 The subcontractor shall submit advanced copies of all presentation material to be reviewed at each design review (SFR, PDR & CDR), five (5) days prior to each design review.
- 9.2 One (1) electronic version of the presentation material shall be delivered in a format that will be used at each design review (ie. Microsoft PowerPoint, Word, etc.).

GDLS-C Proprietary Information

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DID ENG-015

Data Item Descriptions

1. **TITLE:**

Finite Element Analysis (FEA) Report

3. **DESCRIPTION/PURPOSE:**

To provide advanced copies of FEA presentation material for review at PDR and CDR.

5. **TO BE SUBMITTED TO:**

General Dynamics Land Systems-Canada Corporation Subcontract Management

7. <u>INITIAL DELIVERY</u>

Ten (10) days prior to PDR

2. <u>IDENTIFICATION NO.:</u>

DID ENG-015

4. <u>APPLICABLE REFERE NCES:</u>

SDRL ENG-015

SOW G.4.19.1

6. **APPROVAL LIMITATION:**

I

8. **REVISIONS/FREQUENCY**

Ten (10) days prior to CDR and as required

9. **PREPARATION INSTRUCTIONS**

- 9.1 The subcontractor shall submit a report which summarizes the FEA analysis which has been performed on the system, to be reviewed at each design review (PDR & CDR), ten (10) days prior to each design review. The report shall outline the cases performed as well as the results of the analysis.
- 9.2 One (1) electronic version of the presentation material shall be delivered in a format that will be used at each design review (ie. Microsoft PowerPoint, Word, etc.).

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8.

IDENTIFICATION NO.:

Performance Specificatio n

APPROVAL LIMITATION:

REVISIONS/FREQUENCY

APPLICABLE REFERENCES:

DID ENG-017

SOW G.4.15.2

A/30

TITLE: 1.

Qualification Test Plan

3. **DESCRIPTION/PURPOSE:**

> To provide Qualification plans for each requirement of the Performance Specification

5. **TO BE SUBMITTED TO:**

> General Dynamics Land Systems-Canada Corporation Subcontract Management

7. **INITIAL DELIVERY**

> 4 MAC As Required

9. **PREPARATION INSTRUCTIONS**

9.1 Documented plans and/or procedures shall be provided to address each requirement of the Performance Specification (Analysis excepted) (Reference Qualification Matrix). For inspections and demonstrations, the proposed checklist or report format shall be submitted. For tests, the detailed plan or procedure shall be submitted. The Qualification Matrix (DID-ENG-013) shall be updated with specific qualification dates, locations, plan/procedure ref. numbers, and planned report submittal dates and submitted with DID-ENG-017.

9.2 The subcontractor shall provide electronic copies of the Qualification Plans (in MicrosoftOffice compatible format).

> GDLS-C Proprietary Information See Restriction on First Page

> > page 1 of 1

DID ENG-018

Data Item Descriptions

1. **<u>TITLE:</u>**

Qualification Test Report

3. <u>DESCRIPTION/PURPOSE:</u>

To provide a qualification report to show compliance to each requirement of the Performance Specification (Refer to Qualification Test Matrix)

5. **TO BE SUBMITTED TO:**

General Dynamics Land Systems-Canada Corporation Subcontract Management

7. <u>INITIAL DELIVERY</u>

4MAC

2. <u>IDENTIFICATION NO.:</u>

DID ENG-018

4. <u>APPLICABLE REFERENCES:</u>

Performance Specification SOW G.4.15.3

6. **APPROVAL LIMITATION:**

A/15

8. **REVISIONS/FREQUENCY**

As Required, as stated in DID ENG-013 Submittals.

9. **PREPARATION INSTRUCTIONS**

- 9.1 The Subcontractor shall submit a formal Qualification Test Report to include objective evidence and fully document the results of each qualification activity specified by the Performance Specification (Reference Qualification Matrix). For Analysis, reports must completely address all details of the specific requirement. The Qualification Matrix (DID- ENG-013) shall be updated with relevant report references and qualification results and submitted with ENG-018.
- 9.2 The Subcontractor shall provide electronic copies of the Qualification Reports (in Microsoft Office compatible format) in Subcontractor format.

GDLS-C Proprietary Information

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page 1 of 1

Data Item Descriptions

TITLE: 1.

2. **IDENTIFICATION NO.:**

Quality Assurance Plan

DID QA-001

DESCRIPTION/PURPOSE: 3.

The purpose of the plan is to address the Quality System requirements and will describe the management and control of the supplies to be delivered under the contract. The Quality Plan shall be written to assist GDLS-C with Contract quality audit and surveillance activities.

APPLICABLE REFERENCES:

SOW G.5.2.1, G.5.5

5. **TO BE SUBMITTED TO:**

General Dynamics Land Systems-Canada Corporation Subcontract Management

6. **APPROVAL LIMITATION:**

REVISIONS/FREQUENCY:

A/30

8.

7. **INITIAL DELIVERY:**

Due with proposal N/A

PREPARATION INSTRUCTIONS: 9.

- 9.1 The Quality Plan shall be in the supplier's own format. ISO 9000 should be used for guidance in developing this plan.
- 9.2 The Quality Plan shall identify key appointments, responsibilities and functional relationships to ensure the quality management of the contract.
- 9.3 The Quality Plan shall describe in detail the quality relationship, responsibilities and authorities between the supplier and GDLS-C.
- 9.4 The Quality Plan shall define the proposed procedures for ensuring conformance of supplies with the specified requirements and in compliance with specified quality standard.
- 9.5 The Quality Plan shall describe the method for amendment and how changes to the Quality Management System will be reflected into the Quality Plan.

GDLS-C Proprietary Information

Land Systems - Canada

Subcontract PO 35334144 Section G, Annex G3 - DIDs Rev NR

9.6 The Quality Plan shall address the schedule and timing of quality assurance activities for the contract, including, but not limited to quality system audits, and functional/physical configuration audits and delivery and inspection of product.

GDLS-C Proprietary Information

See Restriction on First Page

Page 2of 2

Data Item Descriptions

1. **TITLE:**

Quality Assurance Inspection Test Plan

3. **DESCRIPTION/PURPOSE:**

To define the Inspection and Testing activities to be carried out during the manufacturing of the parts detailed in this subcontract.

5. **TO BE SUBMITTED TO:**

General Dynamics Land Systems-Canada Corporation Subcontract Management

7. **INITIAL DELIVERY:**

Due with proposal

2. <u>IDENTIFICATION NO.:</u>

DID QA-002

4. **APPLICABLE REFERENCES:**

SOW G.5.6.1

6. **APPROVAL LIMITATION:**

A/15

8. **REVISIONS/FREQUENCY:**

Any changes to Technical Data Package require a minimum of 7-days notification to GDLS-C in advance of execution.

- 9. **PREPARATION INSTRUCTIONS:**
- 9.1 The Inspection and Test Plan shall be in the supplier's own format.
- 9.2 The Inspection and Test Plan shall detail all Inspection and Testing activities within the assembly process.

GDLS-C Proprietary Information

See Restriction on First Page

Data Item Descriptions

1. <u>TITLE:</u>

DID QA-003

2.

Supplier / Subcontractor Evaluation & Approval Survey

3. **DESCRIPTION/PURPOSE:**

5.

7.

4. <u>APPLICABLE REFERENCES:</u>

IDENTIFICATION NO.:

To provide a formal test plan for each First Article verification requirement.

TO BE SUBMITTED TO:

SOW G.5.7.1

General Dynamics Land Systems-Canada Corporation Subcontract Management

Corporation Subcontract Wallager

INITIAL DELIVERY:

APPROVAL LIMITATION:

REVISIONS/FREQUENCY:

8.

A/15

With Proposal N/A

9. **PREPARATION INSTRUCTIONS:**

9.1. The Subcontractor shall complete and return a copy of GDLS-C Form 4615.

9.2. The Subcontractor shall support a QA site visit / audit prior to start of production build.

GDLS-C Proprietary Information See Restriction on First Page

D-4		

GE	ENERAL INFORMATION					
BUSINESS NAME	CAGE CODE	VENDOR CODE				
STREET ADDRESS	CITY	PROVINCE / STATE				
BUSINESS PHONE	WEBSITE					
POINT (OF CONTACT INFORMATION	DN				
PRIMARY CONTACT NAME	TITLE					
TELEPHONE NUMBER & EXTENSION	EMAIL	•				
FAX NUMBER						
QA CONTACT NAME	TITLE					
TELEPHONE NUMBER & EXTENSION	EMAIL					
FAX NUMBER	£					
F	ACILTY INFORMATION					
Approximately Facility Size (Sq. Ft.)	Total Number of Em	ployees				
Approximately Size of Manufacturing Area	Total Number of Pro	oduction Employees				
Multiple Shifts in Production?	Total Number of QA	Employees				
MANU	FACTURING CAPABILITIE	S				
CHECK ALL THAT APPLY Wiring & Harnesses Machining CARC Painting Electronics Heat Treating Castings Aluminum Fabrication Distributor	Welding Ballistic Steel Composites / Forgings Hydraulic Hos Pumps / Moto Wire EDM	Plastics				
QUA	LITY SYSTEM: GENERAL					
LEVEL OF SYSTEM REGISTRATION ISO 9001: 2000 □ ISO/TS 16949 □ QS 9000 □	MIL-Q-9858A MIL-I-45208A OTHER					

GDLS-C 4615 Rev. 09/2008

☐ Date:	
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	SECTION A: ADMINISTRATIVE		
1.	Does the supplier have a a documented/established inspection system?	YES	□no
	Does the supplier maintain a single standard quality system? If more than one system, please clarify.	YES	□NO
3.	Does the documented quality system require the preparation and use of inspection/test instruction for material, work in process and completed articles?	YES	□NO
4.	Do inspection and/or test instructions provide criteria for approval/rejection of the product/service?	YES	□NO
5.	Are inspection/test instructions controlled to assure the latest applicable revisions are used?	YES	□NO
6.	When inspection stamps are used, are they of a design distinctly different from government/customer stamps?	YES	□NO
7.	Are stamp controls established to prevent unathorized use?	YES	□NO
	SECTION B: DRAWING AND CHANGE CONTRO	OL	
1.			
	Are controls established to assure only the latest applicable drawings, specifications, and instructions are used for fabrication, inspection, and test?	YES	□NO
	SECTION C: PROCUREMENT CONTROL		
1.	Does the contractors system assure all purchase order include:	805.91	2000
	a) Complete description of supplier, parts and materials ordered?	YES	□ NO
	b) All requirements for manufacturing inspection, quality system	□YES	□NO
	qualifications or approval?	_	
	c) Unique customer requirements?	YES	□NO
2.	Does the supplier control the special process suppliers in accordance with the	YES	□NO
	contract or utilize only suppliers specifically required by contract?	☐ 1E2	
	contract or utilize only suppliers specifically required by contract? SECTION D: RECEIVING CONTROL	LI TES	
1.		YES	
	SECTION D: RECEIVING CONTROL Are procedures in effect, and followed, which provide for inspection upon receipt to assure conformance to all contractual requirements, including QPL		
2.	SECTION D: RECEIVING CONTROL Are procedures in effect, and followed, which provide for inspection upon receipt to assure conformance to all contractual requirements, including QPL items?	YES	□NO
2.	SECTION D: RECEIVING CONTROL Are procedures in effect, and followed, which provide for inspection upon receipt to assure conformance to all contractual requirements, including QPL items? Are inspection/test instructions available and utilized? Are records of receiving inspection activities available which indicate the nature and number of observations made, acceptance and/or rejection status, number and types of deficiencies found and corrective action taken, when	YES YES	
2. 3. 4.	Are procedures in effect, and followed, which provide for inspection upon receipt to assure conformance to all contractual requirements, including QPL items? Are inspection/test instructions available and utilized? Are records of receiving inspection activities available which indicate the nature and number of observations made, acceptance and/or rejection status, number and types of deficiencies found and corrective action taken, when applicable? Are certifications of materials received and available to provide objective evidence that raw materials conform to applicable chemical and physical requirements and is laboratory testing performed, when necessary, to validate	YES YES	□ NO □ NO □ NO
2. 3. 4.	Are procedures in effect, and followed, which provide for inspection upon receipt to assure conformance to all contractual requirements, including QPL items? Are inspection/test instructions available and utilized? Are records of receiving inspection activities available which indicate the nature and number of observations made, acceptance and/or rejection status, number and types of deficiencies found and corrective action taken, when applicable? Are certifications of materials received and available to provide objective evidence that raw materials conform to applicable chemical and physical requirements and is laboratory testing performed, when necessary, to validate compliance? Are materials awaiting inspection and/or test, identified and segregated from those which have been accepted or rejected? Are procedures in effect, and followed, for identification, storage and control of age controlled/shelf life limited materials, including environmental controls where applicable?	YES YES YES	□ NO □ NO □ NO □ NO
2. 3. 4.	Are procedures in effect, and followed, which provide for inspection upon receipt to assure conformance to all contractual requirements, including QPL items? Are inspection/test instructions available and utilized? Are records of receiving inspection activities available which indicate the nature and number of observations made, acceptance and/or rejection status, number and types of deficiencies found and corrective action taken, when applicable? Are certifications of materials received and available to provide objective evidence that raw materials conform to applicable chemical and physical requirements and is laboratory testing performed, when necessary, to validate compliance? Are materials awaiting inspection and/or test, identified and segregated from those which have been accepted or rejected? Are procedures in effect, and followed, for identification, storage and control of age controlled/shelf life limited materials, including environmental controls	YES	NO

Date:	

	SECTION E: IN PROCESS CONTROLS		
1.	Are inspection measurements and test performed on product during in-	YES	□ NO
2	process operations, as applicable, to assure conformance? Are inspection/test instructions available and utilized?	□YES	□ NO
	Is criteria provided for approval or rejection of the product for all inspection		
	and monitoring activities?	☐ YES	□no
	Is process monitoring performed and is objective evidence maintained to verify process monitoring, when required by contract?	YES	□ NO
5.	Are records of in-process inspections and/or tests maintained and available?	YES	□no
6.	Is rejected material identified, segregated and controlled in accordance with established procedures?	YES	□ NO
7.	Is accepted material identified to provide indication of inspection status?	YES	□ NO
8.	When special processes are used during the manufacture and processing of items, does the contractors' system assure maintainence of process controls, certification, authorization or other unique requirements, necessary for equipment, materials and/or personel for the process?	YES	□NO
	SECTION F: COMPLETED ITEM INSPECTION AND	TEST	
_		IESI	
1.	Does the suppliers system provide for final inspection, and test as applicable, of completed products?	YES	NO
	Are inspection/test instructions available and utilized?	YES	□ NO
	Do inspection/test instructions provide accept/reject criteria?	YES	□NO
4.	When modifications, repairs, or replacements are performed after final inspection or testing, is reinspection or retest of all characteristics affected accomplished?	YES	NO
5.	Are records of completed item inspection and/or test maintained and available?	YES	□NO
6.	Is rejected material identified, segregated, and controlled in accordance with established procedures?	YES	□NO
7.	Is accepted material identified to provide indication of inspection status?	YES	□NO
	SECTION G: HANDLING, STORAGE, AND DELIV	ERY	1
1.	Are controls established which assure segregation of and prevents the use of non-certified materials from being used where certified materials are required?	YES	□NO
2.	Is material identified/maintained until such time as it is obliterated by further processing?	YES	□NO
3.	When age control or critical environments apply, does the suppliers' system assure there are monitored or maintained?	YES	□NO

Date		

	SECTION H: STATISTICAL QUALITY CONTRO	DL	
1.	Does the supplier perform sampling inspection? (If yes, complete the remaining questions in this section).	YES	□no
2.	Is the sampling plan in accordance with existing military/government standards or customer approved sampling plans?	YES	NO
3.	Indicate specification upon which the sampling inspection plan/program is based:		
4.	Are instructions for the sampling plans beign used available to the inspection personnel and are then being complied with?	YES	□ NO
5.	Do inspection records provide lot indentity and size, sample sizes, AQL's and accept/reject information?	YES	□ NO
6.	Are defective sample units rejected and segregated from the acceptable portion of the sample lot?	YES	□ NO
7.	Do sampling inspection instruction have provisions for adjustment of the sampling plans when warranted by inspection results, e.g. MIL-STD-105, Section 9, switching procedures?	YES	□NO
8.	The following questions are for information only: a) Does the supplier employ statistical quality control methods? (If so, complete the next three items)	YES	□ NO
	b) Are control charts maintained and used to indicate product/process performance?	YES	□NO
	c) Are process averages maintained? d) Are results used to adjust inspection activities?	YES YES	□ NO
	SECTION I: NONCONFORMING MATERIAL CONT		
-		ROL	200
	Is nonconforming material identified and segregated from other material to prevent inadvertent use or delivery?	YES	□ NO
2.	Are methods of indentification, segregation, control and disposition of nonconforming material documented and followed?	YES	□ NO
3.	Is material dispositioned as scrap positively identified and controlled (i.e. painted, mutilated, permanently marked, etc)?	YES	□ NO
4.	Do supplier's procedures and practices comply with specific requirements for submittal of non-conformances for customer material review board consideration?	YES	□NO
	SECTION J: CORRECTIVE ACTION		
1.	Does the supplier have a corrective action system which provides for prompt detection and correction of assignable conditions adverse to quality?	YES	□ио
2.	Does the corrective action program extend to all areas of activity within the suppliers organization such as design, purchasing, manufacturing, etc?	YES	□NO
3.	Is a method of tracking corrective action requests, (internally, to supplier and from customers), for timeliness of response in effect?	YES	NO
4.	Does the corrective action program address and provide response to customer/user compalints, data or returns?	YES	NO
5.	Are corrective action requests formally documented?	YES	NO

Date:		

SECTION K: RECORDS			
Are adequate records of inspections and tests maintained?	YES	□ NO	
2. Do inspection and testing records, as a minimum, contain the following:		1000	
a) Nature of the observation?	YES	☐ NO	
b) Number of observations made?	YES	□ NO	
c) Number of discrepancies?	YES	☐ NO	
d) Type of discrepancies?	YES	□ NO	
e) Quantity accepted?	YES	□ NO	
f) Quantity rejected?	YES	□ NO	
g) Corrective action taken as appropriate?	YES	□ NO	
Is record retention in accordance with specific contract requirements?	YES	□ NO	
SECTION L - GOVERNMENT/CUSTOMER FURNISHED	MATERIAL		
 Are procedures in effect and followed for the control of government/customer furnished materials which include the following: 			
a) Examination upon receipt to detect transit damage?	YES	□ NO	
b) Inspection for completeness and proper type?	YES	□ NO	
c) Periodic inspection for storage, handling and deterioration?	YES	□ NO	
d)	YES	Пио	
Testing, as required by contract, to determine satisfactory operation?	LIYES	Пио	
e) Identification and protection from improper use or disposition?	YES	□ NO	
f) Verification of quantity?	YES	□ NO	
g) Formal notification to the government/customer when damaged or	YES	□NO	
unsuitable material is detected?			
SECTION M: MEASURING AND TEST EQUIPM	IENT		
1. Does the supplier have a written description of the calibration system?	YES	□ NO	
2. Is the calibration system coordinated with the quality program/inspection system?	YES	□NO	
Are calibration intervals established and maintained to assure acceptable accuracy and reliability?	YES	□ NO	
4. Does the system provide for the mandatory recall of all items, and are items returned for calibration as scheduled?	YES	□ NO	
5. Is calibration performed utilizing standards whose accuracy is certified as	TYES	Пио	
traceable to U.S. or International standards?			

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Data Item Descriptions

1. **TITLE:**

First Piece Inspection

3. <u>DESCRIPTION/PURPOSE:</u>

To define the required manufacturing qualification and certification

5. **TO BE SUBMITTED TO:**

General Dynamics Land Systems-Canada Corporation Subcontract Management

7. **INITIAL DELIVERY:**

Initial Delivery Date due 14 days prior to first shipment of production material.

2. <u>IDENTIFICATION NO.:</u>

DID QA-004

4. **APPLICABLE REFERENCES:**

SOW G.5.3.1

6. **APPROVAL LIMITATION:**

A/15

8. **REVISIONS/FREQUENCY:**

Any changes to the Technical Data Package, tooling and/or FPI information during the length of the subcontract require a minimum of 7days notification to GDLS-C in advance of execution.

9. **PREPARATION INSTRUCTIONS:**

Documents to be submitted are listed below:

- 9.1 Reference Procurement Quality Assurance Handbook PQA3000. The PQA Handbook is available at the following internet address: http://procurement.gdls.com/, Quality Instructions, Quality Instructions, Procurement Quality Assurance Handbook for exact FPI requirements.
- 9.2 Product samples and complete supporting data are reviewed at Contractor's manufacturing location.
- 9.3 The Quality Assurance requirements of this subcontract will be managed by GDLS Supplier Quality Assurance based in Sterling Heights, Michigan, USA.

GDLS-C Proprietary Information

Data Item Descriptions

1. **TITLE:**

3.

First Article Test Plan.

DESCRIPTION/PURPOSE:

To provide a formal test plan for each First Article verification requirement.

5. **TO BE SUBMITTED TO:**

General Dynamics Land Systems-Canada Corporation Subcontract Management

7. <u>INITIAL DELIVERY:</u>

30 days prior to First Article production.

2. <u>IDENTIFICATION NO.:</u>

DID QA-005

4. <u>APPLICABLE REFERENCES:</u>

SOW G.5.4.1

6. **APPROVAL LIMITATION:**

A/30

8. **REVISIONS/FREQUENCY:**

As Required.

9. **PREPARATION INSTRUCTIONS:**

- 9.1 A documented plan must be developed describing how the contractor will complete each First Article verification requirement detailed in the System Specification. The plan must completely address all the specific details of each qualification requirement. The plan must include verification dates and locations. GDLS-C shall review and determine plan approval. The Subcontractor shall not proceed with execution of the plan until GDLS-C approval has been given.
- 9.2 The Subcontractor shall provide two final hardcopies, and one final electronic copy (in MicrosoftOffice compatible file formats).

GDLS-C Proprietary Information

See Restriction on First Page

Data Item Descriptions

A/7

1. <u>TITLE:</u> 2. <u>IDENTIFICATION NO.:</u>

Acceptance Test Plan DID QA-006

3. <u>DESCRIPTION/PURPOSE:</u> 4. <u>APPLICABLE REFERENCES:</u>

To provide a formal test plan SOW G.5.8.1

5. TO BE SUBMITTED TO: 6. APPROVAL LIMITATION:

General Dynamics Land Systems-Canada Corporation Subcontract Management

7. <u>INITIAL DELIVERY:</u> 8. <u>REVISIONS/FREQUENCY:</u>

14 days prior to delivery. As Required.

9. **PREPARATION INSTRUCTIONS:**

9.1. The Subcontractor shall develop and submit an Acceptance Test Plan (ATP) in Subcontractor format.

9.2. The ATP shall test all critical characteristics of material function to the production released technical data package.

9.3. The Subcontractor will submit each unit to the ATP they have developed and submit the results with each shipment for GDLS-C review.

GDLS-C Proprietary Information

See Restriction on First Page

Data Item Descriptions

1. **TITLE:**

Acceptance Test Report

3. **DESCRIPTION/PURPOSE:**

To provide a formal report detailing the results of First Article verification.

5. **TO BE SUBMITTED TO:**

General Dynamics Land Systems-Canada Corporation Subcontract Management

7. **INITIAL DELIVERY:**

1 week prior to Final Acceptance of First Article

DID QA-007

2.

4. **APPLICABLE REFERE NCES:**

IDENTIFICATION NO.:

SOW G.5.8.1

6. **APPROVAL LIMITATIO N:**

A/30

8. **REVISIONS/FREQUENCY:**

N/A

- 9. **PREPARATION INSTRUCTIONS:**
- 9.1 A formal report shall be submitted that fully details the results of the verification of the Acceptance requirements detailed in ATP. The report shall sufficiently detail compliance in accordance with the approved Acceptance Test Plan (DID QA-006). GDLS-C shall review and determine approval prior to Final Acceptance of the product.
- 9.2 The Subcontractor shall provide one electronic copy (in Microsoft Office compatible file formats).

GDLS-C Proprietary Information

See Restriction on First Page

Data Item Descriptions

1. **TITLE:**

-

First Article Test Report

DID QA-008

2.

3. <u>DESCRIPTION/PURPOSE:</u>

To provide a formal report detailing the results of First Article verification.

4. **APPLICABLE REFERENCES:**

IDENTIFICATION NO.:

SOW G.5.4.2

5. **TO BE SUBMITTED TO:**

General Dynamics Land Systems-Canada Corporation Subcontract Management 6. **APPROVAL LIMITATION:**

A/30

7. <u>INITIAL DELIVERY:</u>

1 week prior to Final Acceptance of First Article

8. **REVISIONS/FREQUENCY:**

N/A

9. **PREPARATION INSTRUCTIONS:**

- 9.1 A formal report shall be submitted that fully details the results of the verification of the First Article requirements detailed in the Subcontract Specification. The report shall sufficiently detail compliance in accordance with the approved First Article Test Plan (DID QA-004). GDLS-C shall review and determine approval prior to Final Acceptance of the product. The subcontractor shall not proceed with product shipment until GDLS-C approval has been given.
- 9.2 The Subcontractor shall provide one electronic copy (in Microsoft Office compatible file formats).

GDLS-C Proprietary Information

See Restriction on First Page

Data Item Descriptions

1. **TITLE:**

Supportability Technical Data Request

3. **DESCRIPTION/PURPOSE:**

Provides necessary data for GDLS-C to perform trade-off analysis against other potential suppliers

5. **TO BE SUBMITTED TO:**

General Dynamics Land Systems-Canada Corporation Subcontract Management

7. **INITIAL DELIVERY**

Provide response to following survey with RFP submittal

2. <u>IDENTIFICATION NO.:</u>

DID LE-001

4. **APPLICABLE REFERENCES:**

SDRL LE-001

SOW G.7.1

6. **APPROVAL LIMITATION:**

A/5

8. **REVISIONS/FREQUENCY**

One/R

9. INSTRUCTIONS

If you are a supplier that intends to supply Commercial off the Shelf (COTS) and/or Modified

Commercial off the Shelf (MCOTS) items, please fill out the following form.

Complete and return this form with your proposal. Applicable portions will be expanded upon, and form part of the contract requirements if your product is selected.

The following information shall be submitted with your proposal to allow GDLS-Canada to compare your product with others being evaluated on the basis of Total Life Cost. A Total Life Cost is developed using the data requested below in addition to the initial production cost data. The Total Life Cost will be a consideration in the design trade-off study in the selection process.

The items requested are not to be developed in support of this proposal. It is assumed that the majority of these items are available in support of the existing product. Failure to provide responses to this survey and/or the requested data, may result in your proposal being deemed non-compliant.

GDLS-C Proprietary Information

Land Systems - Canada

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Id#	Requirement/Question	Y/N	Supporting Detail
1	Is your product repairable?		If No – Please explain why the item is not repairable.
2	If Yes to 1, is it repairable by a facility other than your own company		If No – Please explain why the item is not repairable by GDLSC or the end user.
3	Do you currently have an indented Bill of Material for the item?		If Yes – Please provide the BOM. Also identify which down components can be purchased (spares) to support the repair policy with their price and estimated lead time.
4	Do you have Failure Rate / Reliability Predictions for the item?		If Yes – Please provide the system/item level failure rate/reliability prediction. Please identify the source of your failure rate/reliability prediction (i.e. engineering estimate, testing, data from fielded units, warranty claims, etc).
5	Do you have Life Cycle Cost estimates for the item?		If Yes - Please provide LCC analysis estimates, as well as the assumed conditions under which the LCC prediction is based upon (for example assumptions related to Level of Repair, task frequency, failure rates, etc).
6	Do you have technical manuals/publications for the item?		If Yes – Please identify if the manuals are military specification or commercial manuals. Also list the manuals that you have available (i.e. operation, maintenance, overhaul, troubleshooting, illustrated parts list, etc). If No – If you were awarded this subcontract, how many months after award of contract would manuals be available?
7	If Yes to 6, can you provide a copy of your technical manuals for GDLSC to determine if they are suitable for use by the end user?		
8	Do you have 2D or 3D illustrations that are available to assist GDLSC in the creation of military standard publications?		If Yes - Please provide details as to the format of the files (2D vs. 3D, Unigraphics, Pro-E, Adobe Illustrator, EPS, CGM, etc). If No – Do you have hardcopy illustrations that you can provide for GDLS-C reference/use when developing technical manuals?
9	Does your product require special tools to install/remove, repair, or test?		If Yes – If available, please provide a list of special tools, lifting devices, fixtures, diagnostic equipment, etc. required to maintain the product. If available, prices would be preferred for the tools.
10	Do you offer training with respect to the operation and maintenance of the product?		If Yes – Please provide details as to the min/max class size, duration, location, and any pre-requisites required for the training.

GDLS-C Proprietary Information

Subcontract PO 35334144 Section G, Annex G3 - DIDs Rev NR

DID LE-002

Data Item Descriptions

1. **TITLE:**

Indented Engineering Bill of Materials

3. **DESCRIPTION/PURPOSE:**

The indented EBOM allows the Logistics Engineering to structure the supportability data consistent with the engineering documentation and allows early maintenance planning.

5. **TO BE SUBMITTED TO:**

General Dynamics Land Systems-Canada Corporation Subcontract Management

7. <u>INITIAL DELIVERY</u>

10 Days prior to PDR

2. <u>IDENTIFICATION NO.:</u>

DID LE-002

4. **APPLICABLE REFERENCES:**

SDRL LE-002

SOW G.7.2

6. **APPROVAL LIMITATION:**

Approval Required - 5 Da ys

8. **REVISIONS/FREQUENCY**

Final 10 Days prior to CD R, and PCA. 30 days after ECP approval.

9. **PREPARATION INSTRUCTIONS**

9.1 The Indented Bill of Material shall be in electronic medium and prepared in a format acceptable to General Dynamics Land Systems-Canada Corporation. The data shall be prepared in Microsoft Excel spreadsheet format, with the following columns for each item listed and each item in a separate row:

- a. Indenture code (numeric or alphabetic);
- b. Find Number of the part
- c. Part number
- d. Part description
- e. Quantity per assembly
- f. Nato Stock Number (NSN) if available

GDLS-C Proprietary Information

See Restriction on First Page

Subcontract PO 35334144 Section G, Annex G3 - DIDs Rev NR

DID LE-003

Data Item Descriptions

TITLE: 1.

2. **IDENTIFICATION NO.:**

Technical Data Package

DID LE-003

DESCRIPTION/PURPOSE: 3.

4. <u>APPLICABLE REFERENCES:</u>

The TDP allows the Logistics Engineering to structure the supportability data consistent with the engineering

SDRL LE-003 SOW G.7.3

documentation.

5. TO BE SUBMITTED TO:

A/5

General Dynamics Land Systems-Canada Corporation Subcontract

Management

7. **INITIAL DELIVERY** 8. REVISIONS/FREQUENCY

6. APPROVAL LIMITATIO N:

10 Days prior PDR for existing TDP and

SPTD

30 Days post CDR

9. **PREPARATION INSTRUCTIONS**

The Technical Data Package shall not only consist of the engineering drawings developed to support production and assembly of the product, but also the Supplemental Provisioning Technical Data (SPTD) that is required to for support the customer required depth of maintenance.

TDP shall be provided in electronic format and adhere to industry ANSI drawing quality standards.

SPTD shall be provided as following:

- 1. Provide SPTD down to the Lowest Repairable Unit (LRU) / Shop Replaceable Unit (SRA). SPTD also encompasses consumables, bulk items, special tools and test equipment, as well as all applicable kits.
- 2. The SPTD shall provide the following:
 - a. Technical identification of items for maintenance support considerations.
 - b. Alternate sources of supply, if available.
- 3. The SPTD is required in the following order of preference:
 - a. Government or recognized industry specifications or standards.
 - b. Engineering Drawings.

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- c. Commercial catalogues or catalogue descriptions.
- d. Sketches or photographs with brief descriptions of dimensional, material, mechanical, electrical or other descriptive characteristics. When sketches orphotographs are provided for an assembly, a parts list shall be provided.
- 4. All drawings shall be provided to GDLS-C electronically on a CD in a commercially available electronic Adobe Acrobat PDF file. Each drawing shall be submitted as a separate file using the part number as the file name. Text on all documentation shall be in the English language.

GDLS-C Proprietary Information

See Restriction on First Page

Page 2of 2

Data Item Descriptions

1. **TITLE:**

List of Spare Parts

3. **DESCRIPTION/PURPOSE:**

Defines the List of Spare Parts required to support the product.

5. **TO BE SUBMITTED TO:**

General Dynamics Land Systems-Canada Corporation Subcontract Management

7. <u>INITIAL DELIVERY</u>

10 Days prior to PDR

2. <u>IDENTIFICATION NO.:</u>

DID LE-004

4. <u>APPLICABLE REFERENCES:</u>

SDRL LE-004 SOW G.7.4

6. **APPROVAL LIMITATION:**

A/30

8. **REVISIONS/FREQUENCY**

30 Days post CDR

9. **PREPARATION INSTRUCTIONS**

- 9.1 The Indented List of Spare Parts shall be prepared in contractor format and provided in electronic format. The data shall be prepared in Microsoft Excel spreadsheet format, with the following columns for each item listed and each item in a separate row:
 - a. Part Number
 - b. Description
 - c. Type of Part Identify whether hardware, consumable or repair part d.Price
 - e. Lead Time
 - f. NSN if available

GDLS-C Proprietary Information

See Restriction on First Page

Data Item Descriptions

1. **TITLE:**

3.

2. <u>IDENTIFICATION NO.:</u>

DID LE-005

Technical Publications

DESCRIPTION/PURPOSE:

4. **APPLICABLE REFERENCES:**

To provide technical data for the General SDRL LE-005 Dynamics Land Systems-Canada

Corporation to support technical SOW G.7.5 publications.

5. TO BE SUBMITTED TO:

SUBMITTED TO: 6. APPROVAL LIMITATION:

General Dynamics Land SystemsCanada Corporation Subcontract

A/5

Management

7. <u>INITIAL DELIVERY</u> 8. <u>REVISIONS/FREQUENCY</u>

10 Days prior to PDR 30 Days post CDR

9. **PREPARATION INSTRUCTIONS**

- 9.1 The Technical Publications shall be provided in contractor format if not military standard. One electronic copy and one hardcopy shall be provided. The data shall be in MS Word or SGML/XML format as available. The material shall meet the following requirements:
 - a. Written in the English language.
 - b. Existing commercial or military standard.
 - c. The Manuals shall cover the depth of maintenance supported by the procurable parts.
 - d. Include a written copyright release for GDLS-C to use the data in thedevelopment of technical manuals for the end user.

GDLS-C Proprietary Information

See Restriction on First Page

Data Item Descriptions

1. **<u>TITLE:</u>**

Technical Illustrations

3. **DESCRIPTION/PURPOSE:**

To provide technical data for the General Dynamics Land Systems-Canada Corporation to support technical illustrations.

5. **TO BE SUBMITTED TO:**

General Dynamics Land Systems-Canada Corporation Subcontract Management

7. <u>INITIAL DELIVERY</u>

30 Days post CDR

9. **PREPARATION INSTRUCTIONS**

2. <u>IDENTIFICATION NO.:</u>

DID LE-006

4. <u>APPLICABLE REFERENCES:</u>

SDRL LE-006

SOW G.7.6

6. **APPROVAL LIMITATION:**

A/10

8. **REVISIONS/FREQUENCY**

One/R

- 9.1 The parts illustrations shall be provided in electronic medium and be delivered in one of the following formats listed in the order of preferred submission:
 - a. Files provided in Unigraphics (UG) in part file format or Pro-E in Step file format
 - b. Files provided in Adobe Illustrator format, .eps (isometric view orientation)
 - c. Files provided as .cgm (Computer Graphics Matafile), (isometric view orientation)
 - d. Files provided in AutoTrol in .ps (postscript) format (isometric vieworientation)
 - e. Illustration developed using CAD applications shall be provide in .dxf format(isometric view orientation).

GDLS-C Proprietary Information

See Restriction on First Page

Data Item Descriptions

1. **TITLE:**

Support Equipment List

3. **DESCRIPTION/PURPOSE:**

Provides necessary data in order to write maintenance tasks and communicate with customer on maintenance concept.

5. **TO BE SUBMITTED TO:**

General Dynamics Land Systems-Canada Corporation Subcontract Management

7. <u>INITIAL DELIVERY</u>

10 days prior PDR

Corporation Subcontract W

9. **PREPARATION INSTRUCTIONS**

2. **IDENTIFICATION NO.:**

DID LE-007

4. <u>APPLICABLE REFERENCES:</u>

SDRL LE-007

SOW G.7.7

6. **APPROVAL LIMITATION:**

A/5

8. **REVISIONS/FREQUENCY**

10 days post CDR

Provide a list of common and Special Tools and Test Equipment List (STTE) that shall identify all tools and test equipment required for the maintenance and calibration associated with the end equipment. The Support Equipment List shall be produced in subcontractor format and shall contain, as a minimum, the following:

- 1. Part Number and CAGE Code
- 2. Nomenclature / Description
- 3. NSN (if available)
- 4. Shelf Life (If applicable)
- 5. Unit of Measure
- 6. Unit of Issue
- 7. Price
- 8. Suggested Quantity (if applicable)
- 9. Drawings if available

If special tools require engineering development, submission shall include the development estimate.

GDLS-C Proprietary Information

See Restriction on First Page

Subcontract PO 35334144 Section G, Annex G3 - DIDs Rev NR

DID LE-008

Data Item Descriptions

1. **TITLE:**

Reliability and Maintainability Support Data

3. **DESCRIPTION/PURPOSE:**

To provide technical data for the General Dynamics Land Systems-Canada Corporation to conduct LCC/LORA analysis for equipment supportability evaluation and maintenance plan development.

5. **TO BE SUBMITTED TO:**

General Dynamics Land Systems-Canada Corporation Subcontract Management

7. <u>INITIAL DELIVERY</u>

10 Days prior to PDR

2. **IDENTIFICATION NO.:**

DID LE-008

4. **APPLICABLE REFERENCES:**

SDRL LE-008

SOW G.7.10

6. **APPROVAL LIMITATION:**

A/5

8. <u>REVISIONS/FREQUENCY</u>

10 Days prior to CDR

9. **PREPARATION INSTRUCTIONS**

The Support Data shall be prepared in a format acceptable to General Dynamics Land Systems-Canada Corporation, and provided in electronic format.

- 1. Support Data File: The data shall be prepared in Microsoft Excel 2003 (.xls) format, with the following columns and each item listed in a separate row.
 - · Item cage code
 - Item part number
 - Item name
 - · Quantity per next higher assembly
 - Item indenture code (top assy = 1, sub assy = 2, etc.)
 - Failure rate (Mean time between failures in hours)
 - Mission critical failure rate (Mean time between mission failures in hours)
 - Duty cycle (percentage of time item is in use relative to top assembly)
 - Condemnation rate (percentage of time that item failure results in discard of the item)
 - Scheduled maintenance hours per year
 - · Training hours per year for scheduled and unscheduled maintenance
 - Weight (lb)
 - Volume: Height (in.), Length (in.), Width (in.)

Land Systems - Canada

Subcontract PO 35334144 Section G, Annex G3 - DIDs Rev NR

- Shelf life (N if no, if yes, provide duration in months)
- Procurement lead time (duration in months)
- Currency (indicate the currency the costs are provided in)
- Cost (budgetary pricing, not a firm fixed price)
- Lot size (applicable for each cost provided)
- Repair material cost (average cost of repair parts if DoD was to repair the item)
- Contractor repair cost (average cost for contractor repair of the item)
- Support & test equipment costs (cost of all common and peculiar equipment)
- Diagnostic software costs (costs to develop software used on support and test equipment)
- 2. Reliability Prediction The subcontractor shall also provide an upper level reliability prediction for the system/assembly in question. GDLSC must use this number to determine performance to allocation and to determine vehicle level reliability.
- 3. Preventative Maintenance If available, the subcontractor shall provide their preventative maintenance procedures and schedule for the system.
- 4. Dangers, Warnings, Cautions The subcontractor shall provide a document summarizing all the applicable dangers, warnings, and cautions that an operator and/or maintainer would need to know before using or performing maintenance on the system/assembly in question. Particular attention shall be given to any mode of failure or type of maintenance that could cause severe injury and/or loss of life.

GDLS-C Proprietary Information

Data Item Descriptions

1. **<u>TITLE:</u>**

2. <u>IDENTIFICATION NO.:</u>

DID LE-009

Diagnostic Support Data

4. **APPLICABLE REFERENCES:**

SDRL LE-009

SOW G.7.11

3. **DESCRIPTION/PURPOSE:**

To provide technical data for the General Dynamics Land Systems-Canada Corporation to develop efficient and accurate troubleshooting procedures.

5. **TO BE SUBMITTED TO:**

General Dynamics Land Systems-Canada Corporation Subcontract Management

7. <u>INITIAL DELIVERY</u>

9.

APPROVAL LIMITATION:

A/10

10 Days prior to CDR

8. **REVISIONS/FREQUENCY**

30 days post CDR

PREPARATION INSTRUCTIONS

The Support Data shall be prepared in a format acceptable to General Dynamics Land Systems-Canada Corporation, and provided in electronic format. Some or all of this DID may be satisfied by accompanying DIDs. If so please indicate in the supporting detail.

9.a Provide a list of malfunctions or symptoms. For each symptom provide a troubleshooting procedure for fault isolation to a single Line Replaceable Unit or Shop Replaceable Unit. Supporting material may be in the form of technical manuals, written procedures or flow chart procedures.

9.b When the system supports diagnostic messaging provide the following:

- Fault indication method.
 - o Indicator light, hard wired line to OEM indicator
 - Text display, flash codes, network broadcast.
- List of all messages. For each message provide:
 - o Method of indication to user of existence.
 - Name of message
 - Type of message
 - § Text message
 - § Fault or diagnostic code

GDLS-C Proprietary Information

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Subcontract PO 35334144 Section G, Annex G3 - DIDs Rev NR

- o Method of detection
 - § Power On Built In Test
 - § Initiated Built In Test
 - § Continuous Built In Test
 - § Other method of detection.
- o Troubleshooting procedure for fault isolation to a single Line Replaceable Unit or Shop Replaceable Unit. Supporting material may be in the form of technical manuals, written procedures or flow chart procedures.
- o When applicable list which network message Is broadcast on.
- When system supports network broadcast of messages indicate applicable standards and exceptions to standards.
- 9.c When special tools are required for reading diagnostic codes provide the following:
 - Part number, CAGE code, Nomenclature / description, NSN if available, Price, Technical manual ordering information.
- 9.d Provide schematic and/or functional block diagram of systems suitable for troubleshooting the system.

9.eTechnical Support

• On going technical support shall be required via phone or email to support GDLS-C development of the troubleshooting procedures.

GDLS-C Proprietary Information

DID OM-001

Data Item Descriptions

1. **TITLE:**

Obsolescence Management Plan

3. <u>DESCRIPTION/PURPOSE:</u>

The Obsolescence Management Plan shall provide details on how the Subcontractor plans to manage obsolescence issues over the next ten (10) years.

5. **TO BE SUBMITTED TO:**

General Dynamics Land Systems-Canada Corporation Subcontract Management

7. <u>INITIAL DELIVERY</u>

With Proposal

9. **PREPARATION INSTRUCTIONS**

The Obsolescence Plan shall be submitted in Subcontractor format.

2. <u>IDENTIFICATION NO.:</u>

DID OM-001

4. **APPLICABLE REFERENCES:**

SDRL OM-001

SOW G.8.2

6. **APPROVAL LIMITATION:**

I

8. **REVISIONS/FREQUENCY**

1 MAC, As Required

GDLS-C Proprietary Information See Restriction on First Page

Subcontract PO 35334144 Section G, Annex G3 - DIDs Rev NR

DID OM-002

Data Item Descriptions

1. **<u>TITLE:</u>**

2. **IDENTIFICATION NO.:**

Obsolescence Management Candidates

DID OM-002

3. **DESCRIPTION/PURPOSE:**

The Obsolescence Management Candidates List shall specify the Equipment components that are considered to be critical to the availability or serviceability of the Equipment. 4. **APPLICABLE REFERENCES:**

SDRL OM-002

SOW G.8.3

5. **TO BE SUBMITTED TO:**

General Dynamics Land Systems-Canada Corporation Subcontract Management 6. **APPROVAL LIMITATION:**

A/15

7. <u>INITIAL DELIVERY</u>

8. **REVISIONS/FREQUENCY**

With Proposal Quarterly (with DID OM-0 03)

9. **PREPARATION INSTRUCTIONS**

- 9.1 The Obsolescence Management Candidates List shall specify the Subcontractor Equipment components that are most at risk of becoming obsolete, are considered to be critical to the availability or serviceability of the vehicle, or if no longer available, would cause a mission failure.
- 9.2 The Obsolescence Management Candidates List shall be prepared in Subcontractor's format. As a minimum, the following information shall be provided for each part on the Obsolescence Management Candidates List:
 - a. NATO Stock Number;
 - b. Subcontractor Part Number;
 - c. GDLS-C Part Number, where available d. Nomenclature;
 - e. Manufacturer; and
 - f. Any other information that is deemed to be critical to the identification of the part.

GDLS-C Proprietary Information

Land Systems - Canada

Subcontract PO 35334144 Section G, Annex G3 - DIDs Rev NR

- 9.3 The OM Candidates List must be scaled by level of criticality. The method of scaling is inSubcontractor format, but must include the following categories:
 - 1. The component is available from multiple manufacturing sources and is at no risk.
 - 2. There is only one active manufacturing source and the component is at high risk.
 - 3. The component has only one active manufacturer and this manufacturer intends on discontinuing the product within the next 12 months.
 - 4. The component is at the end of its life cycle and will not be manufactured now or in the near future.

GDLS-C Proprietary Information See Restriction on First Page

Page 2 of 2

DID OM-003

Data Item Descriptions

1. **TITLE:**

Obsolescence Management Issues Report

3. **DESCRIPTION/PURPOSE:**

The Obsolescence Management Issues Report shall outline the specifics of a pending issue for those component parts that represent the most significant risk in terms of obsolescence.

5. **TO BE SUBMITTED TO:**

General Dynamics Land Systems-Canada Corporation Subcontract Management

7. **INITIAL DELIVERY**

With Proposal

2. <u>IDENTIFICATION NO.:</u>

DID OM-003

4. **APPLICABLE REFERENCES:**

SDRL OM-003

SOW G.8.4

6. **APPROVAL LIMITATION:**

A/15

8. **REVISIONS/FREQUENCY**

Quarterly (with DID OM-0 02)

9. **PREPARATION INSTRUCTIONS**

- 9.1 The OM Issues Report shall outline the specifics of a pending issue for all high-risk LRUs or component parts. A component shall be considered to be high risk if it is on the Obsolescence Management Candidates List and/or it will become obsolete within one year or less. The OM Issues Report shall be prepared in Subcontractor's format and shall be delivered to GDLS-C in accordance with the Issue Date given in Section 4 above and will provide supporting data and recommendations as follows:
 - a. A detailed description of the industry development leading to the obsolescence and the impact this will have on Equipment supportability and/or availability.
 - b. In most cases, a minimum of three (3) options outlined below and their analysis will be considered. When the Subcontractor considers that option i. or ii. Is the best option and that option iii. would require considerable effort to develop or would cause unnecessary delay in the submission of the OM Issues Report, the Subcontractor shall only submit options i. and ii. with the initial OM Issues Report. Option iii. will be implemented and fully explored only as and when required by GDLS-C. The analysis shall include, as appropriate, for each option the impact on all ILS elements as referenced in GDLS-C Form 4525 B (Supportability Requirements Form), including the impact on support equipment and the impact to spares and R&O (if applicable), and an estimated cost of each option. The three (3) options for the analysis are:

GDLS-C Proprietary Information

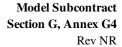
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- i. A life-time buy or a buy for a specified duration of support;
- ii. A new source for the item; and
- iii. Redesign or replace the obsolete item with a similar or enhanced item.
- c. The impact of the obsolescence on enhancements to the system under study;
- d. The time by which the decision is imperative; and
- e. The Subcontractor's recommendation.

GDLS-C Proprietary Information

See Restriction on First Page



GENERAL DYNAMICS Land Systems-Canada

Section G, Annex G4 - Design and Production Review Checklist

GDLS-C Proprietary Information

See Restriction on First Page

GENERAL DYNAMICS Land Systems

SYSTEM FUNCTIONAL REVIEW CHECKPOINT (SFRcp)

PROJECT: <enter project number - name>

	GREE	N - G	ARTIFACT MEETS EXPECTA	TION-PROCEED.						
	YELLO	OW - Y	ARTIFACT DOES NOT MEET	EXPECTATION - PROCEED WITH ACCEPTABLE RISK. DOO	CUMENT AS AN AC	TION ITEM AN	D SUBMIT AS	A RISK IF A	PPLICABLE	
	RED) - R		EXPECTATION - DO NOT PROCEED, UNACCEPTABLE RISK						
			APPLICABLE.							
	BLAC	К - В	NOT APPLICABLE. (MUST IDENTIFY RATIONALE)							
Ι,	UNCTIONAL	FUNCTIONAL			COT A TOTAL		A DEFEA CE	A COTTON	COT A STATE	
ľ	GROUP US	GROUP GDLS-C	CHECKLIST ITEM	Audificat Description / Formantations	STATUS (COLOR CODE)	ASSIGNEE	ARTIFACT LOCATION	ACTION ID	STATUS COMMENT	
+				Artifact Description / Expectations	(COLOR CODE)	ASSIGNEE	LOCATION	ID	COMMENT	
	PEM	PE/SE	Updated Integrated Master Schedule	Integrated Master Schedule / Project Schedule						
T	SE	PE/SE	Technical Performance Measures	TPM Assessment and supporting analysis for each						
	~-		(TPM) Assessment							
	SE (REQT)	PE/SE	Updated System Level	List of modified or updated requirements post SRR System						
			Requirements	Performance Specification						
				Requirements Workbook (GDLS-C						
				Requirements Bi-Directional Traceability matrix/report with system						
				and subsystem						
+	OD/OOD	DE/CE/DE	G . B .	Spec Tree with system and subsystem						
	SE/SSE	PE/SE/DE	System Requirements Decomposed and Allocated to	Subsystem Performance Specifications (SSPS) baselined including functions, performance, constraints, weight, power, thermal,	1					
			Subsystem Performance	reliability, affordability, maintainability, transportability,						
			Specification(SSPS)	survivability, lethality, mobility, safety, and C4ISR allocations						
Ť	SE (REQT)	PE/SE	Requirements Compliance Matrix	System compliance matrix summary tables showing compliance						
	SE (REQ1)	1202	requiencing compilairee mains	with supporting analyses						
				Corrective action plans for noncompliant requirements						
Τ	SE (REQT)	PE/SE	Verification Plan	Design Verification Plan and Report (DVP&R) at the System level.						
Τ	SE/SSE	PE/SE/DE	Structured Decisions of	Trade study list						
			Alternative	Trade study /major decisions summary, showing options and						
			System Concepts	outcome						
				Subsystem concepts						
+				Structured decision records						
	SE (PA)		Physical Architecture Assembly	System Concept defined and baselined (PA_ASM models						
		DE	Models (PA_ASM) -Space Claim	representing subsystem space allocations excluding distributed						
+	CE (DA)	DE	allocations	systems and structural interfaces.) System to subsystem interference analysis complete, documented						
	SE (PA)	DE	System level Interference analysis	with corrective action plans identified.						
0	SE (FA)	PE/SE/DE	Functional Analysis / Architecture	Function Flow Block Diagrams (FFBD) at Subsystem level						
	SE (111)	120222	a menoman rimany sits / rinemineerare	a meden 110 v Block Bagianis (11BB) at 5405y semierei						
				State/Mode Diagrams Sequence Diagrams Use Cases						
1	SE/SSE	PE/SE	Electrical & Mechanical Power,	System Architecture Diagram						
1	DEGGE	1202	and	Power list						
			Signal Architecture	Signal list						
2	SE (SA)	PE/SE/DE	Interface Management	Subsystem Interface Control Documents (ICDs)						
3	SE (PA)	PE/SE/DE	Product Structure/ Engineering	EBOM representing Product Structure, released, down to the						
			Bill of	installation level.	1					
			Materials (EBOM)							
4	SE	LE	Reliability Analysis	System/Subsystem boundary/block diagram						
5	SE	SE	Design Assessments	Safety Assessment						
				Human Factors Engineemig (HFE) Assessment						
6	SE	PE/SE	Design to Cost (DtC) Assessments	Average Unit Production Cost (AUPC) Initial Estimate						
7	LOG	LE	Logistics	Maintainability/Supportability Assessment						
8	SE	PE/SE/DE	Identified System/Subsystem	Risk registers						
			Level	Risk mitigation plans						
4			Risks / Issues							
9	SSE SE	SE PE/SE/DE	Software	Software Development Plan (SDP)	1					

GENERAL DYNAMICS Land Systems

SYSTEM FUNCTIONAL REVIEW CHECKPOINT (SFRcp)

PROJECT: <enter project number - name>

ı	GREI	EN - G	ARTIFACT MEETS EXPECTATION	FIFACT MEETS EXPECTATION-PROCEED.					
YELLOW - Y ARTIFACT DOES NOT MEET EXPECTATION - PROCEED WITH ACCEPTABLE RISK. DOCUMENT AS AN					DOCUMENT AS AN ACT	ION ITEM AND	SUBMIT AS A	RISK IF AF	PLICABLE.
RED - R ARTIFACT DOES NOT MEET EXPECTATION - DO NOT PROCEED, UNACCEPTABLE RISK. DOCUMENT AS AN AG					ACTION ITEM	AND SUBMIT	AS A RISK	IF	
APPLICABLE.									
BLACK - B NOT APPLICABLE. (MUST IDENTIFY RATIONALE)									
FUNCTIONAL FUNCTIONAL				STATUS	ASSIGNEE	ARTIFACT	ACTION	STATUS	
#	GROUP US	GROUP GDLS-C	CHECKLIST ITEM	Artifact Description / Expectations	(COLOR CODE)		LOCATION	ID	COMMENTS
ſ									
	Approval of this Checkpoint Review documents the review team agreement that the design is self consistent, non- conflicting and mutually executable with issues and risks identified and quantified such that the team								
	••	supports the gate decision. (sign/date)							

EN-CK-1.21.1, Checkpoint Review Checklists, Issue 30: April 29, 2011

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GENERAL DYNAMICS Land Systems

PRELIMINARY DESIGN REVIEW CHECKPOINT (PDRcp)

PROJECT: <enter project number - name>

	GREE	N - G	ARTIFACT MEETS EXPECTA	TION-PROCEED.							
	YELL	OW - Y	ARTIFACT DOES NOT MEET	EXPECTATION - PROCEED WITH ACCEPTABLE RISK. DOO	CUMENT AS AN AC	TION ITEM AN	D SUBMIT AS A	RISK IF	APPLICABLE.		
	REI) - R	ARTIFACT DOES NOT MEET APPLICABLE.								
	BLAC	CK - B	NOT APPLICABLE. (MUST IDENTIFY RATIONALE)								
#	FUNCTIONAL GROUP US	FUNCTIONAL GROUP GDLS-C	CHECKLIST ITEM	Artifact Description / Expectations	STATUS (COLOR CODE)	ASSIGNEE	ARTIFACT LOCATION	ACTION ID	STATUS COMMENTS		
1	PEM	PE/SE	Updated Integrated Master Schedule	Integrated Master Schedule / Project Schedule							
2	SE	PE/SE	Technical Performance Measures (TPM) Assessment	TPM Assessment and supporting analysis for each							
3	SE (REQT)	PE/SE	Updated System Level Requirements	List of modified or updated requirements post SFR System Performance Specification Requirements Workbook (GDLS-C Requirements Bi-Directional Traceability matrix/report with system, subsystem, and component Spec Tree with system, subsystem, component							
ı	SE (REQT)	PE/SE/DE	System Requirements Allocated to Subsystems								
i	SSE	DE	Subsystem Requirements Allocated to Components	Component Development Specifications (Subsystem Requirements Workbook - GDLS-C) including weight, power, thermal, reliability, affordability, maintainability, transportability, survivability, lethality, mobility, safety, and C4/SR allocations							
6	SE (REQT)	PE/SE	Requirements Compliance Matrix	System and Subsystem compliance matrix summary tables showing compliance with supporting analyses Corrective action plans for noncompliant requirements							
7	SSE	PE/SE	Verification Plan	Design Verification Plan and Report (DVP&R) at the Subsystem level.							
3	SE/SSE	PE/SE/DE	Functional Analysis / Architecture	Function Flow Block Diagrams (FFBD) Updated State/Mode Diagrams Updated Sequence Diagrams Updated Use Cases							
)	SE/SSE	PE/SE	Electrical & Mechanical Power, and Signal Architecture	Updates since SFR to: System Architecture Diagram Power list Signal list							
0	SSE	PE/SE/DE	Interface Management	Updated Subsystem Interface Control Documents (ICDs) and initial component ICDs							
1	SE(PA)	DE	Physical Architecture Assembly Models (PA_ASM)	Physical Architecture system definition (space allocation in vehicle position and distributed system routings) updated and baselined representing subsystems, including structural interfaces)							
2	SSE	DE	Installation models	Installation models, drawings ready for detailed design (show proof of lifecycle phase (e.g., initial, WIP, detailed, baseline released)							
3	SE (PA)	DE	System level Interference analysis	Subsystem to subsystem interference analysis complete, documented with with no interferences identified.		-					
4	SSE	DE	Subsystem Interference analysis	Intra-subsystem to subsystem interference analysis complete documented with corrective action plans identified.							
5	SE/SSE	PE/SE/DE	Structured Decisions of Alternative Subsystem Concepts	Trade study list Trade study /major decisions summary, showing options and outcome Structured decision records							
6	SE	LE	Reliability Analysis	Initial system/subsystem Design Failure Mode & Effects Analysis (DFMEA)							

GENERAL DYNAMICS Land Systems

PRELIMINARY DESIGN REVIEW CHECKPOINT (PDRcp)

PROJECT: <enter project number - name>

GREEN - G YELLOW - Y			ARTIFACT DOES NOT ME	ARTIFACT MEETS EXPECTATION-PROCEED. ARTIFACT DOES NOT MEET EXPECTATION - PROCEED WITH ACCEPTABLE RISK. DOCUMENT AS AN ACTION ITEM AND SUBMIT AS A RISK IF APPLICABLE.								
	RED	- R	ARTIFICABLE. ARTIFICATE ARTIFICATE ARTIFICATE ARTIFICATION - DO NOT PROCEED, UNACCEPTABLE RISK. DOCUMENT AS AN ACTION ITEM AND SUBMIT AS A RISK IF APPLICABLE.									
BLACK - B			NOT APPLICABLE. (MUST IDENTIFY RATIONALE)									
1	FUNCTIONAL GROUP US	FUNCTIONAL GROUP GDLS-C	CHECKLIST ITEM	Artifact Description / Expectations	STATUS (COLOR CODE)	ASSIGNEE	ARTIFACT LOCATION	ACTION ID	STATUS COMMENT			
				Analysis of failure modes exceeding Risk Priority Number (RPN) threshold (DARTS) Quantitative assessment (MTBSA, MTBSF, MTBSA/MTBHMF, Operational Availability - Ao)								
	SE/SSE	SE/DE	Design Assessments	Survivability Assessment Lethality Assessment Mobility Assessment Transportabilty Assessment Radiation Assessment Electromagnetic Compatibility (EMI), Electromagnetic Interference (EMC), Electrostatic Discharge (ESD) Thermal analysis Structural Analysis Fluid Analysis Noise Vibration Harshness (NVH) Analysis Crash Analysis Mine blast Dimensional Management Safety Assessment Human Factors Engineering (HFE) Assessment Manufacturability/Assembly Assessment Obsolescence Assessment								
	SSE	SE/DE	Design to Cost (DtC) Assessment	s Updated Target Cost Achievement Plan								
	SSE	SE/DE	Subsystem Design	System/Subsystem Design Description (SSDD)								
	LOG	LE	Logistics	Maintainability/Supportability Assessment								
	SE	PE/SE/DE	Identified System/Subsystem/Component Level Risks/Issues	Risk registers Risk mitigation plans Issue list / Corrective action plans								
	PEM	SE/DE	Engineering Release	Release Schedule including Supplier SOWs, CIDS, ICDs, Models and/or Drawings, identified with established dates to support hardware first use								
	SE	SE/DE	Engineering Bill of Materials (EBOM)	EBOM released, identifying all configuration items and released to the product structure.								
	SE	PE/SE	Build Plan	Prototype Build Plan								
	PROC	SCM	Major Suppliers	Major Suppliers Identified								
	PROC	SCM	Long Lead Items	Long Lead Items Identified								
	SSE SE	SE PE/SE/DE	Software Integrated Design Assessment	Updated Software Development Plan (SDP) Software Requirements Completed Integrated Design Assessment								
	SE	PESEDE	untegrated Design Assessment	Completed integrated Design Assessment	l		1	1	1			

GENERAL DYNAMICS Land Systems

CRITICAL DESIGN REVIEW CHECKPOINT (CDRcp)

PROJECT: <enter project number - name>

	GREEN	i - G	ARTIFACT MEETS EXPECTATION-PROCEED.						
	YELLO	W - Y	ARTIFACT DOES NOT MEET E	XPECTATION - PROCEED WITH ACCEPTABLE RISK. DOCU	MENT AS AN ACT	TON ITEM AND	SUBMIT AS A RI	ISK IF APP	LICABLE.
	RED	- R	ARTIFACT DOES NOT MEET E APPLICABLE.	XPECTATION - DO NOT PROCEED, UNACCEPTABLE RISK. I	DOCUMENT AS AN	ACTION ITEM	AND SUBMIT AS	A RISK IF	r
	BLACI	K - B	NOT APPLICABLE. (MUST IDE	NTIFY RATIONALE)					
	FUNCTIONAL	FUNCTIONAL			STATUS	ASSIGNEE	ARTIFACT	ACTION	STATUS
,,	GROUP US	GROUP GDLS-C	CHECKY ICT PERM	A CE AD LOCATE AND	(COLOR CODE)		LOCATION	ID	COMMENTS
#	DED (DE/CE	CHECKLIST ITEM	Artifact Description / Expectations					
1	PEM	PE/SE	Finalized Integrated Master Schedule	Integrated Master Schedule / Project Schedule					
2	SE	PE/SE	Technical Performance Measures (TPM) Assessment	Finalized TPM Assessment and supporting analysis for each					
3			Finalized System Level	List of modified or updated requirements post PDR System Performance Specification Requirements Workbook (GDLS-C Requirements Bi-Directional Traceability matrix/report with system, subsystem, and component Spec Tree with system, subsystem, component					
4	SE (REQT)		System Requirements Allocated to Subsystems	List of modified and updated requirements post PDR. Subsystem Development Specifications (Subsystem Requirements Workbook - GDLS-C) updated to include post PDR changes including weight, power, thermal, reliability, affordability, maintainability, transportability, survivability, lethality, mobility, safety, and C4fSR allocations					
5	SSE	DE	Subsystem Requirements Allocated to Components	List of modified and updated requirements post PDR. Component Development Specifications (Subsystem Requirements Workbook - GDLS-C) including weight, power, thermal, reliability, affordability, maintainability, transportability, survivability, lethality, mobility, safety, and C4ISR allocations					
6	SE (REQT)	PE/SE	Requirements Compliance Matrix	System, Subsystem, and Component compliance matrix summary tables showing compliance with supporting analyses Corrective action plans for noncompliant requirements					
7	SSE	PE/SE	Verification Plan	Design Verification Plan and Report (DVP&R) at the component level.					
8	SSE	PE/SE/DE	Interface Management	Finalized Subsystem Interface Control Documents (ICDs) and component ICDs					
9	SE	DE	Interface Control Models (ICM)	Interface Control Models (ICM) released.					
10		DE	Interference analysis	No system/subsystem/component interferences.					
11	SE	LE	Reliability Analysis	Completed System/subsystem Design Failure Mode & Effects Analysis (DFMEA) Design Action Reporting and Tracking issues (DARTs) closed. Quantitative assessment (MTBSA, MTBSF, MTBSA/MTBHMF, Operational Availability - Ao)					
12	SE/SSE	SE/DE	Design Assessments	Survivability Assessment Lethality Assessment Mobility Assessment Transportabilty Assessment Radiation Assessment Electromagnetic Compatibility (EMI), Electromagnetic Interference (EMC), Electrostatic Discharge (ESD) Thermal analysis Structural Analysis Fluid Analysis Noise Vibration Harshness (NVH) Analysis Crash Analysis Mine blast Dimensional Management Safety Assessment Human Factors Engineering (HFE) Assessment					

GENERAL DYNAMICS Land Systems

CRITICAL DESIGN REVIEW CHECKPOINT (CDRcp)

PROJECT: <enter project number - name>

	GREE	N - G	ARTIFACT MEETS EXPECTATIO	ON-PROCEED. PECTATION - PROCEED WITH ACCEPTABLE RISK. DOCUMENT AS AN ACTION ITEM AND SUBMIT AS A RISK IF APPLICABLE. PECTATION - DO NOT PROCEED, UNACCEPTABLE RISK. DOCUMENT AS AN ACTION ITEM AND SUBMIT AS A RISK IF								
	YELLO	OW - Y	ARTIFACT DOES NOT MEET EXP									
	RED) - R	ARTIFACT DOES NOT MEET EXP APPLICABLE.									
	BLAC	K - B	NOT APPLICABLE. (MUST IDENT	APPLICABLE. (MUST IDENTIFY RATIONALE)								
#	FUNCTIONAL GROUP US	FUNCTIONAL GROUP GDLS-C	CHECKLIST ITEM	Artifact Description / Expectations	STATUS (COLOR CODE)	ASSIGNEE	ARTIFACT LOCATION	ACTION ID	STATUS COMMENT			
				Manufacturability/Assembly Assessment Obsolescence Assessment								
3	SSE	SE/DE	Design to Cost (DtC) Assessments	Updated Target Cost Achievement Plan								
4	SSE	SE/DE	Subsystem Design	System/Subsystem Design Description (SSDD)								
5	LOG	SS SS SS	Logistics	Maintainability/Supportability Assessment Training Products (Identified) Special tooling (Identified) Packaging, handling, transportation considerations								
6	SE	PE/SE	ldentified System/Subsystem/Component Level Risks/Issues	Risk registers Risk mitigation plans Issue list / Corrective action plans								
7	SE/SSE	PE/SE/DE	Engineering Release	All CIDs complete and ready for release All Supplier SOWs complete and ready for release All ICDs complete and ready for release All Component Models and/or Drawings complete and ready for release. Drawings ready to enter checking (GDLS-C)								
8	SE	SE/DE		EBOM - complete (All parts released in EBOM to include fasteners & COTS items)								
9	SE	PE/SE	Build Plan	Prototype Build Plan Completed								
)	SSE	SE	Software	Updated Software Development Plan (SDP) Updated Software Requirements Software Design								
1	SE	PE/SE/DE	Integrated Design Assessment	Completed Integrated Design Assessment								

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GENERAL DYNAMICS Land Systems

${\bf PRODUCTION\ READINESS\ REVIEW\ CHECKPOINT\ (PRRcp)}$

PROJECT: <enter project number - name>

GREE	N - G	ARTIFACT MEETS EXPECTATION	N-PROCEED.					
YELLO	W - Y		PECTATION - PROCEED WITH ACCEPTABLE RISK. DOCUM	ENT AS AN ACTI	ON ITEM AND S	UBMIT AS A RI	SK IF APPL	ICABLE.
RED - R ARTIFACT DOES NOT MEET EXPECTATION - DO NOT PROCEED, UNACCEPTABLE RISK. DOCUMENT AS AN ACTION APPLICABLE.							A RISK IF	
BLACK	K - B	NOT APPLICABLE. (MUST IDENT	TIFY RATIONALE)					
FUNCTIONAL GROUP US	FUNCTIONAL GROUP GDLS-C	CHECKLIST ITEM	Artifact Description / Expectations	STATUS (COLOR CODE)	ASSIGNEE	ARTIFACT LOCATION	ACTION ID	STATUS COMMENTS
1 SE/SSE	PE/SE	System/Subsystem Validation	System Validation Complete Subsystem Validation Complete					
2 SE/SSE	PE/SE SE DE DE PE/SE SE	Engineering Release	EBOM Released S/W Configuration Released CAD Model Released Drawing(s) Released Specification Released S/W Products Released					
3 SSE	SE/DE	Hazardous Materials	Hazardous Materials Management Report Complete					
4 LOG	LE	Logistics	Parts Manuals Incremental Delivery(s) Completed Maintenance Manuals Incremental Delivery(s) Completed Operator Manuals Incremental Delivery(s) Completed					
5 MFG	MFG	Manufacturing	Tooling Identified and Purchased / On Hand Facilities Plan Completed Penonnel Plan Completed All ITIR/UIR/CA Completed All MPR Resolved/Completed All MPR Resolved/Completed CR Improvements Cut-in Plans in Place PRRs conducted at the Major Suppliers Operating Sheet Instructions Completed Production Configuration Baseline Completed Producibility and Quality Requirements Documented Build Plan Completed MBOM Complete					
	•		Approval (sign/date)			•	•	
i			(Sigil/date)					

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GENERAL DYNAMICS Land Systems

PRODUCTION READINESS REVIEW CHECKPOINT (PRRcp)

PROJECT: <enter project number - name>

	GREEN - G ARTIFACT MEETS EXPECTATION-PROCEED.										
	YELLO			ON-PROCEED. VPECTATION - PROCEED WITH ACCEPTABLE RISK	DOCUMENT AS	AN ACTION ITEM	AND CUDATE AC A D	ICIZ IE A DD	LICADIE		
Н											
	RED -	ĸ		ECTATION - DO NOT PROCEED, UNACCEPTABLE RISK. DOCUMENT AS AN ACTION ITEM AND SUBMIT AS A RISK IF							
	DIACE	. в	APPLICABLE. NOT APPLICABLE. (MUST IDENTIFY RATIONALE)								
ı.											
Ш	FUNCTIONAL	FUNCTIONAL			STATUS	ASSIGNEE	ARTIFACT	ACTION	STATUS		
#	GROUP US	GROUP GDLS-C	CHECKLIST ITEM	Artifact Description / Expectations	(COLOR CODE)		LOCATION	ID	COMMENTS		
1	SE/SSE	PE/SE	System/Subsystem Validation	System Validation Complete							
Ш				Subsystem Validation Complete							
2	SE/SSE	PE/SE	Engineering Release	EBOM Released							
Ш		SE		S/W Configuration Released CAD Model Released							
Ш		DE		Drawing(s) Released Specification Released S/W Products Released							
Ш		DE		5/ W 1 loddels Released							
Ш		PE/SE SE									
2	SSE	SE/DE	Hazardous Materials	Hazardous Materials Management Report Complete							
4	LOG	LE	Logistics	Parts Manuals Incremental Delivery(s) Completed							
П	200	LL	20g/Mes	Maintenance Manuals Incremental Delivery(s) Completed							
Ш				Operator Manuals Incremental Delivery(s) Completed							
5	MFG	MFG	Manufacturing	Tooling Identified and Purchased / On Hand							
Ш				Facilities Plan Completed Personnel Plan Completed All							
Ш				TIR/UIR/CA Completed All MPR Resolved/Completed							
Ш				CR Improvements Cut-in Plans in Place PRRs conducted							
Ш				at the Major Suppliers Operating Sheet Instructions							
Ш				Completed Production Configuration Baseline Completed							
Ш				Producibility and Quality Requirements Documented							
Ш				Build Plan Completed MBOM Complete							
Ш				MBOM Complete							
Ш											
Ш											
Γ		•		•			•	•	•		
1				Approval							
				(sign/date)							

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GENERAL DYNAMICS Land Systems-Canada

Section H - Schedule

Table of Contents

- H.1 Introduction
- H.2 Master Project Management Schedule
- H.3 Delivery Terms & Schedule

GDLS-C Proprietary Information

See Restriction on First Page



H.1 Introduction

H.1.1 Purpose

H.1.1.1 The purpose of this document is to outline program and delivery schedules.

H.2 Master Project Management Schedule

H.2.1 MPMS

H.2.1.1 As identified in Section G, Para 2.4, the MPMS shall be provided by the Subcontractor in accordance with *SDRL PM-003*. The MPMS shall be included under Section H, Annex H1 upon Subcontract award and mutual agreement.

H.3 Delivery Terms & Schedule

H.3.1 Delivery Terms

H.3.1.1 The terms of delivery under this Subcontract shall be FCA Free Carrier (Subcontractor's facility) in accordance with Incoterms 2000.

H.3.2 Deliveries

H.3.2.1 **Prototype.** The Subcontractor shall provide a Prototype in accordance with the requirements detailed in Section G, Para G.4.3 and in accordance with the schedule below:

Item	Quantity	Location	Date
Prototype CSS	1	GDLS WTC	29-Jul-11

H.3.2.2 **Updated Prototypes.** The Subcontractor shall provide two (2) updated CSS's in accordance with the requirements detailed in Section G, Para 4.3 and in accordance with the schedule below:

Item	Quantity	Location	Date
Updated Prototype CSS	2	GDLS WTC	3 WAC

H.3.2.3 **Engineering Development Units (EDU).** The Subcontractor shall provide two (2) EDUs in accordance with the requirements detailed in Section G, Para 4.3 and in accordance with the schedule below:

GDLS-C Proprietary Information

See Restriction on First Page

Land Systems-Canada

Item	Quantity	Location	Date
EDU CSS	2	GDLS WTC	3 MAC

H.3.2.4 **Production Representative Unit (PRU).** The Subcontractor shall provide one (1) PRU in accordance with the requirements detailed in Section G, Para 4.3 and in accordance with the schedule below:

Item	Quantity	Location	Date
PRU	1	GDLS WTC	17 WAC

H.3.2.5 **Final Production Representative Unit (PRU).** The Subcontractor shall provide two (2) PRUs in accordance with the requirements detailed in Section G, Para 4.3 and in accordance with the schedule below:

Item	Quantity	Location	Date
Final PRU	2	GDLS WTC	8 MAC

H.3.2.6 **Production Deliveries.** Based on a delivery quantity of 506, the Subcontractor shall produce CSS's as per the schedule below:

Item	Quantity	Location	Date
CSS	2	TBA	9 MAC
CSS	2	TBA	10 MAC
CSS	4	TBA	11 MAC
CSS	6	TBA	12 MAC
CSS	8	TBA	13 MAC
CSS	10 per month	TBA	14 MAC through 19 MAC
CSS	7 per month	TBA	20 MAC through 21 MAC
CSS	10 per month	TBA	22 MAC through 24 MAC
CSS	7	TBA	25MAC
CSS	10 per month	TBA	26 MAC through 31 MAC
CSS	6 per month	TBA	32 MAC through 33 MAC
CSS	9 per month	TBA	34 MAC through 36 MAC
CSS	6	TBA	37 MAC
CSS	9 per month	TBA	38 MAC through 43 MAC
CSS	6 per month	TBA	44 MAC through 45 MAC
CSS	9 per month	TBA	46 MAC through 48 MAC
CSS	6	TBA	49 MAC
CSS	9 per month	TBA	50 MAC through 55 MAC
CSS	6 per month	TBA	56 MAC through 57 MAC
CSS	9 per month	TBA	58 MAC through 60 MAC
CSS	6	TBA	61 MAC
CSS	9 per month	TBA	62 MAC through 67 MAC

GDLS-C Proprietary Information

See Restriction on First Page



Item	Quantity	Location	Date
CSS	6 per month	TBA	68 MAC through 69 MAC
CSS	4	TBA	70 MAC

H.3.3 Deliverables

H.3.3.1 The Subcontractor shall provide all deliverables identified under Section G, Statement of Work in accordance with the SDRL under Section G, Annex G2.

GDLS-C Proprietary Information

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Land Systems-Canada

Model Subcontract Section G, Annex G4 Rev NR

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** CONFIDENTIAL TREATMENT REQUESTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED WITH THE U.S. SECURITIES AND EXCHANGE COMMISSION. OMITTED PORTIONS HAVE BEEN FILED SEPARATELY WITH THE COMMISSION.

[**]	
** CONFIDENTIAL TREATMENT REQUESTED PURSUANT TO A REQUEST FOR CONFIDENT THE U.S. SECURITIES AND EXCHANGE COMMISSION. OMITTED PORTIONS HAVE BEEN F COMMISSION.	

CONFIDENTIAL TREATMENT REQUESTED BY OPTEX SYSTEMS HOLDINGS, INC.

Model Subcontract Section G, Annex G4 Rev NR

GENERAL DYNAMICS Land Systems-Canada

Section I - Price and Payment

Table of Contents

- I.1 Introduction
- I.2 Price
- I.3 Payment Terms

GDLS-C Proprietary Information

See Restriction on First Page

Land Systems-Canada

Model Subcontract Section G, Annex G4 Rev NR

I.1 Introduction

I.1.1 Purpose

I.1.1.1 The purpose of this Section is to identify the firm fixed prices for the deliverables, supplies and service under Subcontract. The Section shall also identify the specific invoicing procedures and requirements associated with this work.

I.2 Price

2.1 Prices

I.2.1.1 All prices for supplies and services under this subcontract shall be invoiced and paid in US dollars in accordance with the Subcontract Line Item Number (SLIN) structure detailed in this section.

I.2.2 Non-Recurring Engineering

I.2.2.1 The following Table identifies the SLIN Structure for Non-Recurring Engineering (NRE) activities in accordance with the Statement of Work (Section G), and its related Annexes and Appendices.

SLIN	Description	Ref	Hrs	Price					
001	Engineering CSSs (Qty 2)	Section G, Section 4.3		\$100,000					
002	SDRLs	Per SDRL as outlined in Section G, Annex G2	2330	\$195,595					
003	Other NRE Costs	Attachment 3 – Pricing Template	800	\$198,100					
	Table 1 – Non-Recurring Engineering Costs								

I.2.3 Recurring / Hardware Costs

I.2.3.1 The following Table identifies the SLIN Structure for Recurring activities identified in the Statement of Work (Section G), and its related Annexes and Appendices.

SLIN	Description	Qty	Unit Price	Total price
004	CSS	**	\$**	\$**
	Table 2–R	Recurring/Hardwar	e Costs	

GDLS-C Proprietary Information

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** CONFIDENTIAL TREATMENT REQUESTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED WITH THE U.S. SECURITIES AND EXCHANGE COMMISSION. OMITTED PORTIONS HAVE BEEN FILED SEPARATELY WITH THE COMMISSION.

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Land Systems-Canada

Model Subcontract Section G, Annex G4 Rev NR

I.2.4 Spares and STTE Pricing

- **I.2.4.1** The Subcontractor shall supply spare and STTE parts pricing for all procurable items as per Section G, Statement of Work, Para 7.4 and 7.7.
- I.2.4.2 The Subcontractor shall supply quantity price breaks for the CSS and all procurable spare parts from quantity 1 through 200.
- **I.2.4.3** All spare and ST&TE parts pricing provided in support of the CSS shall be provided each year from 2012 through 2019, and shall be valid for one calendar year.
- **I.2.4.4** The following Table shall be used as a template to submit price breaks for spare parts. Pricing shall be based on the date of order, not the date of delivery.

Part	Description	Price	2012	2013	2014	2015	2016	2017	2018	2019
Number		Break	Price							
		**	**	**	**	**	**	**	**	**
		**	**	**	**	**	**	**	**	**
		**	**	**	**	**	**	**	**	**
		**	**	**	**	**	**	**	**	**
		**	**	**	**	**	**	**	**	**
		**	**	**	**	**	**	**	**	**
		**	**	**	**	**	**	**	**	**

Table 3 - Spare Parts Price Break Template

I.3 Payment Terms

I.3.1 Pricing Terms

I.3.1.1 The terms of this subcontract are Firm Fixed.

I.3.2 Invoicing

- **I.3.2.1** The Subcontractor shall submit a separate invoice for each SLIN identified in this Section. Invoices shall be submitted no later then 30-calendar days after delivery of each SLIN.
- **I.3.2.2** Payment shall be made in accordance with MNS2 (second day, second month).

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GDLS-C Proprietary Information See Restriction on First Page

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Land Systems-Canada

Subcontract PO 35334144 Section I, Annex I1 Revision NR

Section I, Annex I1 - Payment Plan

CLIN	Description	Amount					
001	Engineering CSSs	\$	100,000.00				
002	SDRLs	\$	195,595.00				
003	Other NRE Costs	\$	198,100.00				
004*	CSS Production Units	\$	7,337,000.00	62.21%	\$ **	Unit Price	\$ **
	Total Contract (US)	\$	7,830,695.00		•	•	

^{* 004} will be replaced with 005 when GDLS-C part number is issued for CSS

** Vendor will be required to submit a separate invoice for each SLIN

Payment #	Event	Completion/Acceptance Criteria	Estimated Completion / Invoice Date	Milestone Payment	Extended Unit Cost	Liquidated Amount	CLIN Number	Invoice Amount (US)**	Estimated Payment Date (MNS2)
1	Start of Work Meeting System Functional Review Production Start of Work	GDLS-C has accepted PDP's: a. SOW-M Minutes b. SFR Exit Criteria c. Production Management Plan	Nov-11	Yes			003	**	Jan-12
							001	**	
2	Delivery of Two (2) Updated Prototypes	Receipt of 2 Updated Prototypes at GDLS	Nov-11	Yes			004	**	Jan-12
3	Preliminary Design Review PRM #1 Production Readiness Review	GDLS-C has accepted PDPs: a. PDR Exit Criteria b. PMR#1 Status & Meeting Minutes c. PRR Meeting Minutes	Nov-11	Yes			002	**	Jan-12
4	Placement of Long Lead Material (LLM)	PDP has provided List of LLM and certification that all LLM is on order.	Nov-11	Yes			003	**	Jan-12
							001	**	
5	Delivery of Two (2) EDUs	Receipt of 2 EDUs at GDLS	Dec-11	Yes			004	**	Feb-12
6	Critical Design Review PRM#2	GDLS-C has accepted PDP's: a. CDR Exit Criteria b. PRM#2 Status & Meeting Minutes	Jan-12	Yes			002	**	Mar-12
							001	**	
7	Delivery of One (1) PRU	Receipt of One PRU at GDLS	Feb-12	Yes			004	**	Apr-12
8	PRM #3	GDLS-C has accepted PDP's PRM#3 Status and Meeting Minutes	Mar-12	Yes			004	**	May-12
							002	**	
9	Delivery of Two (2) Final PRUs	Receipt of Two Final PRUs at GDLS	Jun-12	Yes			004	**	Aug-12
10	CSS Qty 2	Receipt of Material at GDLS	Jul-12	No	\$ **	\$ **	004	**	Sep-12
11	CSS Qty 2	Receipt of Material at GDLS	Aug-12	No	\$ **	\$ **	004	**	Oct-12
12	CSS Qty 4	Receipt of Material at GDLS	Sep-12	No	\$ **	\$ **	004	**	Nov-12
13	CSS Qty 6	Receipt of Material at GDLS	Oct-12	No	\$ **	\$ **	004	**	Dec-12
14	CSS Qty 8	Receipt of Material at GDLS	Nov-12	No	\$ **	\$ **	004	**	Jan-13

** CONFIDENTIAL TREATMENT REQUESTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED WITH THE U.S. SECURITIES AND EXCHANGE COMMISSION. OMITTED PORTIONS HAVE BEEN FILED SEPARATELY WITH THE COMMISSION.

GENERAL DYNAMICS Land Systems-Canada

Subcontract PO 35334144 Section I, Annex I1 Revision NR

Section I, Annex I1 - Payment Plan

CLIN	Description	Amount				
001	Engineering CSSs	\$ 100,000.00				
002	SDRLs	\$ 195,595.00				
003	Other NRE Costs	\$ 198,100.00				
004*	CSS Production Units	\$ 7,337,000.00	62.21%	\$ **	Unit Price	\$ *:
	Total Contract (US)	\$ 7.830.695.00				

^{* 004} will be replaced with 005 when GDLS-C part number is issued for CSS

** Vendor will be required to submit a separate invoice for each SLIN

Payment #	Event	Completion/Acceptance Criteria	Estimated Completion / Invoice Date	Milestone Payment	Extended Unit Cost	Liquidated Amount	CLIN Number	Invoice Amount (US)**	Estimated Payment Date (MNS2)
15	CSS Qty 10	Receipt of Material at GDLS	Dec-12	No	**	**	004	**	Feb-13
16	CSS Qty 10	Receipt of Material at GDLS	Jan-13	No	**	**	004	**	Mar-13
17	CSS Qty 10	Receipt of Material at GDLS	Feb-13	No	**	**	004	**	Apr-13
18	CSS Qty 10	Receipt of Material at GDLS	Mar-13	No	**	**	004	**	May-13
19	CSS Qty 10	Receipt of Material at GDLS	Apr-13	No	**	**	004	**	Jun-13
20	CSS Qty 10	Receipt of Material at GDLS	May-13	No	**	**	004	**	Jul-13
21	CSS Qty 7	Receipt of Material at GDLS	Jun-13	No	**	**	004	**	Aug-13
22	CSS Qty 7	Receipt of Material at GDLS	Jul-13	No	**	**	004	**	Sep-13
23	CSS Qty 10	Receipt of Material at GDLS	Aug-13	No	**	**	004	**	Oct-13
24	CSS Qty 10	Receipt of Material at GDLS	Sep-13	No	**	**	004	**	Nov-13
25	CSS Qty 10	Receipt of Material at GDLS	Oct-13	No	**	**	004	**	Dec-13
26	CSS Qty 7	Receipt of Material at GDLS	Nov-13	No	**	**	004	**	Jan-14
27	CSS Qty 10	Receipt of Material at GDLS	Dec-13	No	**	**	004	**	Feb-14
28	CSS Qty 10	Receipt of Material at GDLS	Jan-14	No	**	**	004	**	Mar-14
29	CSS Qty 10	Receipt of Material at GDLS	Feb-14	No	**	**	004	**	Apr-14
30	CSS Qty 10	Receipt of Material at GDLS	Mar-14	No	**	**	004	**	May-14
31	CSS Qty 10	Receipt of Material at GDLS	Apr-14	No	**	**	004	**	Jun-14
32	CSS Qty 10	Receipt of Material at GDLS	May-14	No	**	**	004	**	Jul-14
33	CSS Qty 6	Receipt of Material at GDLS	Jun-14	No	**	**	004	**	Aug-14
34	CSS Qty 6	Receipt of Material at GDLS	Jul-14	No	**	**	004	**	Sep-14
35	CSS Qty 9	Receipt of Material at GDLS	Aug-14	No	**	**	004	**	Oct-14
36	CSS Qty 9	Receipt of Material at GDLS	Sep-14	No	**	**	004	**	Nov-14
37	CSS Qty 9	Receipt of Material at GDLS	Oct-14	No	**	**	004	**	Dec-14
38	CSS Qty 6	Receipt of Material at GDLS	Nov-14	No	**	**	004	**	Jan-15
39	CSS Qty 9	Receipt of Material at GDLS	Dec-14	No	**	**	004	**	Feb-15
40	CSS Qty 9	Receipt of Material at GDLS	Jan-15	No	**	**	004	**	Mar-15
41	CSS Qty 9	Receipt of Material at GDLS	Feb-15	No	**	**	004	**	Apr-15
42	CSS Qty 9	Receipt of Material at GDLS	Mar-15	No	**	**	004	**	May-15
43	CSS Qty 9	Receipt of Material at GDLS	Apr-15	No	**	**	004	**	Jun-15
44	CSS Qty 9	Receipt of Material at GDLS	May-15	No	**	**	004	**	Jul-15
45	CSS Qty 6	Receipt of Material at GDLS	Jun-15	No	**	**	004	**	Aug-15

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GENERAL DYNAMICS Land Systems-Canada

Subcontract PO 35334144 Section I, Annex I1 Revision NR

Section I, Annex I1 - Payment Plan

CLIN	Description	Amount				
001	Engineering CSSs	\$ 100,000.00				
002	SDRLs	\$ 195,595.00				
003	Other NRE Costs	\$ 198,100.00				
004*	CSS Production Units	\$ 7,337,000.00	62.21%	\$ **	Unit Price	\$
	Total Contract (US)	\$ 7.830.695.00				

^{* 004} will be replaced with 005 when GDLS-C part number is issued for CSS

** Vendor will be required to submit a separate invoice for each SLIN

Payment #	Event	Completion/Acceptance Criteria	Estimated Completion / Invoice Date	Milestone Payment	Extended Unit Cost	Liquidated Amount		Invoice Amount (US)**	Estimated Payment Date (MNS2)
46	CSS Qty 6	Receipt of Material at GDLS	Jul-15	No	**	**	004	**	Sep-15
47	CSS Qty 9	Receipt of Material at GDLS	Aug-15	No	**	**	004	**	Oct-15
48	CSS Qty 9	Receipt of Material at GDLS	Sep-15	No	**	**	004	**	Nov-15
49	CSS Qty 9	Receipt of Material at GDLS	Oct-15	No	**	**	004	**	Dec-15
50	CSS Qty 6	Receipt of Material at GDLS	Nov-15	No	**	**	004	**	Jan-16
51	CSS Qty 9	Receipt of Material at GDLS	Dec-15	No	**	**	004	**	Feb-16
52	CSS Qty 9	Receipt of Material at GDLS	Jan-16	No	**	**	004	**	Mar-16
53	CSS Qty 9	Receipt of Material at GDLS	Feb-16	No	**	**	004	**	Apr-16
54	CSS Qty 9	Receipt of Material at GDLS	Mar-16	No	**	**	004	**	May-16
55	CSS Qty 9	Receipt of Material at GDLS	Apr-16	No	**	**	004	**	Jun-16
56	CSS Qty 9	Receipt of Material at GDLS	May-16	No	**	**	004	**	Jul-16
57	CSS Qty 6	Receipt of Material at GDLS	Jun-16	No	**	**	004	**	Aug-16
58	CSS Qty 6	Receipt of Material at GDLS	Jul-16	No	**	**	004	**	Sep-16
59	CSS Qty 9	Receipt of Material at GDLS	Aug-16	No	**	**	004	**	Oct-16
60	CSS Qty 9	Receipt of Material at GDLS	Sep-16	No	**	**	004	**	Nov-16
61	CSS Qty 9	Receipt of Material at GDLS	Oct-16	No	**	**	004	**	Dec-16
62	CSS Qty 6	Receipt of Material at GDLS	Nov-16	No	**	**	004	**	Jan-17
63	CSS Qty 9	Receipt of Material at GDLS	Dec-16	No	**	**	004	**	Feb-17
64	CSS Qty 9	Receipt of Material at GDLS	Jan-17	No	**	**	004	**	Mar-17
65	CSS Qty 9	Receipt of Material at GDLS	Feb-17	No	**	**	004	**	Apr-17
66	CSS Qty 9	Receipt of Material at GDLS	Mar-17	No	**	**	004	**	May-17
67	CSS Qty 9	Receipt of Material at GDLS	Apr-17	No	**	**	004	**	Jun-17
68	CSS Qty 9	Receipt of Material at GDLS	May-17	No	**	**	004	**	Jul-17
69	CSS Qty 6	Receipt of Material at GDLS	Jun-17	No	**	**	004	**	Aug-17
70	CSS Qty 6	Receipt of Material at GDLS	Jul-17	No	**	**	004	**	Sep-17
71	CSS Qty 4	Receipt of Material at GDLS	Aug-17	No	**	**	004	**	Oct-17

^{**} CONFIDENTIAL TREATMENT REQUESTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED WITH THE U.S. SECURITIES AND EXCHANGE COMMISSION. OMITTED PORTIONS HAVE BEEN FILED SEPARATELY WITH THE COMMISSION.

Land Systems - Canada

24 October 2011

Letter No: HOB11-027

Subject: LAVUP Subcontract 35334144 Award – Commander's Sighting System

Attachment: (1) Subcontract 35334144

(2) Purchase Order 35334144

(3) Execution of Subcontract and Purchase Order 35334144

Mr. Danny Schoening,

GDLS-C is pleased to advise that the Commander's Sighting System (CSS) proposed by Optex Systems Inc has been selected as the CSS for the Canadian LAV III Upgrade Program.

At this time, Optex Systems Inc is prohibited from announcing this selection outside of your Company. GDLS-C and Canada will advise accordingly when this information can be released.

Subcontract 35334144 and the supplemental Purchase Order have been included, at Attachment 1 and 2. Please indicate your acceptance by execution, at Attachment 3, and return a scanned copy to the undersigned, no later than COB **24 October 2011**. GDLS-C shall sign and return a copy for your records.

A Start of Work Meeting has been scheduled for 03 and 04 November 2011 at your facility. GDLS-C will be in touch to provide a list of attendees.

GDLS-C looks forward to building a positive relationship with Optex Systems Inc in the execution of this Program. Should you have any further questions or concerns, please do not hesitate to contact the undersigned at (519) 964-5278 or brownh3@gdls.com.

Sincerely,

//S//

Heath Brown Subcontract Administrator, Situational Awareness Supply Chain Management, Subcontracts GDLS-Canada Brownh3@gdls.com

P.O. Box 7003 London, Ontario N5Y 6L8 Tel 519 964 5421 Fax 519 964 5761

General Dynamics Private Information

Land Systems - Canada

Attachment 3

Execution of Subcontract 35334144 Please indicate your acceptance of Subcontract and Purchase Order 35334144 through execution below.							
Date of Acceptance	Date of Acceptance						
P.O. Box 7003 London, Ontario N5Y 6L8 Tel 519 964 5421 Fax 519 964 5761							
	General Dynamics Private Information						