



**THE CITY OF WINNIPEG**

# **REQUEST FOR PROPOSAL**

**RFP NO. 948-2014**

**REQUEST FOR PROPOSALS FOR THE SUPPLY OF FIRE FIGHTING TURNOUT  
GEAR**

**Bidders please note Clause B10.1(d)**

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## **PART B - BIDDING PROCEDURES**

### **B1. CONTRACT TITLE**

B1.1 REQUEST FOR PROPOSALS FOR THE SUPPLY OF FIRE FIGHTING TURNOUT GEAR

### **B2. SUBMISSION DEADLINE**

B2.1 The Submission Deadline is 4:00 p.m. Winnipeg time, October 20, 2014.

B2.2 Proposals determined by the Manager of Materials to have been received later than the Submission Deadline will not be accepted and will be returned upon request.

B2.3 The Contract Administrator or the Manager of Materials may extend the Submission Deadline by issuing an addendum at any time prior to the time and date specified in B2.1.

### **B3. ENQUIRIES**

B3.1 All enquiries shall be directed to the Contract Administrator identified in D5.1.

B3.2 If the Bidder finds errors, discrepancies or omissions in the Request for Proposal, or is unsure of the meaning or intent of any provision therein, the Bidder shall promptly notify the Contract Administrator of the error, discrepancy or omission at least five (5) Business Days prior to the Submission Deadline.

B3.3 If the Bidder is unsure of the meaning or intent of any provision therein, the Bidder should request clarification as to the meaning or intent prior to the Submission Deadline.

B3.4 Responses to enquiries which, in the sole judgment of the Contract Administrator, require a correction to or a clarification of the Request for Proposal will be provided by the Contract Administrator to all Bidders by issuing an addendum.

B3.5 Responses to enquiries which, in the sole judgment of the Contract Administrator, do not require a correction to or a clarification of the Request for Proposal will be provided by the Contract Administrator only to the Bidder who made the enquiry.

B3.6 The Bidder shall not be entitled to rely on any response or interpretation received pursuant to B3 unless that response or interpretation is provided by the Contract Administrator in writing.

### **B4. CONFIDENTIALITY**

B4.1 Information provided to a Bidder by the City or acquired by a Bidder by way of further enquiries or through investigation is confidential. Such information shall not be used or disclosed in any way without the prior written authorization of the Contract Administrator. The use and disclosure of the confidential information shall not apply to information which:

- (a) was known to the Bidder before receipt hereof; or
- (b) becomes publicly known other than through the Bidder; or
- (c) is disclosed pursuant to the requirements of a governmental authority or judicial order.

B4.2 The Bidder shall not make any statement of fact or opinion regarding any aspect of the Bid Opportunity to the media or any member of the public without the prior written authorization of the Contract Administrator.

### **B5. ADDENDA**

B5.1 The Contract Administrator may, at any time prior to the Submission deadline, issue addenda correcting errors, discrepancies or omissions in the Request for Proposal, or clarifying the meaning or intent of any provision therein.

- B5.2 The Contract Administrator will issue each addendum at least two (2) Business Days prior to the Submission Deadline, or provide at least two (2) Business Days by extending the Submission Deadline.
- B5.2.1 Addenda will be available on the Bid Opportunities page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/bidopp.asp>
- B5.2.2 The Bidder is responsible for ensuring that he/she has received all addenda and is advised to check the Materials Management Division website for addenda regularly and shortly before the Submission Deadline, as may be amended by addendum.
- B5.3 The Bidder shall acknowledge receipt of each addendum in Paragraph 9 of Form A: Proposal. Failure to acknowledge receipt of an addendum may render a Proposal non-responsive.

## **B6. SUBSTITUTES**

- B6.1 The Work is based on the materials, equipment, methods and products specified in the Request for Proposal.
- B6.2 Substitutions shall not be allowed unless application has been made to and prior approval has been granted by the Contract Administrator in writing.
- B6.3 Requests for approval of a substitute will not be considered unless received in writing by the Contract Administrator at least seven (7) Business Days prior to the Submission Deadline.
- B6.4 The Bidder shall ensure that any and all requests for approval of a substitute:
- (a) provide sufficient information and details to enable the Contract Administrator to determine the acceptability of the material, equipment, method or product as either an approved equal or alternative;
  - (b) identify any and all changes required in the applicable Work, and all changes to any other Work, which would become necessary to accommodate the substitute;
  - (c) identify any anticipated cost or time savings that may be associated with the substitute;
  - (d) certify that, in the case of a request for approval as an approved equal, the substitute will fully perform the functions called for by the general design, be of equal or superior substance to that specified, is suited to the same use and capable of performing the same function as that specified and can be incorporated into the Work, strictly in accordance with the Contract;
  - (e) certify that, in the case of a request for approval as an approved alternative, the substitute will adequately perform the functions called for by the general design, be similar in substance to that specified, is suited to the same use and capable of performing the same function as that specified and can be incorporated into the Work, strictly in accordance with the Contract.
- B6.5 The Contract Administrator, after assessing the request for approval of a substitute, may in his/her sole discretion grant approval for the use of a substitute as an "approved equal" or as an "approved alternative", or may refuse to grant approval of the substitute.
- B6.6 The Contract Administrator will provide a response in writing, at least two (2) Business Days prior to the Submission Deadline, to the Bidder who requested approval of the substitute.
- B6.6.1 The Contract Administrator will issue an Addendum, disclosing the approved materials, equipment, methods and products to all potential Bidders. The Bidder requesting and obtaining the approval of a substitute shall be responsible for disseminating information regarding the approval to any person or persons he/she wishes to inform.
- B6.7 The Bidder requesting and obtaining the approval of a substitute shall be entirely responsible for disseminating information regarding the approval to any person or persons he/she wishes to inform.

- B6.8 If the Contract Administrator approves a substitute as an “approved equal”, any Bidder may use the approved equal in place of the specified item.
- B6.9 If the Contract Administrator approves a substitute as an “approved alternative”, any Bidder bidding that approved alternative may base his/her Total Bid Price upon the specified item but may also indicate an alternative price based upon the approved alternative. Such alternatives will be evaluated in accordance with B17.
- B6.10 No later claim by the Contractor for an addition to the price(s) because of any other changes in the Work necessitated by the use of an approved equal or an approved alternative will be considered.
- B6.11 Notwithstanding B6.2 to B6.10 and in accordance with B7.6, deviations inconsistent with the Request for Proposal document shall be evaluated in accordance with B17.1(a).

## **B7. PROPOSAL SUBMISSION**

- B7.1 The Proposal shall consist of the following components:
- (a) Form A: Proposal;
  - (b) Form B: Prices.
- B7.2 Further to B7.1, the Bidder should include the written correspondence from the Contract Administrator approving a substitute in accordance with B6.
- B7.3 All components of the Proposal shall be fully completed or provided, and submitted by the Bidder no later than the Submission Deadline, with all required entries made clearly and completely, to constitute a responsive Proposal.
- B7.3.1 Bidders should submit one (1) unbound original (marked “original”) and five (5) copies.
- B7.4 The Proposal Submission shall be submitted enclosed and sealed in an envelope clearly marked with the RFP number and the Bidder's name and address.
- B7.4.1 Samples or other components of the Proposal Submission which cannot reasonably be enclosed in the envelope may be packaged separately, but shall be clearly marked with the RFP number, the Bidder's name and address, and an indication that the contents are part of the Bidder's Proposal Submission.
- B7.5 Bidders are advised not to include any information/literature except as requested in accordance with B7.1.
- B7.6 Bidders are advised that inclusion of terms and conditions inconsistent with the Request for Proposal document, including the General Conditions, will be evaluated in accordance with B17.1(a).
- B7.7 Proposals submitted by facsimile transmission (fax) or internet electronic mail (e-mail) will not be accepted.
- B7.8 Proposals shall be submitted to:
- The City of Winnipeg  
Corporate Finance Department  
Materials Management Division  
185 King Street, Main Floor  
Winnipeg MB R3B 1J1

## **B8. PROPOSAL**

- B8.1 The Bidder shall complete Form A: Proposal, making all required entries.

- B8.2 Paragraph 2 of Form A: Proposal shall be completed in accordance with the following requirements:
- (a) if the Bidder is a sole proprietor carrying on business in his/her own name, his/her name shall be inserted;
  - (b) if the Bidder is a partnership, the full name of the partnership shall be inserted;
  - (c) if the Bidder is a corporation, the full name of the corporation shall be inserted;
  - (d) if the Bidder is carrying on business under a name other than his/her own, the business name and the name of every partner or corporation who is the owner of such business name shall be inserted.
- B8.2.1 If a Proposal is submitted jointly by two or more persons, each and all such persons shall identify themselves in accordance with B8.2.
- B8.3 In Paragraph 3 of Form A: Proposal, the Bidder shall identify a contact person who is authorized to represent the Bidder for purposes of the Proposal.
- B8.4 Paragraph 11 of Form A: Proposal shall be signed in accordance with the following requirements:
- (a) if the Bidder is a sole proprietor carrying on business in his/her own name, it shall be signed by the Bidder;
  - (b) if the Bidder is a partnership, it shall be signed by the partner or partners who have authority to sign for the partnership;
  - (c) if the Bidder is a corporation, it shall be signed by its duly authorized officer or officers and the corporate seal, if the corporation has one, should be affixed;
  - (d) if the Bidder is carrying on business under a name other than his/her own, it shall be signed by the registered owner of the business name, or by the registered owner's authorized officials if the owner is a partnership or a corporation.
- B8.4.1 The name and official capacity of all individuals signing Form A: Proposal should be printed below such signatures.
- B8.5 If a Proposal is submitted jointly by two or more persons, the word "Bidder" shall mean each and all such persons, and the undertakings, covenants and obligations of such joint Bidders in the Proposal and the Contract, when awarded, shall be both joint and several.

## **B9. PRICES**

- B9.1 The Bidder shall state a price in Canadian funds for each item of the Work identified on Form B: Prices.
- B9.1.1 Prices on Form B: Prices shall include:
- (a) duty;
  - (b) freight and cartage;
  - (c) Provincial and Federal taxes [except the Goods and Services Tax (GST) and Manitoba Retail Sales Tax (MRST, also known as PST), which shall be extra where applicable] and all charges governmental or otherwise paid;
  - (d) profit and all compensation which shall be due to the Contractor for the Work and all risks and contingencies connected therewith.
- B9.2 The quantities listed on Form B: Prices are to be considered approximate only. The City will use said quantities for the purpose of comparing Proposals.
- B9.3 The quantities for which payment will be made to the Contractor are to be determined by the Work actually performed and completed by the Contractor, to be measured as specified in the applicable Specifications.

B9.4 Where applicable to the Request for Proposal, payments for services to Non-Resident Bidders are subject to a Non-Resident Withholding Tax pursuant to the Income Tax Act (Canada).

## **B10. QUALIFICATION**

B10.1 The Bidder shall:

- (a) undertake to be in good standing under The Corporations Act (Manitoba), or properly registered under The Business Names Registration Act (Manitoba), or otherwise properly registered, licensed or permitted by law to carry on business in Manitoba, or if the Bidder does not carry on business in Manitoba, in the jurisdiction where the Bidder does carry on business; and
- (b) be financially capable of carrying out the terms of the Contract; and
- (c) have all the necessary experience, capital, organization, and equipment to perform the Work in strict accordance with the terms and provisions of the Contract;
- (d) be a Canadian vendor having a place of business in Canada.

B10.2 The Bidder and any proposed Subcontractor (for the portion of the Work proposed to be subcontracted to them) shall:

- (a) be responsible and not be suspended, debarred or in default of any obligations to the City. A list of suspended or debarred individuals and companies is available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/debar.stm>

B10.3 The Bidder and/or any proposed Subcontractor (for the portion of the Work proposed to be subcontracted to them) shall:

- (a) have successfully carried out work similar in nature, scope and value to the Work; and
- (b) be fully capable of performing the Work required to be in strict accordance with the terms and provisions of the Contract.

The Bidder shall submit, within five (5) Business Days of a request by the Contract Administrator, proof satisfactory to the Contract Administrator of the qualifications of the Bidder and of any proposed Subcontractor.

B10.4 A representative sample of each item identified on Form B: Prices will be purchased by the City for the purpose of destructive testing for evaluation in accordance with B17.

B10.4.1 The representative samples shall be submitted to the Contract Administrator without any marking on the garments besides the sizes, as this is to be conducted as a blind test and trial;

B10.4.2 The only contact the Bidders will have during the trial period is with the Contract Administrator, should any contact transpire with any Winnipeg Fire Paramedic Service members performing the trial of the turnout gear, the City may determine them to be in breach and they may be disqualified.

B10.5 The Bidder shall provide, on the request of the Contract Administrator, full access to any of the Bidder's equipment and facilities to confirm, to the Contract Administrator's satisfaction, that the Bidder's equipment and facilities are adequate to perform the Work.

## **B11. ELIGIBILITY**

B11.1 Various organizations provided feedback with respect to this Request for Quote. In the City's opinion, this relationship or association does not create a conflict of interest or will not likely create a perception of conflict of interest because of this disclosure. The organizations are;

- (i) BH Safety Services & Consulting Ltd.;
- (ii) Commercial Solutions;
- (iii) Reliant Action Ltd.;



- (iv) Trak Ventures Fire & Safety;
- (v) ABC Fire & Safety;
- (vi) Gore.

## **B12. OPENING OF PROPOSALS AND RELEASE OF INFORMATION**

- B12.1 Proposals will not be opened publicly.
- B12.2 After the trial period the award of Contract, the names of the Bidders and the Contract amount of the successful Bidder will be available on the Closed Bid Opportunities (or Public/Posted Opening & Award Results) page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/>
- B12.3 To the extent permitted, the City shall treat all Proposal as confidential, however the Bidder is advised that any information contained in any Proposal Submission may be released if required by City policy or procedures, by The Freedom of Information and Protection of Privacy Act (Manitoba), by other authorities having jurisdiction, or by law.

## **B13. IRREVOCABLE OFFER**

- B13.1 The Proposal(s) submitted by the Bidder shall be irrevocable for the time period specified in Paragraph 10 of Form A: Proposal.
- B13.2 The acceptance by the City of any Proposal shall not release the Proposals of the other responsive Bidders and these Bidders shall be bound by their offers on such Work for the time period specified in Paragraph 10 of Form A: Proposal.

## **B14. WITHDRAWAL OF OFFERS**

- B14.1 A Bidder may withdraw his/her Proposal without penalty by giving written notice to the Manager of Materials at any time prior to the Submission Deadline.
- B14.1.1 Notwithstanding C21, the time and date of receipt of any notice withdrawing a Proposal shall be the time and date of receipt as determined by the Manager of Materials.
- B14.1.2 The City will assume that any one of the contact persons named in Paragraph 3 of Form A: Proposal or the Bidder's authorized representatives named in Paragraph 11 of Form A: Proposal, and only such person, has authority to give notice of withdrawal.
- B14.1.3 If a Bidder gives notice of withdrawal prior to the Submission Deadline, the Manager of Materials will:
- (a) retain the Proposal until after the Submission Deadline has elapsed;
  - (b) open the Proposal to identify the contact person named in Paragraph 3 of Form A: Proposal and the Bidder's authorized representatives named in Paragraph 11 of Form A: Proposal; and
  - (c) if the notice has been given by any one of the persons specified in B14.1.3(b), declare the Proposal withdrawn.
- B14.2 A Bidder who withdraws his/her Proposal after the Submission Deadline but before his/her offer has been released or has lapsed as provided for in B13.2 shall be liable for such damages as are imposed upon the Bidder by law and subject to such sanctions as the Chief Administrative Officer considers appropriate in the circumstances. The City, in such event, shall be entitled to all rights and remedies available to it at law.

## **B15. INTERVIEWS**

- B15.1 The Contract Administrator may, in his/her sole discretion, interview Bidders during the evaluation process.

## **B16. NEGOTIATIONS**

- B16.1 The City reserves the right to negotiate details of the Contract with any Bidder. Bidders are advised to present their best offer, not a starting point for negotiations in their Proposal Submission.
- B16.2 The City may negotiate with the Bidders submitting, in the City's opinion, the most advantageous Proposals. The City may enter into negotiations with one or more Bidders without being obligated to offer the same opportunity to any other Bidders. Negotiations may be concurrent and will involve each Bidder individually. The City shall incur no liability to any Bidder as a result of such negotiations.
- B16.3 If, in the course of negotiations pursuant to B16.2 or otherwise, the Bidder amends or modifies a Proposal after the Submission Deadline, the City may consider the amended Proposal as an alternative to the Proposal already submitted without releasing the Bidder from the Proposal as originally submitted.

## **B17. EVALUATION OF PROPOSALS**

- B17.1 Award of the Contract shall be based on the following evaluation criteria:
- (a) compliance by the Bidder with the requirements of the Request for Proposal or acceptable deviation therefrom (include destructive evaluation by City Committee):
    - (i) mandatory requirements (pass/fail);
    - (b) qualifications of the Bidder and the Subcontractors, if any, pursuant to B10 (pass/fail):
    - (c) Design and construction features exceeding the minimum mandatory requirements and the results from the testing and trial period. (40%)
    - (d) Quality of Workmanship (20%)
    - (e) Evaluated Bid Price (40%)
    - (f) economic analysis of any approved alternative pursuant to B6.
- B17.2 Further to B17.1(a), the Award Authority may reject a Proposal as being non-responsive if the Proposal Submission is incomplete, obscure or conditional, or contains additions, deletions, alterations or other irregularities. The Award Authority may reject all or any part of any Proposal, or waive technical requirements or minor informalities or irregularities if the interests of the City so require.
- B17.3 Further to B17.1(b), the Award Authority shall reject any Proposal submitted by a Bidder who does not demonstrate, in his/her Proposal, in other information required to be submitted, during interviews or in the course of reference checks, that he/she is responsible and qualified.
- B17.4 Further to B17.1(c), the design and construction features exceeding the minimum mandatory requirements will be evaluated based on composition of material and vapour barrier for wear and on comfort, fit, range of motion, ladder/escape belt and any other all elements that exceed NFPA 1500.
- B17.4.1 Further to B17.1(c), destructive evaluation by City Committee, destructive testing will include taking apart the turnout gear to ensure compliance.
- B17.4.2 Further to B17.1(c), trial of the turnout gear will take approximately six (6) to (8) eight months.
- B17.5 Further to B17.1(d), the quality of workmanship will be evaluated based on the professional finish of the garment based on stitching and seams.
- B17.6 Further to B17.1(e), Evaluated Bid Price shall be the sum of the quantities multiplied by the unit prices for each item shown on Form B: Prices.
- B17.7 This Contract will be awarded in Phases. Phase 2 will be awarded as a whole.

**B18. AWARD OF CONTRACT**

B18.1 The City will give notice of the award of the Contract or will give notice that no award will be made.

B18.2 The City will have no obligation to award a Contract to a Bidder, even though one or all of the Bidders are determined to be responsible and qualified, and the Proposals are determined to be responsive.

B18.2.1 Without limiting the generality of B18.2, the City will have no obligation to award a Contract where:

- (a) the prices exceed the available City funds for the Work;
- (b) the prices are materially in excess of the prices received for similar work in the past;
- (c) the prices are materially in excess of the City's cost to perform the Work, or a significant portion thereof, with its own forces;
- (d) only one Proposal is received; or
- (e) in the judgment of the Award Authority, the interests of the City would best be served by not awarding a Contract.

B18.3 Where an award of Contract is made by the City, the award shall be made to the responsible and qualified Bidder submitting the most advantageous offer, in accordance with B17.

B18.3.1 Following the award of contract, a Bidder will be provided with information related to the evaluation of his/her Bid upon written request to the Contract Administrator.

B18.4 The City will award this Contract in Phases.

B18.5 Notwithstanding C4 and Paragraph 6 of Form A: Proposal, the City may issue a purchase order to the successful Bidder in lieu of the execution of a Contract.

The Contract Documents, as defined in C1.1 (n) (ii), in their entirety shall be deemed to be incorporated in and to form a part of the purchase order notwithstanding that they are not necessarily attached to or accompany said purchase order.

## **PART C - GENERAL CONDITIONS**

### **C0. GENERAL CONDITIONS**

- C0.1 The *General Conditions for the Supply of Goods* (Revision 2008 05 26) are applicable to the Work of the Contract.
- C0.1.1 The *General Conditions for the Supply of Goods* are available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division website at [http://www.winnipeg.ca/matmgt/gen\\_cond.stm](http://www.winnipeg.ca/matmgt/gen_cond.stm)
- C0.2 A reference in the Request for Proposal to a section, clause or sub clause with the prefix “**C**” designates a section, clause or sub clause in the *General Conditions for Supply of Goods*.

## PART D - SUPPLEMENTAL CONDITIONS

### D1. GENERAL CONDITIONS

- D1.1 In addition to the *General Conditions for the Supply of Goods*, these Supplemental Conditions are applicable to the Work of the Contract.
- D1.1 In addition to the *General Conditions*, these Supplemental Conditions are applicable to the Work of the Contract.

### D2. UNFAIR LABOUR PRACTICES

- D2.1 Further to C3.2, the Contractor declares that in bidding for the work and in entering into this contract, he and his subcontractors conduct their respective business in accordance with established international codes as they relate to child and forced labour embodied in United Nations (UN) and International Labour Organization (ILO) conventions as ratified by Canada.
- D2.2 The Contractor shall forfeit all claims under the Contract as well as refund to the City any monies paid to him, beyond his actual proven expenses for work done, if this declaration is shown to be false.

### D3. DEFINITIONS

- D3.1 Where used in these General Conditions and in the other documents forming part of the Contract:
- (a) "**representative sample**" means the samples submitted will be exactly that which will be provided for the duration of the Contract and must meet specifications.

### D4. SCOPE OF WORK

- D4.1 The Work to be done under the Contract shall consist of two (2) phases as follows:
- (a) **Phase One** shall be the trial and testing of firefighting turnout gear (protective ensembles) in accordance with B17.4.2. The City intends to test firefighting turnout (protective ensembles) from the Bidders.
- (b) **Phase Two** shall consist of the supply and delivery of the firefighting turnout gear (protective ensembles) that is determined to be the most advantageous based on the results of the trial and testing.
- D4.2 The work to be done under Phase 2 of the Contract shall consist of supply and delivery of firefighting turnout gear (protective ensemble) for the period from the date of award until April 30, 2020, with the option of three (3) mutually agreed upon two (2) year extensions.
- D4.2.1 The City may negotiate the extension option with the Contractor within sixty (60) Calendar Days prior to the expiry date of the Contract. The City shall incur no liability to the Contractor as a result of such negotiations.
- D4.2.2 Changes resulting from such negotiations shall become effective on May 1st of the respective year. Changes to the Contract shall not be implemented by the Contractor without written approval by the Contract Administrator.
- D4.3 The Work shall be done on as "as required and scheduled" basis during the term of the Contract.
- D4.3.1 The type and quantity of Work to be performed under the Contract shall be as authorized from time to time by the Contract Administrator and/or Users.
- D4.3.2 Notwithstanding C7, the City shall have no obligation under the Contract to purchase any quantity of any item in excess of its actual operational requirements.

- D4.3.3 Notwithstanding D4.2, the type and quantity of Work to be performed under this Contract is subject to annual approval of monies therefore in a budget by Council. Bidders are advised that monies have been approved for work up to and including December 31, 2014.
- D4.3.4 Notwithstanding D4.2, in the event that operational changes result in substantial changes to the requirements for Work, the City reserves the right to alter the type or quantity of work performed under this Contract, or to terminate the Contract, upon thirty (30) Calendar Days written notice by the Contract Administrator. In such an event, no claim may be made for damages on the ground of loss of anticipated profit on Work.

## **D5. CONTRACT ADMINISTRATOR**

- D5.1 The Contract Administrator is:

Diane S. Kowaliuk, SCMP  
Supervisor of Stores  
2546 McPhillips Street  
Winnipeg, Manitoba  
Telephone No.: 204 -986-5255  
e-mail: dkowaliuk@winnipeg.ca

## **D6. NOTICES**

- D6.1 Notwithstanding C21.3 all notices of appeal to the Chief Administrative Officer shall be sent to the attention of the Chief Financial Officer at the following facsimile number:

The City of Winnipeg  
Chief Financial Officer  
Facsimile No.: 204 949-1174

## **D7. OWNERSHIP OF INFORMATION, CONFIDENTIALITY AND NON DISCLOSURE**

- D7.1 The Contract, all deliverables produced or developed, and information provided to or acquired by the Contractor are the property of the City and shall not be appropriated for the Contractors own use, or for the use of any third party.
- D7.2 The Contractor shall not make any public announcements or press releases regarding the Contract, without the prior written authorization of the Contract Administrator.
- D7.3 The following shall be confidential and shall not be disclosed by the Contractor to the media or any member of the public without the prior written authorization of the Contract Administrator;
- (a) information provided to the Contractor by the City or acquired by the Contractor during the course of the Work;
  - (b) the Contract, all deliverables produced or developed; and
  - (c) any statement of fact or opinion regarding any aspect of the Contract.
- D7.4 A Contractor who violates any provision of D7 may be determined to be in breach of Contract.

## **SUBMISSIONS**

### **D8. AUTHORITY TO CARRY ON BUSINESS**

- D8.1 The Contractor shall be in good standing under The Corporations Act (Manitoba), or properly registered under The Business Names Registration Act (Manitoba), or otherwise properly registered, licensed or permitted by law to carry on business in Manitoba, or if the Contractor does not carry on business in Manitoba, in the jurisdiction where the Contractor does carry on

business, throughout the term of the Contract, and shall provide the Contract Administrator with evidence thereof upon request.

## **D9. INSURANCE**

D9.1 The Contractor shall provide and maintain the following insurance coverage:

- (a) commercial general liability insurance, in the amount of at least five million dollars (\$5,000,000.00) inclusive, with The City of Winnipeg added as an additional insured; such liability policy to also contain a cross-liability clause, contractual liability and products and completed operations cover, to remain in place at all times during the term of the Contract;
- (b) if required, automobile liability insurance for owner and non-owned automobiles used for or in connection with the Contractor in the amount of at least two million dollars (\$2,000,000.00) to remain in place at all times during the term of the Contract: such insurance may be net through the commercial general liability cover where applicable.

D9.2 All policies shall be taken out with insurers licensed to and carrying on business in the Province of Manitoba

D9.3 Deductibles shall be borne by the Contractor.

D9.4 The Contractor shall not cancel, materially alter, or cause the policy to lapse without providing at least thirty (30) Calendar Days prior written notice to the Contract Administrator.

D9.5 The Contractor shall file with the City an annual Certificate of Insurance in a form satisfactory to the City Solicitor.

D9.6 The City shall have the right to alter the limits and/or coverage's as reasonably required from time to time during the continuance of this Contract and for any subsequent renewals thereof, provided that the City shall give the Contractor reasonable notice and shall request reasonable change.

## **SCHEDULE OF WORK**

### **D10. COMMENCEMENT**

D10.1 The Contractor shall not commence any Work until he/she is in receipt of a notice of award from the City authorizing the commencement of the Work.

D10.2 The Contractor shall not commence any Work until:

- (a) the Contract Administrator has confirmed receipt and approval of:
  - (i) evidence of authority to carry on business specified in D8;
  - (ii) evidence of the workers compensation coverage specified in C6.16;
  - (iii) evidence of the insurance specified in D9;
- (b) the Contractor has attended a meeting with the Contract Administrator, or the Contract Administrator has waived the requirement for a meeting.

### **D11. DELIVERY**

D11.1 Goods shall be delivered as follows, f.o.b. destination, freight prepaid to

City of Winnipeg  
Fire Paramedic Service  
South Side of Building – Bay #2  
2546 McPhillips Street  
Winnipeg, Manitoba  
R2P 2T2

- D11.2 Goods include the initial sizing and supply of Turnout Coats and Turnout Pants as per the following scheduled delivery dates of the initial orders:
- (a) September 1, 2015 – 220 sets of made to measure turnout coats and pants
  - (b) May 1, 2016 – 180 sets of made to measure turnout coats and pants  
September 1, 2016 – 40 sets of made to measure turnout coats and pants
  - (c) May 1, 2017 – 180 sets of made to measure turnout coats and pants  
September 1, 2017 – 40 sets of made to measure turnout coats and pants
  - (d) May 1, 2018 – 180 sets of made to measure turnout coats and pants  
September 1, 2018 – 40 sets of made to measure turnout coats and pants
  - (e) May 1, 2019 – 180 sets of made to measure turnout coats and pants  
September 1, 2019 – 40 sets of made to measure turnout coats and pants
  - (f) May 1, 2020 – 180 sets of made to measure turnout coats and pants
- D11.3 The Contractor shall confirm each delivery with the Contract Administrator or his/her designate, at least two (2) Business Days before delivery.
- D11.4 Goods shall be delivered between 8:00 a.m. and 3:30 p.m. on Business Days.
- D11.5 The Contractor shall off-load goods as directed at the delivery location.
- D11.6 In addition to D11.2, goods shall be delivered on an “as required and scheduled” basis during the term of the Contract, f.o.b. destination, freight prepaid, to the delivery address stated in D11.1
- D11.6.1 Goods shall be delivered within sixty (60) Business Day(s) of the placing of an order for Phase one and Phase two, unless otherwise allowed by the User at the time of ordering.

## **D12. LIQUIDATED DAMAGES**

- D12.1 If the Contractor fails to achieve delivery of the goods within the time specified in D11, the Contractor shall pay the City two hundred dollars (\$200.00) per Calendar Day for each and every Calendar Day until the goods have been delivered.
- D12.2 The amount specified for liquidated damages in D12.1 is based on a genuine pre-estimate of the City's damages in the event that the Contractor does not achieve Delivery by the day fixed herein for same.
- D12.3 The City may reduce any payment to the Contractor by the amount of any liquidated damages assessed.

## **MEASUREMENT AND PAYMENT**

### **D13. INVOICES**

- D13.1 Further to C10, the Contractor shall submit an invoice for each order delivered to:
- The City of Winnipeg  
Corporate Finance - Accounts Payable  
4th Floor, Administration Building, 510 Main Street  
Winnipeg MB R3B 1B9
- Facsimile No.: 204 949-0864  
Email: [CityWpgAP@winnipeg.ca](mailto:CityWpgAP@winnipeg.ca)
- D13.2 Invoices must clearly indicate, as a minimum:
- (a) the City's purchase order number;



- (b) date of delivery;
- (c) delivery address;
- (d) type and quantity of goods delivered;
- (e) the amount payable with GST, MRST, and any applicable environmental handling charges/fees identified and shown as separate amounts; and
- (f) the Contractor's GST registration number.

D13.3 The City will bear no responsibility for delays in approval of invoices which are improperly submitted.

D13.4 Bids Submissions must be submitted to the address in B7.8.

**D14. PAYMENT**

D14.1 Further to C10, the City may at its option pay the Contractor by direct deposit to the Contractor's banking institution.

**D15. PAYMENT SCHEDULE**

D15.1 Further to C10, payment shall be in Canadian funds net thirty (30) Calendar Days after receipt and approval of the Contractor's invoice.

**WARRANTY**

**D16. WARRANTY**

D16.1 Notwithstanding C11, the warranty period shall begin on the date of Total Performance unless extended pursuant to C11.3.

- (i) Further to C11.3, the warranty for the moisture barrier shall be minimum three and a half (3 1/2) years.

D16.2 If a defect or deficiency prevents the full and normal use or operation of the Work or any portion thereof, for purposes of calculating the warranty period, time shall be deemed to cease to elapse for the defective or deficient portion, and for any portion of the Work whose use or operation is prevented by such defect or deficiency, as of the date on which the defect or deficiency is observed or the use or operation is prevented and shall begin to run again when the defect or deficiency has been corrected or the Work may be used or operated to the satisfaction of the Contract Administrator.

D16.3 Notwithstanding C11, if any law of Manitoba or of the jurisdiction in which the Work was manufactured requires, or if the manufacturer provides a longer warranty period or a warranty which is more extensive in its nature, then the provisions of such or manufacturer's warranty shall apply.

## **PART E - SPECIFICATIONS**

### **GENERAL**

#### **E1. APPLICABLE SPECIFICATIONS**

- E1.1 These Specifications shall apply to the Work.
- E1.2 Bidders are reminded that requests for approval of substitutes as an approved equal or an approved alternative shall be made in accordance with B6.

#### **E2. GARMENT SIZING AND MEASURING**

- E2.1 Each protective ensemble shall be custom fit to the user. Contractor is advised that male and female users must be fitted.
- E2.2 The Contractor shall be responsible for all measuring. Fit must also take into account dynamic positions of the user as well as the static positions of the user:
- (a) The Contractor shall have a representative able to attend in Winnipeg within two (2) Business Days of notification to take measurements;
  - (b) Measuring sessions may be spread out to accommodate shift changes;
  - (c) The City will provide a facility in Winnipeg and arrange to have users available for measurements in a continuous manner.
- E2.3 The Contractor must insure proper fit after protective coat and protective trousers are washed and dried once, in accordance with manufacturer's instructions. Random confirmation checks will be performed by the City.

#### **E3. LABELS**

- E3.1 Each garment shall be labelled:
- (a) in accordance with the requirements of NFPA 1971, current edition at time of order placement;
  - (b) with the name of the user for whom the garment was fitted;
  - (c) all labels shall be permanent so they will stay intact and be legible for the life of the garment;
  - (d) each garment shall have a bar code label complete with a computerized tracking program to include at a minimum:
    - (i) Person to whom garment is issued;
    - (ii) Date of issuance;
    - (iii) Manufacturer;
    - (iv) Model name, number, or design;
    - (v) ID #, lot #, or serial #;
    - (vi) Month and year of manufacture;
    - (vii) Dates and finding of inspections;
    - (viii) Dates cleaned or decontaminated;
    - (ix) Reasons for cleaning/decontamination;
    - (x) Who cleaned or decontaminated;
    - (xi) Dates of repair;
    - (xii) Who performed the repairs;
    - (xiii) Description of repairs;
    - (xiv) The person authorizing serviceability;
    - (xv) Date of retirement;

- (xvi) Date and method of disposal.

#### **E4. PACKAGING**

- E4.1 Protective coats shall be packaged and delivered in a container that allows:
- (a) For a maximum of one fold and a maximum of five protective coats and matching protective trousers per package;
- E4.2 Each package shall clearly identify on the outside:
- (a) the type of contents (i.e., protective coat(s) and protective trousers);
  - (b) the names of the user(s) for whom the contents were fitted.

#### **E5. QUALITY CONTROL**

- E5.1 Each individual garment (protective coat or protective trousers) shall be inspected, prior to shipping, by the Contractor to ensure the garment is free of flaws, imperfections or blemishes that may adversely affect its appearance or serviceability
- E5.2 After delivery, each garment will be inspected by the Contract Administrator and the User for:
- (a) flaws, imperfections or blemishes, and obvious sizing errors.
- E5.2.1 After initial inspection, but before any use, each garment will be washed and dried once in accordance with the manufacturer's instructions and the user will try garment for fit. If the garment shrinks more than specified (NFPA std.) and is too small for the user the garment shall be replaced at the Contractor's expense.

#### **E6. TURNOUT GEAR SPECIFICATIONS**

- E6.1 Standards:
- (a) All materials, labels, and component parts, as well as the finished product, must meet or exceed the NFPA 1971 standard, current edition at time of order placement, that applies to protective clothing for structural firefighting;
  - (b) Total garment assembly of outer shell, moisture barrier and thermal liner shall exhibit a minimum TPP of 38;
  - (c) Provide third party documentation confirming the TPP rating of the garments proposed to be supplied under the Contract.
- E6.2 Design:
- (a) The protective clothing ensemble (protective coat and protective trousers) shall be designed to provide adequate coat/trousers overlap of all three layers (outer shell, moisture barrier and thermal liner) as required by NFPA 1500, current edition at time of order placement, to protect the user when bending, leaning, crawling or stretching. The use of barriers such as neoprene or rubber, in any portion of the garment is only permitted where specified.
  - (b) The bunker pants shall be designed to interface with firefighting boots to prevent excess drag on the pants or excess clearance to allow heat and materials to easily travel between the pant and boot.
- E6.3 Materials
- (a) Outer Shell Material: all sections of the coat and pant ensemble that specify "outer shell material" shall be manufactured with- PBI Max -7 oz. sq./yd.- Black in color.
  - (b) Moisture Barrier Material: all sections of the coat and pant ensemble that specify "moisture barrier material" shall be manufactured with- Stedair Gold 5.2 oz sq/yd.
  - (c) Thermal Liner Material: all sections of the coat and pant ensemble that specify "thermal liner material" shall be manufactured with- Glide PBI G2 6.8 oz sq/yd.

- (d) Thread: shall be Nomex thread- Black in color, that will resist heat and shall not ignite, melt or char when exposed to a temperature of 500E F (260E C) in accordance with Method 1534, "Melting Point of Synthetic Fibres," of Federal Test Method Standard 191A, Textile Test Methods;
- (e) Knit Material: all sections of the coat and pant ensemble that specify "knit material" shall be manufactured with Knit Nomex- Black in Color;
- (f) Hook and Loop Fasteners: shall be fire resistant Velcro Hook #80 and fire resistant Velcro Loop #1000 and shall be fastened with two(2) parallel rows of thread around the perimeter of both components of the fastener system;
- (g) Zipper Fasteners: shall be YKK Vislon, Left Hand Pull, as described in NFPA 1971, current edition at time of order placement;
- (h) Snap and Dome Fasteners: shall be as described in NFPA 1971, current edition at time of order placement, Hardware Requirements;
- (i) Reflective Trim: shall meet new NFPA current standard with 3M-Scotchlite, Lime two (2) inch and two-tone (silver and lime) three (3) inch as specified.
- (j) Arashield Material: where specified, sections of the pant ensemble shall be manufactured with Arashield material- Black in color.

**E6.4 Seams:**

- (a) All seams shall be double felled and double stitched. Only lock stitching shall be used in the construction of the garment. There shall be no raw edges and all stress points such as pockets, pocket flaps shall be bar tacked for reinforcement. Stitches shall be 8-10 per inch.

**E7. PROTECTIVE TURNOUT COAT**

**E7.1 General Design:**

- (a) In order to maintain constant protection at the waist area, coat rise should be minimal and shall not exceed four (4) inches when arms are raised from a relaxed position down by the users sides to directly over the user's head;
- (b) Protective coat design shall not cover the protective trousers' pockets but still must overlap the protective trousers and provide a minimum two (2) inch overlap at the waist when the user is bending forward, leaning backward, bending side to side, crawling or stretching;
- (c) Each layer (outer shell, moisture barrier, thermal liner) of the body of the coat shall be constructed with at least three (3) separate body panels. The body panels shall be shaped so as to provide a tailored fit to increase user comfort and to enhance body movement.

**E7.2 Modular Construction:**

- (a) The protective coat shall be constructed as two separate modules. Also, the ability to purchase from the manufacturing company for five (5) consecutive years any of these three modules as replacement, allowing each to be cleaned separately or replaced separately without replacing the entire protective coat:
  - (i) the outer shell;
  - (ii) the liner consisting of the moisture barrier & thermal liner.

**E7.3** The bottom hem of the outer shell shall extend no more than three (3) inches past the bottom hem of the liner.

**E7.4** The outer shell and the liner shall be secured to each other by:

- (a) a minimum of twelve snap and dome fasteners around the neck and front seam of the liner and;
- (b) two snap and dome fasteners with a Nomex strap at each sleeve (Dome fasteners shall be one (1) inch from the cuff of the liner. The Nomex strap shall be secured with reinforced stitching to the outer shell. The Nomex strap shall be a maximum of one (1) inch length and 3/4" wide.

- E7.5 The liner shall have an inspection port between the thermal liner and moisture barriers:
- (a) This inspection port shall be large enough so the thermal liner and moisture barriers can be pulled through this opening;
  - (b) This inspection port shall have a re-sealable opening of fire resistant Hook and loop fastener, which shall also be covered by the outer shell;
  - (c) This inspection port shall be placed at the bottom edge of the liner.
- E7.6 Sleeves:
- (a) Sleeve design and construction shall be shaped one piece that will allow for complete and unrestricted movement through the full range of motion of the arm and shoulder;
  - (b) The sleeves shall include an under arm gusset or bellow that is sewn in separately, or alternatively an enlarged area under the arm that is part of the one piece sleeve construction;
  - (c) Sleeve construction and design shall be compatible with a gauntlet style glove or mitt;
  - (d) The sleeve end of the outer shell shall extend no more than one (1) inch past the sleeve end of the liner;
  - (e) Sleeve ends (cuffs) shall be reinforced with an additional 2.0" piece of outer shell material, sewn proportionately on each side of the outer shell.
- E7.7 Elbow areas of the liner shall be reinforced with an elbow pad made of an additional layer of thermal liner between the moisture barrier and the thermal liner. Elbow pads shall be of size and placement that elbows are completely covered when the user is in a relaxed position, arms down by their sides or when they are crawling on their elbows.
- E7.8 Sleeves shall have at least one wristlet per sleeve consisting of a two layer Nomex knit with minimum value of 20 TPP:
- (a) Wristlets shall be attached to the thermal liner;
  - (b) Wristlets shall be provided in such a manner that it will not cause discomfort when user's arms are fully raised or extended;
  - (c) Wristlet length and size shall be determined by user's sleeve length and hand size. The minimum length must be five (5) inches.
- E7.9 Sleeves shall have a "water well" constructed of moisture barrier material:
- (a) The water well shall be attached to the moisture barrier liner;
  - (b) The water well shall overlap the wristlet. If there are two wristlets then the water well shall only overlap the wristlet with the thumb loop;
  - (c) Water well elasticized gathers shall not cause discomfort to the user or restrict circulation in the wrist area;
  - (d) Water well shall be constructed to ensure a liquid-tight interface with the glove or mitt;
- E7.10 Drag Rescue Device:
- (a) The Protective Coat shall have a Drag Rescue Device consisting of an integrated system of webbing, rope, or other material;
  - (b) The drag rescue device must be designed such that a portion of the device is accessible from the coat exterior and can be readily grabbed by others, without interference by the SCBA;
  - (c) Must have the capability to drag horizontally over a specified distance without breaking and used for any vertical operations, as per current NFPA standard;
  - (d) The materials used in the construction of the drag rescue device are subject to certain breaking strengths requirements as per current NFPA standard;
  - (e) The drag rescue device shall be articulating in design and consist of Kevlar webbing.

E7.11 Collar:

- (a) The collar shall provide continuous, complete thermal and moisture protection to the neck area:
  - (i) The collar shall be a four layer composite construction of outer shell, moisture barrier, thermal liner, and outer shell material;
  - (ii) The collar shall be rigid or stiff enough to ensure it can be free standing or can lay flat in the stowed position and not cause the user any discomfort;
  - (iii) The collar shall not impede the user's vision or interfere with any other personnel protective equipment;
  - (iv) The collar shall be naturally contoured and not less than three (3) inches wide at any point;

E7.12 Throat Protector Closure:

- (a) The collar shall incorporate a throat protector closure system and shall be of layered construction identical to that of the collar configuration;
- (b) The throat protector closure shall be crescent shaped or contoured with minimum dimensions of: 9 inches (22.5 cm) long across the top corners, 10.5 inches (26 cm) long across the bottom corners, and 3.5 inches (8.75 cm) in vertical height, measured at the center;
- (c) When in use, the throat protector closure shall be secured on both sides, i.e., sewn on the Right side under the collar and with a minimum of a 2" X 4" fire resistant hook and loop fastener on the left side. When not in use, the throat protector closure shall be secured on the right side with a piece of 2" X 4" fire resistant hook and loop fastener;
- (d) The top portion of the throat protector tab (chin strap) that comes in contact with the chin shall be designed for user comfort and safety; and shall be constructed of a knit Nomex material. Black in color reference E6.3 (e).
- (e) The hook portion of the hook and loop material shall be sewn to the collar so that only the soft loop portion could come in contact with the user's face and neck;

E7.13 Front Closure:

- (a) Positive closure will be performed by an NFPA approved Vislon Zipper, no brass substitutes will be permitted;
- (b) A storm flap shall insure complete thermal and moisture protection while minimizing bulk and weight by incorporating an overlapping design;
- (c) The storm flap shall be a minimum of four (4) inches and a maximum of seven (7) inches in width, and shall cover the positive closures. Length shall be determined by sizing;
- (d) The storm flap shall be constructed of a minimum of three layers (outer shell, moisture barrier, outer shell) to reduce bunching when the user is using a SCBA or is leaning forward;
- (e) A fire resistant hook and loop system shall extend the entire length of the storm flap. The loop strip shall be sewn to the storm flap and the hook shall be sewn to the left side of the protective coat;

E7.14 Pockets:

- (a) Protective coat shall have two hand warmer slash pockets on the inside of the outer shell, one bellow type radio pocket on the outside of the outer shell, one notebook pocket on the inside of the liner and one slash pocket on the inside of the storm flap;
- (b) Openings for the two hand warmer slash pockets shall be secured by a flap with a fire resistant hook and loop fastener closure. Each of the two hand warmer slash pockets shall be approximately 10" x 8". The inner lining of the slash pockets shall be constructed of Moisture Barrier material;
- (c) The radio pocket shall be 7" in height x 3 1/2" in width x 2" in depth, bellow type pocket lined with moisture barrier material. The radio pocket shall also include a drain, and a storm flap with antenna notch on left side to cover the radio, fixed to the outer shell and secured to

the exterior of the pocket with fire resistant hook and loop closure. The radio pocket shall be placed in a position on the left chest. 1" over from storm flap so that when a radio is inserted in the pocket, the radio does not interfere with the user's SCBA;

- (d) The notebook pocket on the inside of the liner shall be constructed of FR Cotton material patch 7 1/2" x 8" and shall contain a sewn pencil "tube" approximately one inch wide closest the coat storm flap. The notebook pocket shall be placed below the right chest area on the inside of the liner, attached to the exterior of the thermal layer ( i.e. between the thermal liner and the user's body);
- (e) The slash pocket on the inside of the storm flap shall be constructed of moisture barrier and be approximately 7" x 7" or equivalent to accommodate the need to store examination gloves.

#### E7.15 Reflective Trim:

- (a) Protective coats shall have reflective trim placement based on a style of placement not the number of square inches of reflective trim;
- (b) Reflective trim placement shall be in accordance with the NFPA 1971 current edition at time of order placement;
- (c) Reflective trim configuration for the body shall consist of one circumferential band around the bottom of the coat near the hem and one circumferential band at the chest level as per NFPA 1971 current edition;
- (d) Reflective trim configuration for each sleeve shall be a staggered 360-degree visibility pattern meeting or exceeding the surface area of a circumferential band, between the wrist and elbow area to meet NFPA 1971 current edition;
- (e) Reflective trim shall be 2" Lime fluorescent 3M Scotchlite NFPA around the sleeves. The chest and hem trim shall be three (3) inch two-tone (silver on Lime) 3M Scotchlite NFPA;
- (f) All reflective trim to be fastened to the garment with a minimum of (2) two rows of stitching around the outer edge of the trim;
- (g) The Fire Fighter's surname shall be reflective lettering two (2) or three (3) inches in height depending on the length of the user's name. Lettering shall be placed on a piece of outer shell and sewn to the back of the coat beneath the hem trim;
- (h) Chest Light Holder Reverse clip on a patch with Velcro strap 1" x 9" strap with 3" Velcro on each end, two bar tacks to be 3 1/2" apart. Top of strap to be 2 1/2" below patch right side.

#### E7.16 Hanger Loop:

- (a) Hanger loop to be supplied to prevent damage to thermal liner if coat is hung on a hook.

#### E7.17 Supplemental Thermal Protection:

- (a) A performance specification indicating thermal protective performance must be provided in the third party documentation accompanying the coat;
- (b) Supplemental thermal protection is required in the shoulder area and entire length of sleeves. Additional flat layers of thermal liner that increases the thermal protection is not acceptable. The method to provide supplemental thermal protection shall be a thermal layering system that provides dead air space. One acceptable layering system utilizes strips of Nomex/Kevlar thermal liner material that runs from the neck opening outward, toward the arm, running the full length of the sleeve to the wrist area, forming sections of dead air insulation on the top and sides of the shoulder and arm areas. These strips of Nomex/Kevlar shall be sewn on the inside of the thermal liner between the thermal liner and moisture barrier. There shall be 5 (five) strips across the shoulder area to protect the area over the collar bone to the shoulder blade capped with an additional single layer of thermal liner. Provide details of the method proposed to provide dead air space to supplement thermal protection.

## E8. PROTECTIVE TURNOUT TROUSERS

### E8.1 General Design:

- (a) Protective trousers shall be of waist height design and the waistband strikes the user at the navel;
- (b) Each layer (outer shell, moisture barrier and thermal liner) of the body of the trousers shall be constructed with at least four (4) separate body panels. The body panels shall be shaped so as to provide a tailored fit to increase user comfort and to enhance body movement;
- (c) Panel design shall be full leg cut for wearing over station wear and knee length leather or rubber boots;
- (d) A separate fly panel shall be required to insure complete thermal and moisture protection;
- (e) An extra panel in crotch areas is preferred to insure comfort and freedom of movement.

E8.2 Modular Construction:

- (a) The protective trousers shall be constructed as two separate modules:
  - (i) the outer shell;
  - (ii) the liner consisting of the thermal liner and moisture barrier.
- (b) allowing each to be cleaned separately or replaced separately without replacing the entire protective trousers.

E8.3 The leg of the liner shall be cut two (3) inches shorter than the leg of the outer shell.

E8.4 The outer shell and the liner shall be secured to each other by:

- (a) Two snaps and dome fasteners with a Nomex strap at each leg (Dome fasteners shall be 1" from the bottom hem of the liner);
- (b) Dome fasteners on the inside of the thermal liner to prevent wear through of outer shell;
- (c) The Nomex strap to be secured with reinforced stitching 2" from the bottom hem of the outer shell on the side seams. The Nomex strap shall be 2" long x 3/4" wide.

E8.5 Waistband:

- (a) The waistband of the outer shell shall be 1 1/2" wide and shall be at least a double layer of outer shell material over reinforcing material such as moisture barrier;

E8.6 Fly Flap:

- (a) The fly flap shall ensure that the two sides of the protective trousers can be joined together and shall provide a continuous thermal liner/moisture barrier;
- (b) The fly flap shall be constructed of a layer of outer shell material, moisture barrier and thermal liner.
- (c) The fly flap shall be sewn to the right side outer shell;
- (d) The open end of the fly flap shall be fixed to the left side of the protective trousers fastened by a YKK Vislon Zipper and 1-1/2" fire resistant hook fastener sewn to the outer shell of the pants and 2" loop fastener sewn along the leading edge of the fly flap.
- (e) The fly flap should be approximately 3" wide. Fly flap length may be determined by waist size and crotch rise.

E8.7 Ladder / Escape Belt:

- (a) The Ladder / Escape belt system described are for a right-over-left Ladder Escape Belt and pant closure where the escape system is worn and deployed from the right hip or leg. The turnout pants shall be designed to accept either a: Class 1 belt or a Class 2 harness with internally routed adjustable leg straps.
- (b) Each Ladder / Escape Belt option shall be certified by UL to NFPA 1983 (latest edition). The belt shall close at the front from the right to the left. The belt is mounted external to the pant waist. The waist is tightened at the left hip with a forward pulling, natural motion. The waist must be easily and fully adjustable while wearing the bunker pants. There shall be two sliding D- Rings that provide points of attachment for a tether and/or escape system. There



shall be a pair of webbing and fire resistant Velcro retaining tabs at the front of the waist to stow a tether/ladder hook.

- (c) Tether and Ladder Hook style carabiner ( Carabiner shall be Pro Series Product #30025301).

#### E8.8 Belt & Tether Materials

- (a) All materials shall also be certified to NFPA 1971 (latest edition);
- (b) Waist belt webbing shall be: 1.6875 inch (4.2 cm) width, woven filament, black Kevlar webbing with a natural Kevlar stripe down the center and a minimum tensile strength of 7,000 lbs (3,182 kilograms). Example: Sturges #36517 or equal;
- (c) Leg loop webbing shall be: 1.75 inch (4.4 cm) width, woven filament, black Kevlar webbing with natural Kevlar tracers down the sides and a minimum tensile strength of 7,000 lbs (3,182 kilograms). Example: Sturges #37506 or equal;
- (d) Webbing for tabs shall be one-inch width Nomex or Kevlar. Example: Offray NOMBIND or KEVBIND;
- (e) One-inch fire resistant Velcro hook and loop;
- (f) Slotted D-Rings shall be: approximate 3.5 ounce; with 1.75-inch I.D. slot and "D". Example: Bourdon Forge PS22046-1 or equal;
- (g) Adapter/Adjusters shall be: Quick Fit style; 1.75-inch I.D.; with sliding lock bar. Example: Bourdon Forge PS70114-1 or equal;
- (h) Snap Hook with Adjuster shall be: approximate 5.8 ounce; Parachute harness hook; quick fit style; 1.75-inch I.D.; with sliding lock bar. Example: Bourdon Forge PS22043-1 or equal;
- (i) Tether Snap Hook without adjuster: approximate 4.2 ounce; Parachute style; 1.75-inc I.D. Example: Bourdon Forge #PS22044-1 or equal;
- (j) Thread shall be: natural color, 100% Kevlar, minimum size TEX 70.

#### E8.9 Load Bearing Construction

- (a) All load bearing, webbing-to-hardware, connection points shall be sewn with a minimum 1.25 inch (3.1 cm) Box & Diamond stitch. At the waist the ends of the webbing shall be folded toward the body before Box & Diamond stitching.

#### E8.10 Belt Design

- (a) Waist belt shall be comprised of the following two components;
- (b) There shall be a D-Ring & Back Belt that starts at the leading edge of the pant fly and wraps around the waist and to the rear of the left hip area and terminates with a sewn on, forged adapter with sliding adjuster bar. Two webbing and fire resistant Velcro retaining tabs shall be bar-tacked between the D-Ring's Box & Diamond stitch and the right hip;
- (c) Waist closure shall be provided by a Hook & Take-up Strap comprised of Kevlar webbing sewn to a Snap Hook with adjuster bar and the loose trailing end of the webbing threaded through the adapter/adjuster end of the Back Belt.;
- (d) Provide two sliding slotted D-rings as anchor points on the Back Belt;
- (e) The adjustable leg straps for the Class 2 harness shall be routed inside the pants between the Outer Shell and Moisture barrier. The leg straps shall be quickly adjustable by a minimum of 4" tabs of leg strap material exposed through the right and left outer hip region of pants or equivalent in accordance with B6. Substitute.

#### E8.11 Tether Design

- (a) The tether shall made of 1.6875-inch (4.2 cm) width webbing and a snap hook without adjuster and shall be available with a length of 14-inch (35 cm) +/- 0.50-inch (1.0 cm);
- (b) One end of the tether shall be a loop created by triple folding the webbing lengthwise and bar-tacking a three inch (7.5 cm) section which is then folded in half with the remaining loose end of the webbing Box & Diamond stitched to the tether main body;

- (c) The opposite end of the tether shall terminate with the Snap Hook being Box & Diamond stitched into place.

#### E8.12 Pant Adaptation for Ladder / Escape Belt

- (a) There shall be a three-inch (7.5 cm) wide fly sewn to the pants right front body panel that closes over the left front body panel. The pant positive closure shall be a Vislon zipper inside and the fly closes by means of 1.5 inch (3.75 cm) fire resistant Velcro outside. The belt shall be externally mounted around the pant waist. The waist provides a total of eight vertical breakaway tabs and two horizontal breakaway tabs and two horizontal breakaway tabs as follows;
- (b) The back belt shall be mounted using four one-inch wide (2.5 cm) vertical outer shell and fire resistant Velcro, two-piece breakaway tabs even spaced across the rear of the pant or equivalent in accordance with B6. Substitute;
- (c) The Snap Hook with sliding bar used for harness closure shall install using a one-inch wide (2.5 cm) vertical two-piece and an 1.5 inch (3.75 cm) wide horizontal one-piece outer shell and fire resistant Velcro breakaway tab located on the left front pant panel or equivalent in accordance with B6. Substitute;
- (d) The closure D-Ring shall install using a one-inch wide (2.5 cm) vertical outer shell and fire resistant Velcro, two piece break away tab and an 1.5 inch (3.75 cm) near the leading edge of the fly or equivalent in accordance with B6. Substitute;
- (e) The webbing that extends from the D-Ring to the right hip shall be held in place by two one-inch (2.5 cm) wide vertical outer shell and fire resistant Velcro, two-piece break away tabs on the right front body panel or equivalent in accordance with B6. Substitute.

#### E8.13 Suspenders:

- (a) Suspenders shall be part of the protective trousers but are not to be considered the main support;
- (b) Suspenders shall be designed to equalize pressure on the straps when the wearer bends side to side;
- (c) Suspender straps shall be two (2) inch heavy duty cotton with an elasticized area below the mid back; (2) inch two tone reflective trim (silver on lime) sewn onto the suspenders visible from the front and back;
- (d) Suspenders shall be removable and attached using a (2) inch tab system sewn onto the waist of the pants.

#### E8.14 Pant Cuffs:

- (a) Cuffs shall be reinforced by hemming with an additional 2.0" piece of Arashield material, black in colour, sewn proportionately on each side of the outer shell;
- (b) A four (4) inch wide inseam guard made of Arashield material shall be placed from reflective trim to hem;
- (c) Cuffs shall be a boot cut design with the rear of the cuff notched 1" to 1 ½" higher than the front and measured and constructed so as not to touch the ground when worn;
- (d) A (1) inch wide X (3) inch long seam guard made of Arashield material shall be sewn vertically to protect the reflective trim seam.

#### E8.15 Knee Pads:

- (a) Protective trousers shall have protective knee pads of a minimum of 8" wide by 12" high, to provide thermal protection and cushioning while crawling or kneeling;
- (b) Knee pads shall be placed such that knees are completely covered when user is standing, kneeling or crawling. Knee pads shall be attached to the exterior of the outer shell;
- (c) Knee pads shall be:
  - (i) a heat channel design to allow flexing from two different directions permanently affixed to the outer shell and constructed of multiple horizontal and vertical panel layers of Nomex

batt insulation covered with an external layer of Arashield in the center section of the knee pad.

**E8.16 Pockets:**

- (a) Protective trousers shall have two (2) side leg bellow pockets constructed of outer shell material lined with Kevlar;
- (b) Side leg pockets shall be 9" wide x 9" high x 2" deep, full bellow with a 4" flap. (If user has short legs, pocket height shall be reduced proportionately.) Side leg pockets shall be centred over side seams. The top of the side leg pockets shall be even with the bottom hem of protective coat and the bottom of the pockets shall be above the knee. Each side leg pocket shall have a 4" flap, constructed of two layers of outer shell material, secured by a 1.5" wide strip of hook fastener sewn on the full width of the pocket and 3 vertical strips 1.5" x 3" of fire resistant loop fastener sewn under flap. The flap design shall incorporate a rolled edge to permit easier opening with a gloved hand as well ensure the fire resistant hook and loop fastening system is installed to grip on the vertical plane to strengthen the pocket closure ability to remain fastened if the pocket is bulged with contents.. Each side leg pocket shall have two drain holes (grommets) at the bottom of the bellow; Pockets to be lined with Kevlar.

**E8.17 Reflective Trim:**

- (a) Protective trousers shall have a circumferential band of three (3) inches wide two-tone (silver on lime) 3M Scotchlite reflective trim on each leg between cuff and knee pad;
- (b) Bottom of trim shall be six (6) inches from the bottom of the cuff.