



**CITY OF SPRINGFIELD, MISSOURI  
DIVISION OF PURCHASES  
INVITATION FOR BID #034-2010**

**THIS IS NOT AN ORDER**

**RETURN**

**TO:** Jason Finke, CPPO, Senior Buyer  
City of Springfield  
Division of Purchases  
218 E. Central  
Springfield, MO 65802

Date Issued: October 7, 2009  
Buyer's Email: [jfinke@springfieldmo.gov](mailto:jfinke@springfieldmo.gov)  
Telephone Number: 417-864-1624  
Fax Number: 417-864-1927  
**DUE DATE: October 21, 2009**

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SEALED BIDS MUST BE PHYSICALLY RECEIVED IN THE DIVISION OF PURCHASES PRIOR TO **3:00 P.M. ON WEDNESDAY, OCTOBER 21, 2009**. Bids will be opened by the buyer at the location listed above.

- Bids shall be submitted on the forms provided and must be manually signed by the individual authorized to legally bind the company.
- Bids shall be submitted with the IFB number clearly indicated on the outside of the mailing envelope.
- Bids received after the opening date and time will be rejected.
- The attached Terms and Conditions shall become part of any purchase order resulting from this bid.
- **FAXED/EMAILED BIDS WILL NOT BE ACCEPTED.**

You are invited to submit your bid to furnish the materials and/or services described herein. Please submit your prices/fees net of all discounts.

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**DESCRIPTION**

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**FIREFIGHTING TURNOUT GEAR**

*See attached General Conditions, Specifications, and Bid Form for detailed information.*

DELIVERY: F.O.B. DESTINATION

*The articles to be furnished hereunder shall be delivered all transportation charges paid by the bidder to destination.*

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It is the intent of the City that this Invitation for Bid promotes competitive bidding. It shall be the Vendor's responsibility to advise the Division of Purchases if any language, requirements, etc. any combination thereof, inadvertently restricts or limits the requirements stated in this Invitation for Bid to a single source. Such notification must be submitted in writing and must be received by the Division of Purchases not later than three (3) days prior to the bid opening date.

**CITY OF SPRINGFIELD  
INSTRUCTION TO BIDDERS**

**01. Opening Location**

The Bids will be opened at the City of Springfield, Division of Purchases, 218 E. Central, Springfield, MO 65802 in the presence of Purchasing officials at the due date and time indicated on the IFB. All bidders or their representatives are invited to attend the opening of the IFB.

**02. IFB Delivery Requirements**

Any Bids received after the above stated time and date will not be considered. It shall be the sole responsibility of the bidder to have their Bid delivered to the Division of Purchases for receipt on or before the due date and time indicated. If a Bid is sent by U.S. Mail, the bidder shall be responsible for its timely delivery to the Division of Purchases office. Bids delayed by mail shall not be considered, shall not be opened, and shall be rejected. Arrangements may be made for their return at the bidder's request and expense. Bids may be mailed to the Division of Purchases and accepted if the signed bid form and required information was mailed and received prior to the due date and time. Bids sent by email will not be accepted.

**03. Sealed and Marked**

If sent by mail, one original signed Bid shall be submitted in one sealed package, clearly marked on the outside of the package with the Invitation for Bid number and addressed to:

City of Springfield  
Division of Purchases  
218 E. Central  
Springfield, MO 65802

**04. Legal Name and Signature**

Bids shall clearly indicate the legal name, address, and telephone number of the bidder (company, firm, corporation, partnership, or individual). Bids shall be manually signed above the printed name and title of signer on the Affidavit of Compliance page. The signer shall have the authority to bind the company to the submitted Bid. Failure to properly sign the Bid form shall invalidate same, and it shall not be considered for award.

**05. Corrections**

No erasures are permitted. If a correction is necessary, draw a single line through the entered figure and enter the corrected figure above it. Corrections must be initialed by the person signing the Bid.

**06. Clarification and Addenda**

Each bidder shall examine all Invitation for Bid documents and shall judge all matters relating to the adequacy and accuracy of such documents. Any inquiries or suggestions, concerning interpretation, clarification, or additional information pertaining to the Invitation for Bid shall be made through the Division of Purchases in writing or through email. The Division of Purchases shall not be responsible for oral interpretations given by any City employee, representative, or others. The issuance of written addenda is the official method whereby interpretation, clarification, or additional information can be given.

It shall be the responsibility of each bidder, prior to submitting their Bid, to contact the Division of Purchases at phone number 417-864-1620, or to check the Purchasing website to determine if addenda were issued and to make such addenda a part of their Bid at:

[www.springfieldmo.gov/egov/finance/bid\\_center.html](http://www.springfieldmo.gov/egov/finance/bid_center.html)

**07. IFB Expenses**

All expenses for making Bids to the City are to be borne by the bidder.

**08. Irrevocable Offer**

Any Bid may be withdrawn up until the due date and time set for opening of the IFB. Any Bid not so withdrawn shall, upon opening, constitute an irrevocable offer for a minimum period of 90 days to sell to the City the goods or services set forth in the IFB, until one or more of the Bids have been duly accepted by the City.

**09. Responsive and Responsible Bidder**

To be responsive, a bidder shall submit a Bid which conforms in all material respects to the requirements set forth in the Invitation for Bid. To be a responsible bidder, the bidder shall have the capability in all respects to perform fully the contract requirements, and the tenacity, perseverance, experience, integrity, reliability, capacity, facilities, equipment and credit which will ensure good faith performance. The lowest responsible bidder shall mean the bidder who makes the lowest Bid to sell goods or services of a quality which conforms closest to the quality of goods or services set forth in the specifications or otherwise required by the City and who is known to be fit and capable to perform the Bid as made.

**10. Reserved Rights**

The City reserves the right to make such investigations as it deems necessary to make the determination of the bidder's responsiveness and responsibility. Such information may include, but shall not be limited to: current financial statement, verification of availability of equipment and personnel, and past performance records.

**11. The Right to Audit**

The bidder agrees to furnish supporting detail as may be required by the City to support charges or invoices, to make available for audit purposes all records covering charges pertinent to the purchase, and to make appropriate adjustments in the event discrepancies are found. The cost of any audit will be paid by the City. The City shall have the right to audit the bidder's records pertaining to the work/product for a period of three (3) years after final payment.

## **12. Applicable Law**

All applicable laws and regulations of the State of Missouri and the City including the City Procurement Regulations and Procedures will apply to any resulting agreement, contract, or purchase order. Any involvement with the City Procurement shall be in accordance with the Procurement Regulations and Procedures.

## **13. Right to Protest**

Appeals and remedies are provided for in the City Procurement Regulations. Protestors shall seek resolution of their complaints initially with the City Purchasing Agent.

Any protest shall state the basis upon which the solicitation or award is contested and shall be submitted within ten (10) calendar days after such aggrieved person knew or could have reasonably been expected to know of the facts giving rise thereto.

## **14. Ethical Standards**

With respect to this IFB, if any bidder violates or is a party to a violation of the general ethical standards of the City Procurement Code or the State of Missouri Statutes, such bidder may be disqualified from furnishing the goods or services for which the Bid is submitted and shall be further disqualified from submitting any future Bids. A copy of the City's General Ethical Standards is available at the Division of Purchases.

## **15. Collusion**

By offering a submission to this Invitation for Bid, the bidder certifies the bidder has not divulged, discussed, or compared the Bid with other bidders and has not colluded with any other bidder or parties to this IFB whatsoever. Also, the bidder certifies, and in the case of a joint Bid, each party thereto certifies as to their own organization, that in connection with this IFB:

- a. Any prices and/or cost data submitted have been arrived at independently, without consultation, communication, or agreement for the purpose of restricting competition, as to any matter relating to such prices and/or cost data, with any other bidder or with any competitor.
- b. Any prices and/or cost data for this Bid have not knowingly been disclosed by the bidder and will not knowingly be disclosed by the bidder prior to the scheduled opening directly or indirectly to any other bidder or to any competitor.
- c. No attempt has been made or will be made by the bidder to induce any other person or firm to submit or not to submit a Bid for the purpose of restricting competition.
- d. The only person or persons interested in this Bid, principal or principals are named therein and that no person other than therein mentioned has any interest in this Bid or in the contract to be entered into.
- e. No person or agency has been employed or retained to solicit or secure this contract upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee exempting bona fide employees or established commercial agencies maintained by the Purchaser for the purpose of doing business.

## **16. Contract Forms**

Any agreement, contract, or purchase order resulting from the acceptance of a Bid shall be on forms either supplied by or approved by the City.

## **17. Liability and Indemnity**

- a. In no event shall the City be liable to the Contractor for special, indirect, or consequential damages, except those caused by the City's gross negligence or willful or wanton misconduct arising out of or in any way connected with a breach of this contract. The maximum liability of the City shall be limited to the amount of money to be paid or received by the City under this contract.
- b. The Contractor shall defend, indemnify and save harmless the City, its elected or appointed officials, agents and employees from and against any and all liability, suits, damages, costs (including attorney fees), losses, outlays and expenses from claims in any manner caused by, or allegedly caused by, or arising out of, or connected with, this contract, or the work or any subcontract thereunder (the Contractor hereby assuming full responsibility for relations with subcontractors), including, but not limited to, claims for personal injuries, death, property damage, or for damages from the award of this contract to Contractor.
- c. The Contractor shall indemnify and hold the City harmless from all wages or overtime compensation due any employees in rendering services pursuant to this agreement or any subcontract, including payment of reasonable attorneys' fees and costs in the defense of any claim made under the Fair Labor Standards Act, the Missouri Prevailing Wage Law or any other federal or state law.

## **18. IFB Forms, Variances, Alternates**

Bids must be submitted on attached City IFB forms, although additional information may be attached. Bidders must indicate any variances from the City requested specifications and/or terms and conditions, on the IFB Affidavit of Compliance. Otherwise, bidders must fully comply with the City requested specifications and terms and conditions. Alternate Bids may or may not be considered at the sole discretion of the City Purchasing Agent.

## **19. Bid Form**

All blank spaces must be completed with the appropriate response. The bidder must state the price, written in ink, for what is proposed to complete each item of the project. Bidders shall insert the words "no bid" in the space provided for an item for which no Bid is made. The bidder shall submit an executed Bid form, affidavit of compliance with other requested documents.

## **20. Modifications or Withdrawal of Bid**

A modification for a Bid already received will be considered only if the modification is received prior to the time announced for opening of Bids. All modifications shall be made in writing, executed, and submitted on the same form and manner as the original Bid. Modifications submitted by telephone, fax, or email will not be considered.

## **21. No Bid**

If not submitting a Bid, respond by returning the "Statement of No Bid" no later than the stated Bid opening time and date, and explain the reason in the space provided.

## **22. Errors in Bids**

Bidders or their authorized representatives are expected to fully inform themselves as to the conditions, requirements, and specifications before submitting Bids; failure to do so will be at the bidder's own risk. Neither law nor regulations make allowance for errors either of omission or commission on the part of bidders. In case of error of extension of prices in the Bid, the unit price shall govern.

## **23. Prices Bid**

Give both unit price and extended total. Price must be stated in units of quantity specified in the bidding specifications. In case of discrepancy in computing the amount of the Bid, the unit price of the Bid will govern. All prices shall be F.O.B. destination, freight prepaid (unless otherwise stated in special conditions). Each item must be bid separately and no attempt is to be made to tie any item or items in with any other item or items. If a bidder offers a discount on payment terms, the discount time will be computed from the date of satisfactory delivery at place of acceptance and receipt of correct invoice at the office specified. Payment terms shall be Net 30 if not otherwise specified. Pre-payment terms are not acceptable.

## **24. Discounts**

Any and all discounts except cash discounts for prompt payments must be incorporated as a reduction in the Bid price and not shown separately. The price as shown on the Bid shall be the price used in determining award(s).

## **25. Descriptive Information**

All equipment, materials, and articles incorporated in the product/work covered by this IFB are to be new and of suitable grade for the purpose intended. Brand or trade names referenced in specifications are for comparison purposes only. Bidders may submit Bids on items manufactured by other than the manufacturer specified when an "or equal" is stated.

## **26. Deviations to Specifications and Requirements**

When bidding on an "or equal," Bids must be accompanied with all descriptive information necessary for an evaluation of the proposed material or equipment such as the detailed drawings and specifications, certified operation and test data, and experience records. Failure of any bidder to furnish the data necessary to determine whether the product is equivalent, may be cause for rejection of the specific item(s) to which it pertains. All deviations from the specifications must be noted in detail by the bidder on the Affidavit of Compliance form, at the time of submittal of Bid. The absence of listed deviations at the time of submittal of the Bid will hold the bidder strictly accountable to the specifications as written. Any deviation from the specifications as written and accepted by the City may be grounds for rejection of the material and/or equipment when delivered.

## **27. Samples (if required)**

For certain types of procurements, samples may be required. If samples are required, it will be stated in the IFB. The following conditions and requirements apply to all samples submitted.

- a. The samples submitted by bidders on items for which they have received an award may be retained by the City until the delivery of contracted items is completed and accepted. Bidders whose samples are retained may remove them after delivery is accepted.
- b. Samples not retained must be removed as soon as possible after award has been made on the item or items for which the samples have been submitted. The City will not be responsible for such samples not removed by the bidder within 30 days after the award has been made. The City reserves the right to consume any or all samples for testing purposes.
- c. Bidders shall make all arrangements for delivery of samples to place designated as well as the removal of samples. Cost of delivery and removal of samples shall be borne by the bidder.
- d. All samples packages shall be marked "Sample for Division of Purchases" and each sample shall bear the name of the bidder, item number, Bid number, and shall be carefully tagged or marked in a substantial manner. Failure of the bidder to clearly identify samples as indicated may be considered sufficient reason for rejection of Bid.

## **28. Quality Guaranty**

If any product delivered does not meet applicable specifications or if the product will not produce the effect that the bidder represents to the City, the bidder shall pick up the product from the City at no expense. Also, the bidder shall refund to the City any money which has been paid for same. The bidder will be responsible for attorney fees in the event the bidder defaults and court action is required.

## **29. Quality Terms**

The City reserves the right to reject any or all materials if, in its judgment, the item reflects unsatisfactory workmanship, manufacturing, or shipping damages.

## **30. Tax-Exempt**

The City is exempt from sales taxes and Federal Excise Taxes: Missouri Tax ID Number 12493651.

## **31. Awards**

- a. Unless otherwise stated in the Invitation for Bid, cash discounts for prompt payment of invoices will not be considered in the evaluation of prices. However, such discounts are encouraged to motivate prompt payment.

- b. *As the best interest of the City may require, the right is reserved to make awards by item, group of items, all or none, or a combination thereof; to reject any and all Bids or waive any minor irregularity or technicality in Bids received.*
- c. *Awards will be made to the Bidder whose Bid (1) meets the specifications and all other requirements of the Invitation for Bid and (2) is the lowest and best Bid, considering price, delivery, responsibility of the bidder, and all other relevant factors.*

**32. Authorized Product Representation**

*The successful bidder(s) by virtue of submitting the name and specifications of a manufacturer's product will be required to furnish the named manufacturer's product. By virtue of submission of the stated documents, it will be presumed by the City that the bidder(s) is legally authorized to submit and the successful bidder(s) will be legally bound to perform according to the documents.*

**33. Regulations**

*It shall be the responsibility of each bidder to assure compliance with OSHA, EPA, Federal, State of Missouri, and City rules, regulations, or other requirements, as each may apply.*

**34. Termination of Award**

*Any failure of the bidder to satisfy the requirements of the City shall be reason for termination of the award. Any Bid may be rejected in whole or in part for good cause when in the best interest of the City.*

**35. Royalties and Patents**

*The successful bidder(s) shall pay all royalties and license fees for equipment or processes in conjunction with the equipment being furnished. Bidder shall defend all suits or claims for infringement of any patent right and shall hold the City harmless from loss on account or cost and attorney's fees incurred.*

**36. Equal Employment Opportunity Clause**

*The City of Springfield, in accordance with the provision of Title VI of the Civil Rights Act of 1964 (78 Stat. 252) and the Regulations of the Department of Commerce (15 CFR, Part 8) issued pursuant to such Act, hereby notifies all bidders that affirmatively ensure that in any contract entered into pursuant to this advertisement that minority businesses will be afforded full opportunity to submit Bids in response to this advertisement and will not be discriminated against on the grounds of race, color, or national origin in consideration for award.*

**37. Bid Tabulation**

*Bidders may request a copy of the bid tabulation of the Invitation for Bid.*

**38. Budgetary Constraints**

*The City reserves the right to reduce or increase the quantity, retract any item from the Bid, or upon notification, terminate entire agreement without any obligations or penalty based upon availability of funds.*

**39. Additional Purchases by Other Public Agencies**

*The bidder by submitting a Bid authorizes other public agencies to "Piggy-Back" or purchase equipment and services being proposed in this Invitation for Bid unless otherwise noted on the Affidavit of Compliance Form.*

**40. Order of Precedence**

*Any and all Special/General Conditions and Specifications attached hereto, which varies from the instruction to bidders, shall take precedence.*

**41. Affidavit for Service Contracts**

*The Bidder represents, in accordance with RSMO 285.530.2 that they have not employed, or subcontracted with, unauthorized aliens in connection with the scope of work to be done under the IFB and agrees to provide an affidavit to the City of Springfield affirming that they have not, and will not in connection with the IFB, knowingly employ, or subcontract with, any person who is an unauthorized alien.*

**42. Inspection and Acceptance**

*No item(s) received by the City pursuant to this contract shall be deemed accepted until the City has had reasonable opportunity to inspect the item(s). Any item(s) which are discovered to be defective or which do not conform to any warranty of the Seller upon inspection may be returned at the seller's expense for full credit or replacement. If at a later time, the defects were not ascertainable upon the initial inspection may also be returned at the Seller's expense for full credit or replacement. The City's return of defective items shall not exclude any other legal, equitable or contractual remedies the City may have.*

**CITY OF SPRINGFIELD  
INVITATION FOR BID #034-2010  
GENERAL TERMS AND CONDITIONS**

1. **PURPOSE:** Provide Fire-fighting turnout gear for the Springfield Fire Department for new hires and for replacement gear as required throughout the contract period.
2. **Term:** One year beginning on the date of award. The City may, at its option, extend the contract for up to two additional one-year terms.
3. **Escalation/De-Escalation:** Bid prices shall remain firm for a period of one year from the date of award. The contract prices may be changed after the first year for the following reasons:

An increase or decrease in the supplier's cost of materials may be justification for price change; however, this shall not be construed in any way to increase vendor's margin of profit.

All written request for price increase must include backup documentation as to the nature of the increase and shall be submitted to the City Purchasing Agent at least 60 days prior to the scheduled price increase/decrease or renewal of contract. Approval of each request shall be by written confirmation from the City Purchasing Agent. If the City should consider said increase unwarranted or unreasonable, the City reserves the right to terminate the contract with the vendor. Any price decline at the manufacturer's level shall be reflected in an immediate reduction of the contract prices and the vendor shall notify the buyer of said decline.

4. **Quantity:** Quantities listed are estimates for bid purposes only; actual quantities may be more or less.
5. **Purchasing Card Program:** The City has implemented a purchasing card program, using the Visa network. Bidders may receive payment from the purchasing card in the same manner as other Visa purchases. Bidders should have the ability to accept Visa.

City departments will be encouraged to use purchasing cards to order from this annual contract. In the event the department does not use a purchasing card, a written purchase order will be issued.

6. **Specifications:** If bidding an equal, Bidders must include with their bid specification sheets or information sufficient for thorough evaluation. Failure may be cause for rejection as non-compliant.
7. **SAMPLES/DEMONSTRATION:** The City may require Bidders to submit and/or demonstrate samples within one week (7-days) following date of request at no cost to the City. **DO NOT SUBMIT SAMPLES UNTIL NOTIFIED TO DO SO.** The City will not request oversized or over-length samples for the purpose of testing. All samples submitted shall be standard size and shall be provided at no cost or obligation to the City. All samples shall become the property of the City unless designated otherwise by the bidder.
8. **NEW:** The completed bid shall not include components or finished units that are of a prototype nature or that have not been in production for a sufficient period of time.
9. **WARRANTY:** The City desires a minimum 5 year warranty on materials and workmanship. A copy of the manufacturer's warranty shall be provided with the bid. Warranty shall include repair to the satisfaction of the City Fire Department or replacement at no additional cost to the City. The Contractor shall be responsible for all transportation costs incurred during the warranty period. The City of Springfield Fire Department shall be furnished a "no charge" invoice for all work performed under warranty indicating type of work performed and materials replaced.

10. **SIZING:** Contractor shall fit-test each individual to size at no additional cost to the City. The City desires the Contractor to perform this service within one week from date of order.
11. **DELIVERY:** The City desires delivery within 60 days from the date of sizing. Bidder shall provide their best delivery date on the Bid Form – Proposal.
12. **INSPECTION/ACCEPTANCE:** All merchandise shall be inspected before acceptance by an authorized representative of the Springfield Fire Department for workmanship, appearance and proper functioning of all components, and conformance to all requirements of these specifications. Failure in compliance will be cause for the purchaser to reject all or part of the order.

Should deficiencies be found, it shall be the responsibility of the supplier to pack and return the product in question, make necessary corrections or replacements, and return them to the Springfield Fire Department for re-inspection and acceptance.

13. **QUESTIONS:** Direct all questions to the buyer, Jason Finke, at 417-864-1624.

**CITY OF SPRINGFIELD  
INVITATION FOR BID #034-2010  
SPECIFICATIONS**

**1.0 GENERAL SPECIFICATIONS - FIREFIGHTER STANDARD TURNOUT GEAR**

1.1 **PURPOSE:** The purpose of the clothing is to provide protection during structural fire fighting operations where there is a threat of fire and against adverse environmental effects during structural fire fighting as well as when certain physical hazards are likely to be encountered, such as during non-fire-related rescue operations, emergency medical operations, and victim extrication.

1.2 **STANDARDS:** All garments produced shall meet or exceed the criteria set forth in the current NFPA Standard 1971 latest revision for PROTECTIVE CLOTHING FOR STRUCTURAL FIRE FIGHTING.

1.3 **THIRD PARTY TESTING:** All components and composites used in the construction of garments shall be third party tested, certified and listed for compliance to NFPA Standard (2007 revision). Such certification shall be denoted by the certification label of the third party tester as shown in the specifications for the Garment label.

**1.4 OUTER SHELL MATERIAL - JACKETS AND HIGH BACK TROUSERS**

The outer shell shall be constructed of "**ADVANCE**" Kevlar®/Nomex® blend material with an approximate weight of 7.2 oz. per square yard in a rip stop weave. The shell material must be treated with **SST™ (SUPER SHELLTITE)** which is a durable water-repellent finish that also enhances abrasion resistance.

**1.5 THERMAL INSULATING LINER - JACKET AND TROUSERS**

The thermal liner shall be constructed of "CALDURA®/ARALITE"; one layer of para-aramid batt, quilt stitched to a combination spun/filament Caldura® face cloth, with a finished weight of approximately 7.6 oz. per square yard. A 7 inch by 9 inch pocket, constructed of self material and lined with moisture barrier material, shall be affixed to the inside of the jacket thermal liner on the left side by means of a lock stitch. The thermal liner shall be bound around its perimeter with Bias-Cut Neoprene coated cotton/polyester binding. The thermal liner shall be attached to the moisture barrier. Further mention of "Thermal Liner" in this specification shall refer to this section.

**1.6 MOISTURE BARRIER - JACKETS AND TROUSERS**

The "CROSSTECH Type 2C" moisture barrier material shall be a 5.0 oz. per square yard two-layer laminate comprised of a bicomponent membrane and a 3.2 oz. per square yard Nomex® IIIA woven pajama check substrate. The bicomponent membrane shall be comprised of an expanded PTFE (polytetrafluoroethylene, for example Teflon) matrix having a continuous hydrophilic (i.e. water loving) and oleophobic (i.e. oil hating) coating that is impregnated into the matrix. The moisture barrier material shall meet all moisture barrier requirements of NFPA 1971-2007 edition, which includes water penetration resistance, viral penetration resistance, and common chemical penetration resistance. The moisture barrier shall be bound along the edges with Bias-Cut Neoprene-coated cotton/polyester binding. Further mention of "Specified Moisture Barrier" in this specification shall refer to this section.

**1.7 SEALED MOISTURE BARRIER SEAMS**

All moisture barrier seams shall be sealed with a minimum 1 inch wide sealing tape. One side of the tape shall be coated with a heat activated glue adhesive. The adhesive side of the tape shall be oriented toward the moisture barrier seam. The adhesive shall be activated by heat and the sealing tape shall be applied to the moisture barrier seams by means of pressure exerted by rollers for that purpose.

## **1.8 METHOD OF THERMAL LINER/MOISTURE BARRIER ATTACHMENT FOR JACKET AND HIGH BACK TROUSERS**

The thermal liner and moisture barrier shall be completely removable from the jacket shell. Two strips of 5/8 inch wide flame resistant hook and pile (e.g. Velcro) fastener tape shall secure the thermal liner/moisture barrier to the outer shell along the length of the neck line under the collar (see Collar section). The remainder of the thermal liner/moisture barrier shall be secured with a minimum of four snap fasteners appropriately spaced on each jacket facing and four snap fasteners at each sleeve end.

The thermal liner and moisture barrier shall be completely removable from the high back trouser shell. Nine snap fasteners shall be spaced along the waistband to secure the thermal liner/moisture barrier to the shell. The legs of the thermal liner/moisture barrier shall be secured to the shell by means of two snap fasteners per leg.

## **1.9 SAFETY CHECK LINER INSPECTION - COAT**

The liner system of the coat shall incorporate an opening at the hem for the purpose of inspecting the integrity of the coat liner system. This opening shall run the full length of the liner and shall close by the means of (2) two-way snap fasteners. The two snap fasteners shall secure the thermal liner to the moisture barrier along the hem. The hem of the liner system layers shall each be bound with moisture barrier to prevent fraying/wicking. The two-way snap fasteners shall be attached to the lower side seams of the coat outer shell with snap tabs and shall secure the liner to the shell.

## **1.10 SAFETY CHECK LINER INSPECTION - PANT**

The liner system of the pant shall incorporate an opening at the cuff of each trouser leg for the purpose of inspecting the integrity of the pant liner system. This opening shall run the full circumference of each trouser cuff of the liner and shall close by means of (2) two-way snap fasteners. The two snap fasteners shall secure the thermal liner to the moisture barrier along the cuff. The cuffs of the liner system layers shall be bound with moisture barrier to prevent fraying/wicking. The two snap fasteners shall be attached to the outer shell seams on the pant cuffs with snap tabs and shall secure the liner to the shell.

## **1.11 THERMAL PROTECTIVE PERFORMANCE**

The assembled garment, consisting of an outer shell, moisture barrier, and thermal liner, shall exhibit a TPP (Thermal Protective Performance) rating of not less than 35.

## **1.12 STITCHING**

The outer shell shall be assembled using stitch type #301, #401, and #516. The thermal liners and moisture barriers shall be assembled using stitch type #301, #401, #504, #514, and #516. Stitching in all seams shall be continuous. There shall be no joined stitching in midseam. All major A outer shell structural seams, major B structural liner seams, and minor seams including but not limited to pockets, flaps, and material reinforcements, shall have a minimum of 8 to 10 stitches per inch.

**CITY OF SPRINGFIELD, MISSOURI  
GENERAL SPECIFICATIONS  
FIREFIGHTER TURNOUT GEAR**

**2.0 JACKET CONSTRUCTION**

**2.1 BODY**

The body of the shell shall be constructed of three separate body panels consisting of two front panels and one back panel. The body panels shall be shaped so as to provide a tailored fit thereby enhancing body movement and shall be joined together by double stitching with Nomex® thread.

**2.2 DRAG RESCUE DEVICE (DRD)**

A Firefighter Drag Rescue Device shall be installed in each jacket. Two ends of a 1.5 inch wide Kevlar® strap will be sewn together to form a continuous loop. The strap will be installed in the jacket between the liner system and outer shell such that when properly installed will loop around each arm. The strap will be accessed through a portal between the shoulders on the upper back where it is secured in place by a Velcro strap. The access port will be covered by an outside flap with beveled corners designed to fit between the shoulder straps of an SCBA. The flap will have a compliant reflective patch sewn to the outside to clearly identify the feature as the DRD (Drag Rescue Device).

**2.3 SEPARATING LINER SYSTEM (JKT)**

The thermal liner and moisture barrier shall be completely removable from the jacket shell. Two strips of 5/8 inch wide flame resistant hook and pile fastener tape shall secure the thermal liner/moisture barrier to the outer shell along the length of the neckline under the collar. This opening shall run the full length of the collar for the purpose of inspecting the inner surfaces of the coat liner system. The remainder of the thermal liner/moisture barrier shall be secured with a minimum of four snap fasteners appropriately spaced on each jacket facing and four snap fasteners at each sleeve end. The outside perimeter of the AXTION liner moisture barrier and thermal liner layers shall be bound together along the side and bottom edges with a Bias-Cut Neoprene coated cotton/polyester binding for a finished appearance that prevents fraying and wicking of contaminants.

**2.4 SLEEVES**

The sleeves shall be of two-panel construction, contoured, and of set in design. The outer and under sleeve panels shall be double stitched together with Nomex® thread. The sleeves shall be contoured (curved) to follow the natural shape of the human arm unlike straight, tubular sleeve configurations. An underarm gusset shall be incorporated between the underside of the sleeve and the body of the jacket and shall be used in all layers of the garment (shell, moisture barrier, and thermal liner). The underarm gusset shall measure approximately 5 inches wide by 17 inches long (all layers) and graded to size, beginning at the front of the armpit and terminating approximately three inches from the top of the back of the shoulder, and shall provide for a high degree of uninhibited arm and shoulder movement.

**2.5 LINER ELBOW THERMAL ENHANCEMENT**

An additional layer of thermal liner material shall be sewn to the elbow area of the liner system for added protection at contact points and increased thermal insulation. The elbow thermal enhancement layers shall be sandwiched between the thermal liner and moisture barrier layers of the liner system and shall be stitched to the thermal liner layer only.

## 2.6 SLEEVE CUFF REINFORCEMENTS

The sleeve cuffs shall be reinforced with an extra layer of outer shell material. The cuff reinforcements shall not be less than 3 inches in width and folded in half, approximately one half inside and one half outside the sleeve end for greater strength and abrasion resistance. The cuff reinforcement shall be double stitched to the sleeve end.

## 2.7 WRISTLETS

There shall be Nomex<sup>®</sup> hand and wrist guards (over the hand) not less than 7 inches in length and of double thickness. A separate thumbhole with an approximate diameter of 2 inches shall be recessed approximately 1 inch from the leading edge.

The wristlets shall be sewn to flame resistant neoprene coated cotton/polyester moisture barrier material, which in turn shall be sewn to the inside of the sleeve shell approximately five inches from the sleeve cuff. This sleeve well configuration serves to prevent water and other hazardous elements from entering the sleeves when the arms are raised. The neoprene moisture barrier material shall also line the inside of the sleeve shell from the cuff to a point approximately five inches up, where it joins the sleeve well and is double stitched to the shell. Four Nomex<sup>®</sup> snap tabs will be sewn into the juncture of the sleeve well and wristlet. The tabs will be spaced equidistant from each other and shall be fitted with female snap fasteners to accommodate corresponding male snaps in the liner sleeves. This configuration will ensure there is no interruption in protection between the sleeve liner and wristlet.

## 2.8 COLLAR

The collar shall consist of five-layer construction and be of two-piece design. The collar shall have a minimum of 3 rows of quilting. The outer layers shall consist of outer shell material, with three-layers of specified moisture barrier sandwiched between (see Moisture Barrier section). The rear inside ply of moisture barrier shall be sewn to the collar's back layer of outer shell with four lateral rows of stitching for reinforcement. The forward inside ply and center layer of moisture barrier shall be sewn to the inside of the collar at the edges only. The multi-layered configuration shall provide protection from water and other hazardous elements. The collar shall be of two piece design with the left and right halves of all component materials joined in the center by stitching, thereby permitting the collar to retain its proper shape and roll. The collar shall be minimum 3 1/2 inches high and graded to size. The leading edges of the collar shall extend up evenly from the leading edges of the jacket front body panels so that no gap occurs at the throat area. The collar's back layers of outershell, moisture barrier and center ply of moisture barrier, shall be joined to the body panels with two rows of stitching. Inside the collar, above the seam where it is joined to the shell, shall be a strip of 5/8-inch wide FR hook fastener tape running the full length of the collar. The collar's front layers of moisture barrier and outershell shall have an additional strip of 5/8 inch wide hook fastener tape stitched to the inside lower edge and running the full length of the collar. These two inside strips of 5/8 inch wide FR hook fastener tape (e.g. Velcro) sewn to the underside of the collar shall engage corresponding pieces of flame resistant pile fastener tape at the front and back neck area of the liner system. The collar closure strap shall be constructed of two plies of outer shell material with two center plies of moisture barrier material, and shall measure not less than 4 inches wide by 9 inches long. The collar closure strap shall be secured in the closed and stowed position with flame resistant hook and pile (e.g. Velcro) fastener tape. A 2 inch by 3 inch piece of FR pile fastener tape shall be sewn vertically to the inside of the end of the closure strap. A corresponding piece of FR hook fastener tape measuring 2 inches by 3 inches shall be sewn horizontally to the outside of the collar on the opposite side, thereby providing a high degree of collar strap adjustment when wearing a breathing apparatus mask. In order to provide a means of storage for the closure strap when not in use, a 1 inch by 2 inch piece of FR hook fastener tape shall be sewn horizontally to the collar immediately in front of the closure strap. The collar closure strap shall fold in half with the FR pile fastener tape engaging the FR hook fastener tape. An NFPA compliant fabric hanger loop shall be sewn to the inside of the liner at the neckline.

## **2.9 LINER SHOULDER AND UPPER BACK THERMAL ENHANCEMENT**

An additional layer of thermal liner material shall be used to increase thermal insulation in the upper back and shoulder area of the liner system. This thermal enhancement layer shall drape over the top of each shoulder extending from the collar to the sleeve/shoulder seam, and from the juncture of the collar and back panel to a depth of 7 1/2 inches. The upper back and shoulder thermal enhancement layers shall be sandwiched between the thermal liner and moisture barrier layers of the liner system and shall be stitched to the thermal liner layer only.

## **2.10 SHOULDER REINFORCEMENT**

The tops of the shoulders (front yoke) of the outer shell shall be reinforced on the outside with an extra layer of outer shell material. The additional shoulder reinforcement layer shall also serve to increase thermal insulation to the shoulder area. The reinforcements shall be double stitched to the shell and shall measure approximately 4 inches wide near the collar and approximately 6 inches wide at the juncture of the sleeve and body panels.

## **2.11 ACTION BACK**

The jackets shall include inverted pleats to afford enhanced mobility and freedom of movement in addition to that provided by the underarm gussets. The outer shell shall have two inverted pleats (one each side) installed at the juncture of the front and back body panels. The inverted pleats shall begin at top of each shoulder and extend vertically down the sides of the jacket to the hem. Maximum expansion of the pleats shall occur at the shoulder area and taper toward the hem. The liner (moisture barrier & thermal liner) shall have a single inverted pleat located at the upper middle of the back. It will be designed to expand with the outer shell pleats to their maximum expansion.

## **2.12 JACKET FRONT**

The jacket shall incorporate separate facings to ensure there is no interruption in thermal or moisture protection in the front closure area. The facings shall measure 2 1/2 inches wide, extend from collar to hem, and be double stitched to the underside of the outer shell at the leading edges of the front body panels. A Breathable moisture barrier material shall be sewn to the jacket facings and configured such that it is sandwiched between the jacket facing and the inside of the respective body panel. The breathable film side shall face inward to protect it. The thermal liner and moisture barrier assembly shall be attached to the jacket facings by means of snap fasteners.

## **2.13 STORM FLAP**

A rectangular storm flap measuring 3 1/4 inches wide and 23 inches long shall be centered over the left and right body panels to ensure there is no interruption in thermal or moisture protection in the front of the jacket. The outside storm flap shall be constructed of two plies of outer shell material with a center ply of breathable moisture barrier material. The outside storm flap shall be double stitched to the right side body panel and shall be reinforced at the top and bottom with bartacks.

## **2.14 STORM FLAP AND JACKET FRONT CLOSURE SYSTEM**

The jacket shall be closed by means of (zipper and hook & pile tape) a 22 inch heavy duty zipper on the jacket fronts and flame resistant hook and pile (e.g. Velcro) fastener tape on the storm flap. The teeth of the zipper shall be mounted on Nomex<sup>®</sup> cloth and shall be sewn into the respective jacket facings. The zipper stop shall be "pressed", not molded, insuring the highest quality with increased durability. The storm flap shall close over the left and right jacket body panels and shall be secured with flame resistant hook and pile fastener tape. A 1 1/2 inch by 23 inch piece of FR pile fastener tape shall be installed along the leading edge of the storm flap on the underside with four

rows of stitching. A corresponding 1 1/2 inch by 23 inch piece of FR hook fastener tape shall be sewn with four rows of stitching to the front body panel and positioned to engage the pile fastener tape when the storm flap is closed over the front of the jacket.

#### 2.15 **DUAL ACTION**

Each jacket will be equipped with two combination pockets: one on the left side and one on the right side. The pockets shall be located at the bottom of the jacket near the storm flap and be double stitched to the respective body panels. Retroreflective trim shall run over the bottom of the pockets so as not to interrupt the trim stripe. The lower pocket corners shall be stitched in such a way that a small diagonal opening is left for complete water drainage. The lower half of the pocket shall be reinforced with an extra layer of outer shell material on the inside. The pockets shall measure 9 inches wide by 9 inches high and be accessed from the top. Each pocket will be constructed with a two pleats installed vertically for the full height of the pocket to provide expansion capability. The pocket flaps shall be rectangular in shape, constructed of two layers of outer shell material, and shall measure 3 inches deep and 1/2 inch wider than the pocket. A piece of 1 1/2 inch by 3-inch flame resistant hook and pile fastener tape (e.g. Velcro) shall secure each flap in the closed position. The upper pocket corners and pocket flaps shall be reinforced with bartacks. Additionally, a separate hand warmer pocket compartment will be provided under the expandable cargo pocket. This compartment will be accessed from the rear of the pocket.

#### 2.16 **RADIO POCKET**

Each jacket shall have a pocket designed for the storage of a portable radio. This pocket shall be of box type construction, double stitched to the coat, and shall have one drainage eyelet in the bottom of the pocket. The pocket flap shall be constructed of two layers of outer shell material measuring approximately 5 inches deep and 1/4 inch wider than the pocket. The pocket flap shall be closed by means of flame resistant hook and pile (e.g. Velcro) fastener tape. A 1 1/2 inch by 3 inch piece of FR hook fastener tape shall be installed vertically on the inside of the pocket flap beginning at the center of the bottom of the flap. A 1 1/2 inch by 3 inch piece of FR pile fastener tape shall be installed horizontally on the outside of the pocket near the top center and positioned to engage the hook fastener tape. In addition, the entire inside of the pocket shall be lined with neoprene coated cotton/polyester moisture barrier material to ensure that the radio is protected from the elements. The moisture barrier material shall also be sandwiched between the two layers of outer shell material in the pocket flap for added protection. The radio pocket shall measure approximately 3 inches deep by 3.5 inches wide by 9 inches high and shall be installed on the right chest. Note: (radio pocket over 6-inch in height requires trim)

#### 2.17 **NOTCHED RADIO POCKET FLAP**

The radio pocket flap shall be notched to accommodate the radio antenna on the right side as worn.

#### 2.18 **MICROPHONE STRAP**

A strap shall be constructed to hold a microphone for a portable radio. It shall be sewn to the coat at the ends only. The microphone strap shall be mounted high on the left chest near the shoulder and shall be constructed of double layer outer shell material.

#### 2.19 **RETROREFLECTIVE FLUORESCENT TRIM**

The retroreflective fluorescent trim shall be lime/yellow Triple Trim (L/Y borders with silver center).

Each jacket shall have an adequate amount of retroreflective fluorescent trim affixed to the outside of the outer shell to meet the requirements of NFPA #1971 (2007 edition) and OSHA. The trim shall be in the following widths and shall be **NYC** style; 3 inch wide stripes around the lower portion of the body of the jacket, around the back and chest area approximately three inches below the armpit, around each sleeve below the elbow, and around each sleeve above the elbow.

#### 2.20 **REINFORCED TRIM STITCHING**

The trim stitching shall be reinforced with a strip of 3/32-inch wide flame resistant cording material. The cording shall be sewn to the top surface of the trim at the edges during installation of the retroreflective fluorescent trim on the garment. The cording provides a bed for the stitching and affords extra protection to the stitching from abrasion. This action will help to significantly reduce trim separation from the garment due to stitching failure from abrasion.

#### 2.21 **SIZING**

The jacket length shall be measured from the juncture of the collar and back panels to the hem of the jacket and shall measure 32 inches long.

The jacket shall be available in even size chest measurements of two inch increments, and shall range from a small size of 30 to a large size of 60. Generalized sizing, such as small, medium, large, etc., will not be considered acceptable. Sizing specifically for women shall also be available.

**CITY OF SPRINGFIELD, MISSOURI  
GENERAL SPECIFICATIONS  
FIREFIGHTER TURNOUT GEAR**

**3.0 HIGH BACK TROUSERS CONSTRUCTION**

**3.1 BODY AND HIGH BACK BIB**

The body of the shell (exclusive of back bib) shall be constructed of four separate body panels consisting of two front panels and two back panels. The body panels shall be shaped so as to provide a tailored fit, thereby enhancing body movement, and shall be joined together by double stitching with Nomex® thread.

The rise at the front of the trouser shall be approximately 16 inches from the top of the waistband to the bottom of the crotch seams and graded to size.

**3.2 SEPARATING LINER SYSTEM (TROUSER)**

The thermal liner and moisture barrier layers of the trouser liner system shall be constructed in such a way as to allow the layers to separate for complete interior inspection, service and replacement. The thermal liner and moisture barrier layers shall be stitched together at the front fly for security and prevention of inadvertent use of one layer without the other. The liner system shall have a reinforcement of black Nomex® Twill sewn to the bottom of the fly opening. This reinforcement will serve to prevent the liner from tearing in that area from the constant donning and doffing of the trousers.

The liner system of the trouser shall incorporate an opening at the right side of the waist, a minimum of 11 inches, for the purpose of inspecting the integrity of the trouser liner system.

**3.3 SUSPENDERS (For No-Bib GX-7 Trousers)**

Four rust resistant suspender buttons shall be installed on the uppermost portion of the back panel and four suspender buttons shall be installed in the front of the trousers on the waist band. The suspender buttons shall be reinforced with die-cut pieces of leather on the inside.

A pair of Heavy Duty suspenders shall be supplied with each pair of trousers. The suspenders shall be constructed of 1 1/2 inch wide heavy-duty elasticized webbing material, and shall be of 4-way, 8 point design. The suspenders shall be red.

A pair of red Super Duty suspenders shall be supplied with each pair of trousers. The main body of the suspenders shall be constructed of 2-inch wide non-elasticized cotton webbing, and shall be equipped with (for regular Super Duty) non-slip thermoplastic slide fasteners for adjustment. The non-elasticized sections of the suspenders shall run over each shoulder and shall join together at a point approximately in the middle of the back, and just above the waist line on the front.

**3.4 WAISTBAND**

The waist area of the trousers shall be reinforced on the inside with a separate piece of black aramid outer shell material not less than two inches in width. Neoprene coated cotton/polyester shall be sewn to the back of the waistband as a reinforcement. The top edge of the waistband reinforcement shall be double stitched to the outer shell at the top of the trousers. The lower edge of the waistband shall be serged and unattached to the shell to accept the thermal liner and moisture barrier. The top of the thermal liner and moisture barrier shall be secured to the underside of the waistband reinforcement so as to be sandwiched between the waistband reinforcement and outer shell to reduce the possibility of liner detachment while donning and to avoid pass

through of snaps from the outer shell to the inner liner. An inward facing snap hook attached to a leather strap shall be triple riveted to the right front body panel in the waist area. A leather backed dee ring shall be riveted to the leading edge of the fly flap near the top. The snap hook shall engage the dee ring located on the fly flap when in the closed position.

### 3.5 TAKE UP STRAPS

The trousers shall be equipped with two take up straps. The straps shall be constructed of 1 inch wide black Aramid twill and be positioned in the waist area on the outside of the garment; one on each side. Each take up strap shall be comprised of two sub-component straps. The rear strap component shall be constructed of black twill Nomex<sup>®</sup>. The rear strap shall measure 1 inch wide and 4 inches long, folded back to form a loop, and shall be bartacked to the trousers. The loop shall hold a high temp thermoplastic buckle. The buckle shall point toward the front. The front strap component shall measure 1 inch wide by approximately 9 inches long (finished dimension). One end shall be folded back on itself to form a loop. A high temp thermoplastic slide fastener shall be captured within the loop. The front strap component shall be inserted through the buckle on the rear strap component, back through the slide fastener, and the end shall be bartacked to the trousers. A pull-tab of 1 inch black Aramid twill shall be affixed to the slide fastener. The take up strap pull-tabs shall pull toward the front to tighten. This shall allow for approximately 4 inches of adjustment per strap (8 inches overall).

### 3.6 EXTERNAL FLY FLAP

The fly flap shall be constructed of two pieces of outer shell material. A center ply of specified moisture barrier shall be sandwiched between the two outer shell pieces. The fly flap shall be double stitched to the left front body panel beginning at the waist and extending down to a depth of approximately 11 inches. The fly flap shall be approximately 6 inches wide at the top, tapering to approximately 1 inch in width at the crotch where it will be further reinforced with a bartack. A leather backed dee ring shall be riveted to the leading edge of the fly flap at the top and shall be positioned to engage the safety hook when the fly flap is in the closed position.

The internal fly flap closure shall consist of a heavy duty zipper measuring approximately 10 inches long. One half of the zipper shall be sewn to the inside of the leading edge of the external fly flap. The corresponding zipper half shall be sewn diagonally along the right front body panel and shall be positioned to engage the zipper half on the fly flap. The top of each zipper half shall be further reinforced with a bartack.

An internal fly flap constructed of one ply of outer shell material, thermal liner and specified moisture barrier, measuring approximately 2 inches wide by 11 inches long, shall be sewn to the leading edge of the right front body panel in the fly area. The thermal liner and moisture barrier of the internal fly shall extend approximately 7 inches horizontally from the leading edge of the fly flap follow the shape of the outside large fly flap. The action of the external fly flap overlapping the internal fly flap lined with thermal liner and moisture barrier will ensure there is no interruption in protection.

### 3.7 TROUSER CLOSURE SYSTEM

The exterior primary positive locking closure shall be an inward facing safety hook and dee ring. The safety hook shall be attached to a leather strap that is riveted to the right front body panel in the waist area and shall engage the dee ring located on the leading edge of the external fly flap. (See paragraph on waistband construction).

The internal fly flap closure shall consist of 2 inch wide by full-length flame resistant hook and pile (e.g. Velcro) fastener tape. The FR pile portion shall be sewn with four rows of stitching to the inside of the leading edge of the external fly flap. The corresponding portion of FR hook fastener tape shall be sewn with four rows of stitching to the right front body panel positioned to engage the pile portion when the external fly flap is in the closed position.

Appropriate male and female snap fastener halves shall be installed at the leading edge of the waistband for the purpose of further securing the trousers in the closed position.

### 3.8 EXPANSION (BELLOWS) POCKETS

An expansion pocket, measuring approximately 2 inches deep by 10 inches wide by 10 inches high shall be double stitched to the side of each leg straddling the outseam above the knee and positioned to provide accessibility. The lower half of each expansion pocket shall be reinforced with an additional layer of outer shell material on the inside. Two rust resistant metal drain eyelets shall be installed on the underside of each expansion pocket to facilitate drainage of water. The pocket flaps shall be rectangular in shape, constructed of two layers of outer shell material and shall measure 3 inches deeper than the pocket expansion and 1/2 inch wider than the pocket. The upper pocket corners and pocket flaps shall be reinforced with bartacks. The pocket flaps shall be closed by means of flame resistant hook and pile (e.g. Velcro) fastener tape. Two pieces of 1 1/2 inch by 3 inch FR hook fastener tape shall be installed vertically on the inside of each pocket flap (one piece on each end). Two corresponding pieces of 1 1/2 inch by 3 inch FR pile fastener tape shall be installed horizontally on the outside of each pocket near the top (one piece on each end) and positioned to engage the hook fastener tape.

### 3.9 EXPANSION KNEE

The outer shell of the trouser legs shall be constructed with expansion panels to provide added fullness for increased freedom of movement in the knee area. The expansion panels shall be installed vertically on the sides of the legs along both the inseam and outseam in the knee area. Each of the 4 expansion panels will be of an elongated oval shape approximately 15 inches long, with a maximum width of 1 3/4 inches at the knee and tapered to a point at each end. The liner system, comprised of the moisture barrier and thermal liner, shall be constructed with four darts per leg in the front of the knee. Two will be located above the knee (one on each side) and two will be located below the knee (one on each side). Each dart will be approximately 2 inches long. The darts in the liner provide a natural bend at the knee. The darts in the liner work in conjunction with the expansion panels in the outer shell to increase freedom of movement when kneeling, crawling, climbing stairs or ladders, etc.

### 3.10 LINER KNEE THERMAL ENHANCEMENT

An additional layer of specified thermal liner material will be paired with an extra layer of specified moisture barrier material and sewn to the knee area of the liner system for added protection at contact points and increased thermal insulation. The knee thermal enhancement layers shall be sandwiched between the thermal liner and moisture barrier layers of the liner system and shall be stitched to the thermal liner layer only.

### 3.11 KNEE REINFORCEMENTS

The knee area shall be reinforced with an extra layer of outer shell material.

The knee reinforcement shall be slightly offset to the inside of the leg to insure proper coverage when bending, kneeling and crawling. The knee reinforcements shall measure 10 inches wide by 12 inches high and shall be double stitched to the outside of the outer shell in the knee area for greater strength and abrasion resistance.

### 3.12 TROUSER CUFF REINFORCEMENTS

The cuff area of the trousers shall be reinforced with an extra layer of outer shell material.

The cuff reinforcement shall not be less than 2 inches in width and folded in half, approximately one half inside and one half outside the end of the legs for greater strength and abrasion resistance. The cuff reinforcement shall be double stitched to the outer shell. Two Nomex<sup>®</sup> snap tabs (one each side), measuring approximately 1 inch long shall be bartacked to the inside of each leg of the outer shell approximately three inches from the bottom of the trouser leg. A female snap fastener half shall be installed at the end of each tab and shall align with the male snap fastener halves installed at the bottom of the trouser thermal liner/moisture barrier. The tab mounted snap fasteners shall secure the trouser thermal liner/moisture barrier to the outer shell within three inches of the cuff.

### **3.13 REVERSE BOOT CUT**

The trouser leg cuffs will be constructed such that the back of the leg is approximately 1 inch shorter than the front. This construction feature will minimize the chance of premature wear of the cuffs and injuries due to falls as a result of "walking" on the trouser cuffs.

### **3.14 RETROREFLECTIVE FLUORESCENT TRIM**

The trousers shall have a stripe of retroreflective fluorescent trim encircling each leg below the knee to comply with the requirements of NFPA #1971 (2007 revision) in 3 inch lime/yellow Triple Trim (L/Y borders with silver center).

### **3.15 REINFORCED TRIM STITCHING**

The trim stitching shall be reinforced with a strip of 3/32 inch wide flame resistant cording material. The cording shall be sewn to the top surface of the trim at the edges during installation of the retroreflective fluorescent trim on the garment. The cording provides a bed for the stitching and affords extra protection to the stitching from abrasion. This action will help to significantly reduce trim separation from the garment due to stitching failure from abrasion.

### **3.16 SIZING**

The trousers shall be available in even size waist measurements of two inch increments and shall be available in a range of sizes from 24 to 56. The trouser inseam measurement shall be available in two inch increments. Generalized sizing, such as small, medium, large, etc., will not be considered acceptable. Sizing specifically for women shall also be available.

### **3.17 THIRD PARTY TESTING AND LISTING PROGRAM**

All components used in the construction of these garments shall be tested for compliance to NFPA Standard #1971 (2007 revision) by Underwriters Laboratories (UL). Underwriters Laboratories shall certify and list compliance to that standard. Such certification shall be denoted by the Underwriters Laboratories certification label.

**CITY OF SPRINGFIELD, MISSOURI  
GENERAL SPECIFICATIONS  
FIREFIGHTER TURNOUT GEAR**

**4.0 GARMENT LABELING SPECIFICATIONS:**

**4.1 LABELS**

Appropriate warning label(s) shall be permanently affixed to each garment. Additionally, the label(s) shall include the following information.

Compliance to NFPA Standard #1971 - 2007 edition

Underwriters Laboratories classified mark

Manufacturer's name

Manufacturer's address

**4.2 USER INFORMATION GUIDE:** Each garment shall include a *User Information Guide* with information required by NFPA Standard 1971, latest edition. This guide shall include:

(a) Pre-use information:

1. Safety considerations.
2. Limitations of use.
3. Garment marking recommendations and restrictions.
4. A statement that most performance properties of the garment cannot be tested by the user in the field.
5. Warranty information.

(b) Preparation for use:

1. Sizing/adjustment.
2. Recommended storage practices

(c) Inspection:

- Inspection frequency and details.

(d) Don/Doff:

1. Donning and doffing procedures.
2. Sizing and adjustment procedures.
3. Interface issues.

(e) Use:

1. Proper use consistent with NFPA 1500, *Standard on Fire Department, Occupational Safety and Health Program*, and 29 CFR 1910, 132.

(f) Maintenance and Cleaning:

1. Cleaning instructions and precautions with a statement advising users not to use garments that are not thoroughly cleaned and dried.
2. Maintenance criteria and methods of repair where applicable.
3. Decontamination procedures for both chemical and biological contamination.

(g) Retirement and disposal criteria:

1. Manufacturer's garment identification number
2. Date of manufacture
3. Size

4.3 **BAR CODE LABELS:** Each garment shall include a barcode label. This city will use this label to assign each garment to a fire fighter. The fire fighters name shall be imprinted on the label along with the bar code.

**CITY OF SPRINGFIELD  
 BID FORM – PROPOSAL  
 IFB #034-2010**

SUBMITTED BY \_\_\_\_\_  
 Company Name

Pursuant to and in accordance with the above stated Invitation for Bid, the undersigned hereby declares that they have examined the IFB documents and specifications for the item(s) listed below.  
 The undersigned proposes and agrees, if their Bid is accepted to furnish the item(s) submitted below, including delivery to Springfield, Missouri in accordance with the delivery schedule indicated below and according to the prices products/services information submitted.

ITEM	ESTIMATED QTY	DESCRIPTION	UNIT PRICE	EXTENDED AMOUNT
1.	45 Each	<p><b>Turnout Coat</b> per specifications contained herein, Globe GX-7, Lion Janesville Freedom Series #CSUM-32, Morning Pride LTO-2512 or equal.</p> <p>Mfg. _____ Model no. _____</p> <p><b>Delivery:</b> _____ days after receipt of order</p> <p>SHALL WARRANTY THE ABOVE EQUIPMENT FOR PARTS, LABOR, AND TRAVEL FOR _____</p>	\$ _____	\$ _____
2.	45 Each	<p><b>Turnout Pant</b> per specifications contained herein; Globe GX-7, Lion Janesville Freedom Series PSUM-32, Morning Pride LTO-2512 or equal.</p> <p>Mfg. _____ Model no. _____</p> <p><b>Delivery:</b> _____ days after receipt of order</p> <p>SHALL WARRANTY THE ABOVE EQUIPMENT FOR PARTS, LABOR, AND TRAVEL FOR _____</p>	\$ _____	\$ _____
3.	45 Each	<p><b>Suspenders for Item #2 above</b>, Red; H-back, non-stretch with metal loops; Globe GX-7, Lion Janesville Freedom Series #SB342, Morning Pride SP-DF8C or equal.</p> <p>Mfg. _____ Model no. _____</p> <p><b>Delivery:</b> _____ days after receipt of order</p> <p>SHALL WARRANTY THE ABOVE EQUIPMENT FOR PARTS, LABOR, AND TRAVEL FOR _____</p>	\$ _____	\$ _____

4.	24 Each	<b>OPTION: Mic Tab;</b>  <b>Delivery:</b> Additional Mic Tab shall be ordered with the coat and delivery shall be the same as that offered for Item #1.	Price per each tab:  \$_____	\$_____
5.		<b>OPTION:</b> Additional charge for "quick shipment" in the event it is necessary to expedite delivery sooner than the above promised delivery:  <b>Quick Delivery:</b> _____ days after receipt of order.	\$_____/per set	

DELIVERY: F.O.B. DESTINATION

ACCEPT VISA P-CARD: YES \_\_\_\_\_ NO \_\_\_\_\_

Prompt Payment Discount \_\_\_\_\_% \_\_\_\_\_ Days, Net \_\_\_\_\_ Days



**CITY OF SPRINGFIELD  
STATEMENT OF "NO BID"  
IFB #034-2010**

**RETURN THIS PAGE ONLY IF YOUR COMPANY PROVIDES THE PRODUCTS/SERVICES BEING BID AND DECLINES  
TO DO SO.**

WE, THE UNDERSIGNED, HAVE DECLINED TO BID ON YOUR **IFB #034-2010** FOR **FIREFIGHTING TURNOUT GEAR** FOR THE FOLLOWING REASON(S):

\_\_\_\_\_ SPECIFICATIONS ARE TOO "TIGHT," I.E. GEARED TOWARD ONE BRAND OR MANUFACTURER ONLY (PLEASE EXPLAIN BELOW).

\_\_\_\_\_ INSUFFICIENT TIME TO RESPOND TO INVITATION FOR BID.

\_\_\_\_\_ OUR PRODUCT SCHEDULE WOULD NOT PERMIT US TO PERFORM.

\_\_\_\_\_ UNABLE TO MEET SPECIFICATIONS.

\_\_\_\_\_ UNABLE TO MEET INSURANCE REQUIREMENTS.

\_\_\_\_\_ SPECIFICATIONS UNCLEAR (PLEASE EXPLAIN BELOW).

\_\_\_\_\_ OTHER (PLEASE SPECIFY BELOW).

REMARKS: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

COMPANY NAME: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

SIGNATURE AND TITLE: \_\_\_\_\_

TELEPHONE NUMBER: \_\_\_\_\_

DATE: \_\_\_\_\_