

**SPECIFICATIONS
AND
DOCUMENTS
FOR**
Fire Fighting Turnout Gear

For
City of Bolivar



CITY OF BOLIVAR
345 SOUTH MAIN AVENUE
P.O. BOX 9
BOLIVAR, MO 65613
417-326-2489
FAX 417-777-3212

NOTICE TO Bidders

May, 2014
Office of City Clerk
Bolivar, MO 65613

Sealed bids subject to the conditions contained herein will be received until 1:00 p.m. on July 7, 2014, and then publicly opened and read at Bolivar Municipal Golf Course/City Hall in Bolivar, Polk County, Missouri, for proposed firefighting gear in accordance with plans and specs as adopted by the Bolivar City Fire Department.

Specifications and Bid Documents are on file and may be examined between the hours of 8:00 a.m. and 5:00 p.m. Monday through Friday in the City Clerk's Office at the Bolivar Admin offices, 1630 S. Killingsworth, Bolivar, Missouri, 65613.

The City of Bolivar reserves the right to reject any and all proposals and to waive technicalities.

Bids will be chosen based upon the best bid, and not necessarily the lowest bid.

Natalie Scrivner

Natalie Scrivner, City Clerk
City of Bolivar, Missouri

INSTRUCTIONS TO BIDDERS

1. Each Proposal shall be legibly written or printed in ink on the Proposal provided in this bound copy of the proposed Contract Documents. No alterations in proposals, or in the printed forms therefore, by erasures, interpolations, or otherwise will be acceptable unless each such alteration is signed or initialed by the Bidder. If initialed, the Owner may require the bidder to identify any alteration so initialed. No alteration in any proposal, or in the proposal form on which it is submitted, shall be made by the person after the Bidder has submitted the Proposal. Any and all addenda to the Contract Documents, on which a proposal is based, properly signed by the Bidder shall accompany the Proposal when submitted.

Each Proposal submitted shall be enclosed in a sealed envelope, addressed to the City Clerk, City of Bolivar, Missouri identified on the outside with the words ***“Bolivar Missouri – 2014 Firefighting Gear”*** and filed with the City Clerk, Bolivar, Missouri.

2. Each Bidder shall carefully examine the Specifications and other Contract Documents, shall visit the sites and fully inform himself of all conditions affecting the work or the cost thereof, and shall be presumed to have done so and his bid shall be based upon his own conclusions. Each Bidder shall inform himself concerning all Federal, State, and local laws, ordinances, or regulations, which may in any manner affect his proposed operations of construction, or those engaged or employed on the work or the material or equipment. Should a Bidder find discrepancies in, or omissions from, the Specifications or other Contract Documents, he should at once notify the Director of Public Works and obtain clarification or interpretation prior to submitting any bid. Any interpretation of the proposed Contract Documents will be made only by addendum duly issued and a copy of such addendum will be mailed or delivered to each person obtaining a set of such documents from the Director of Public Works. The Owner will not be responsible for any other explanations or interpretations of the proposed Contract Documents.

3. All sales and use taxes, as well as other taxes, that might lawfully be assessed against the Owner in the execution and performance of the proposed contract and work covered thereby and are to be paid by the contractor from monies obtained in satisfaction of his contract. It is to be understood by all bidders that the bid price or prices submitted shall include the total cost of all such taxes.

4. No bidder may submit more than one proposal. Two proposals under different names will not be received from one firm or association.

5. No bidder may withdraw his proposal for a period of thirty (30) days after the date and hour set for the opening herewith. A bidder may withdraw his proposal at any time prior to the expiration of the period during which proposals may be submitted, by written request of the same person or persons who signed the proposal.

6. The Owner reserves the right to accept the bid, which in its judgment is the lowest and best bid; to reject any or all bids; and to waive irregularities or informalities in any bids submitted. Bids received after the specified time of closing will be returned unopened.

7. None of the Instructions to Bidders, Proposal, Contract Payment and Performance Bonds, Contract Agreement, General Conditions, Special Conditions, Specifications, and other documents shall be removed from the bound copy of the "Contract Documents" prior to filing the Proposal contained therein.

8. Each Bidder shall sign his proposal, using his usual signature, and giving his full business address. Bids by Partnerships shall be signed with the Partnership named, followed by the signature of one of the members of the Partnership or by an authorized representative and designation of the person signing. Bids by Corporations shall be signed with the name of the Corporation, followed by the signature and designation of the President, Secretary, or other person authorized to bind it in the matter. The names of all persons signing should also be typed or printed below the signature. A bid by a person who affixes to his signature the word "*President*", "*Secretary*", "*Agent*", or other designation, without disclosing his Principal, may be held to be the bid of the individual signing. When requested by the Owner, satisfactory evidence of the authority of the officer signing on behalf of a corporation shall be furnished.

9. 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.

10. 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.

11. Delivery of said items shall be F.O.B. Destination

BID

PROPOSAL OF _____
(hereinafter called "Bidder") organized and existing under the laws of the State of _____
_____ doing business as _____.*

To the City of Bolivar, Missouri (hereinafter called "Owner"). In compliance with your Advertisement for Bids, Bidder hereby proposes to deliver firefighter turnout gear in strict accordance with the Contract Documents, within the time set forth therein, and at the prices stated below.

By submission of this Bid, each Bidder certifies, and in the case of a joint Bid, each party thereto certifies as to his own organization, that this Bid has been arrived at independently, without consultation, communication, or agreement as to any matter relating to this Bid with any other Bidder or with any competitor.

ITEM	ESTIMATED QTY	DESCRIPTION	UNIT PRICE	EXTENDED AMOUNT
1	12	TURNOUT COAT per specifications contained herein MFG: _____ Model #: _____ Delivery: _____ days after receipt of order, shall warranty the above equipment for parts, labor, and travel for _____	\$ _____	\$ _____
2	12	TURNOUT Pants per specifications contained herein MFG: _____ Model #: _____ Delivery: _____ days after receipt of order, shall warranty the above equipment for parts, labor, and travel for _____	\$ _____	\$ _____
3	12	Suspenders for Item #2 above, H-Back, non-stretch(if not included) MFG: _____ Model #: _____ Delivery: _____ days after receipt of order, shall warranty the above equipment for parts, labor, and travel for _____	\$ _____	\$ _____

DELIVERY: F.O.B. DESTINATION

Show bid in both words and figures. In case of discrepancy, the amount in words will govern. The above price shall include all labor and materials to cover the finished work for the improvements mentioned above.

Bidder understands that the Owner reserves the right to reject any or all bids and to waive any informality in the bidding.

The bidder further agrees that this bid shall be good and may not be withdrawn for a period of 90 calendar days after the scheduled closing time for receiving bids.

Respectfully submitted,

Contractor

Attest: _____
Secretary

By: _____

Title: _____

Address: _____

SEAL
(If bid is by a corporation)

BCFD GEAR SPECS 2014

1. GENERAL SPECIFICATIONS - FIREFIGHTER STANDARD TURNOUT GEAR PANTS AND COATS

1.1 PURPOSE: The purpose of the clothing is to provide protection during structural firefighting operations where there is a threat of fire and against adverse environmental effects during structural firefighting 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. These garments are not protective clothing and are not designed to be kept in direct contact with flames

1.2 STANDARDS: All garments produced shall meet or exceed the criteria set forth in the current NFPA Standard 1971 latest revision for PROTECTIVE ENSEMBLE 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 2013 Edition. 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 QUALITY ASSURANCE: The manufacturer shall provide and maintain a quality assurance program that is certified and registered to ISO.

1.5 LABELING: Labels shall be attached to each detachable layer in accordance with applicable NFPA Current Edition Standard.

1.5.2 Each garment shall have a barcode label which the City will use to assign each garment to a firefighter.

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

- a. Compliance to NFPA Standard #1971 – 2013 Edition
- b. Underwriters Laboratories classified mark
- c. Manufacturer's name
- d. Manufacturer's address
- e. Manufacturer's garment Identification number
- f. Date of Manufacture
- g. Size

1.5.4 USER INFORMATION GUIDE: Each garment shall include a *User Information Guide* with information required by NFPA Standard 1971, 2013 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: 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

1.6 WARRANTY:

The manufacturer shall warrant these jackets and pants to be free from defects in materials and workmanship for their serviceable life when properly used and cared for.

_____Comply _____Exception

Outer Shell Material- Jackets and Pants

2.1 Material shall meet the current edition of NFPA 1971

2.2 The outer shell, thermal barrier, moisture barrier and all material components utilized in the construction of the garment shall meet the applicable NFPA Current Edition standard. All stitching shall meet the required breaking strength specified by the standard for the particular application. All stress areas shall be bartacked for additional strength.

2.3 OUTER SHELL: The outer shell shall be constructed of TENCATE "**BLACK ADVANCE™ PCA (Producer Colored Aramid)**" 50/50 Kevlar®/Nomex® blend material with an approximate weight of 7.0 oz. per square yard, or equivalent material and shall be listed as an alternative in the bid. Color of the garments shall be black.

_____ Comply _____ Exception

2.4 MOISTURE BARRIER: The moisture barrier material shall be constructed of 5.0 oz./sq. yd. Nomex woven pajama check substrate laminated with a Crosstech III membrane, or equivalent materials and shall be listed as an alternative in the bid. The material shall meet the NFPA 1971 Current Edition requirements for resistance to water penetration, viral penetration, and common chemical penetration. All seams are to be heat and pressure sealed with 1" seam tape.

_____ Comply _____ Exception

2.5 THERMAL BARRIER: The thermal liner shall be constructed of 7.8 oz. per square yard TENCATE "**DEFENDER M SL2™**"; consisting of two layers of E-89™ spun laced aramid blend, quilt stitched to a camouflage printed 65% Lenzing FR Rayon, 25% Para-Aramid, and 10% Nylon (spun yarn) blended face cloth. A material equivalent shall be acceptable, and listed as an alternative with the exact materials listed in the bid. 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 sewn to the moisture barrier and bound around its perimeter with bias-cut Neoprene coated cotton/polyester binding.

_____ Comply _____ Exception

2.6 MOISTURE BARRIER/THERMAL BARRIER CONSTRUCTION: The moisture barrier shall be completely sewn to the thermal barrier at its perimeter and finished with moisture barrier binding so no raw edges are exposed. The film side of the moisture barrier shall be oriented toward the thermal barrier. All seams are to be heat and pressure sealed with seam tape.

_____ Comply _____ Exception

2.7 ATTACHMENT OF THERMAL/MOISTURE BARRIER TO THE OUTER SHELL: The liner shall be completely detachable by means of 5/8" hook and loop fastener tape across the collar and down each side (hard/hook on outer shell, soft/loop on liner). In addition to the hook and loop, the liner system shall attach to the shell with four snap fasteners appropriately spaced on each jacket facing and four snap fasteners at each sleeve end. Additional hook and loop attachment on the center back hem of the shell and liner for maximum thermal protection at the coat and pant overlap.

The thermal liner and moisture barrier shall be completely removable from the pant shell. Nine snap fasteners shall be spaced along the waistband to secure the thermal liner to the shell. The legs of the thermal liner/moisture barrier shall be secured to the shell by means of snap fasteners,

2 per leg. The snap tabs shall be color coded to a corresponding snap tab in the liner for ease of matching the liner system to the outer shell after inspection or cleaning is completed.

_____ Comply _____ Exception

3. COAT SPECIFICATIONS:

3.1 DESIGN AND PERFORMANCE: The coat shall be constructed of three separate body panels designed to afford maximum unrestricted movement of the arms and shoulders. The coat shell and liner which are equal in length shall provide a minimum overlap of all protective layers (when worn with bunker pants) in accordance with NFPA 1500. The coat shall have a standard hanging letter patch or a tail.

_____ Comply _____ Exception

3.2 Hanging Letter Patch

The hanging letter patch shall be constructed of a double layer of outer shell material. The letter patch will attach to the rear inside hem of the jacket with a combination of snap fasteners and FR Velcro[®] hook & loop fastener tape.

_____ Comply _____ Exception

3.3 CONSTRUCTION: All components MUST be in compliance with the test specifications for NFPF 1971, 2013 Edition

_____ Comply _____ Exception

3.3.2 All thread seams shall be constructed with Tex 90 Kevlar Thread. Tex 90 Natural Nomex Thread shall be used on all trim areas. Tex 90 Black Kevlar Thread shall be used on black garments, or equivalent material and shall be listed as an alternative in the bid.

_____ Comply _____ Exception

3.4. COAT METAL CONTACT PREVENTION: The coat shall be constructed so that, when completely assembled, there shall be no direct metal contact from the exterior of the outer shell through the thermal barrier to the wearer's body.

_____ Comply _____ Exception

3.5 SLEEVE CONSTRUCTION: The sleeves shall be of two piece construction and contoured, having an upper and a lower sleeve. Both the under and upper sleeve shall be graded in proportion to the chest size. For unrestricted movement, on the underside of each sleeve there shall be two outward facing pleats located on the front and back portion of the sleeve on the shell and thermal liner. On the moisture barrier, the system will consist of two darts, rather than pleats, to allow added length in the under sleeve. The moisture barrier darts will be seam sealed to assure liquid resistance integrity.

The pleats shall expand in response to upper arm movement and shall fold in on themselves when the arms are at rest. This expansion shall allow for greater multi-directional mobility and flexibility in the shoulder and arm areas, with little restriction or jacket rise. Neither stove-pipe nor raglan-style sleeve designs will be considered acceptable.

_____Comply _____Exception

3.6 STORM FLAP: An extra-wide storm flap measuring no less than 3" wide and at least 23" long shall provide continuous thermal and moisture protection of the torso. The storm flap shall be constructed of four layers: moisture barrier and thermal barrier sandwiched between two layers of the outer shell material. Closure on the front facings shall be a heavy-duty #10 brass zipper with a "breakaway" feature. Outer flap closure shall be 1 1/2" wide hook and loop fastener the full length of the flap. Chest trim pattern shall continue across the storm flap.

_____Comply _____Exception

3.7 COLLAR: The collar shall provide continuous thermal and moisture protection to the face and neck. It shall be no less than 3" high and overlap by minimum of 2" in the front. The collar shall be constructed of four layers: moisture barrier, thermal barrier and inside and outside layers of outer shell material. A 2" wide piece of hook shall be set horizontally on the left front collar to secure loop on throat tab when in use. An additional 2" x 2" hook patch shall be sewn to the outside collar in the back for storage of throat tab when not in use.

_____Comply _____Exception

3.8 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 in this high compression area. 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. Finished dimension shall be 5 inches by 8 inches. All edges shall be finished by means of over edging. Raw or unfinished edges shall be considered unacceptable. Thermal scraps shall not be substituted for full-cut fabric padding.

_____Comply _____Exception

3.9 POCKETS Each jacket front body panel shall have a 2 inch deep by 8 inch wide by 8 inch high expansion pocket, double stitched to it and shall be located such that the bottom of the pockets are at the bottom of the jacket for full functionality when used with an SCBA. Retro reflective trim shall run over the bottom of the pockets so as not to interrupt the trim stripe. Two rust resistant metal drain eyelets shall be installed in the bottom of each expansion pocket to facilitate drainage of water. Pocket flaps shall be double layered. 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 ½ inch wider than the pocket. The upper pocket corners shall be reinforced with proven backtacks and pocket flaps shall be reinforced with bartacks. The pocket flaps shall be closed by means of FR Velcro® fastener tape. Two pieces of 1 ½ inch by 3 inch FR Velcro® hook fastener tape shall be installed vertically on the inside of each pocket flap (one piece on each end). Two corresponding pieces of 1 ½ inch by 3 inch FR Velcro® loop 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.

An inside pocket of outer shell material measuring 8" x 7" shall be sewn to the thermal layer of the coat. The liner pocket shall have Velcro closure.

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 and shall be lined with Nomex® Fleece for warmth and comfort. Shell material linings shall not be considered acceptable.

_____Comply _____Exception

3.10 RADIO POCKET: The radio pocket shall be constructed of outer shell material and lined with moisture barrier. The pocket shall be approximately 9" x 4" x 3" with bras grommets for drainage. Radio pocket flaps of double layer shell material shall have an internal layer of moisture barrier and 2" x 2" hook and loop for closure. The radio pocket flap shall be notched to accommodate the radio antenna on either side as user discretion. A strip of 3" reflective trim shall be added to continue the trim pattern.

3.11 NOTCHED RADIO POCKET FLAP

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

_____Comply _____Exception

3.12 MICROPHONE STRAP

A strap shall be constructed to hold a microphone for a portable radio. It shall be sewn to the jacket at the ends only. The size of the microphone strap shall be 1 inch x 3 inches. The

microphone strap shall be mounted above the radio pocket and shall be constructed of double layer outer shell material.

_____Comply _____Exception

3.13 SLEEVE CUFF REINFORCEMENTS

The sleeve cuffs shall be reinforced with a layer of black Dragonhide[®] material, or equivalent material and shall be listed as an alternative in the bid. The cuff reinforcements shall not be less than 2 inch 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; a single row of stitching shall be considered unacceptable. Jackets finished with a turned and stitched cuff do not provide the same level of abrasion resistance and will be considered unacceptable.

_____Comply _____Exception

3.14 SURVIVOR FLASHLIGHT HOLDER

Each jacket shall be equipped with a "Survivor" flashlight holder. An inward facing metal safety coat hook shall be triple riveted in a vertical position to the upper chest. The inward facing coat hook will accommodate the clip portion of the flashlight. Below the coat hook will be a strap constructed of outer shell material measuring approximately 2½ inches high and 9 inches wide, and will hold the barrel of the flashlight. The lower strap will be equipped with a 1½ inch by 2½ inch FR Velcro[®] closure at the front of the strap to facilitate easy removal of the flashlight. There shall be approximately 3 inches between the upper coat hook and lower strap. The "Survivor" flashlight holder shall be sewn to the jacket on the right chest.

_____Comply _____Exception

3.15 WRISTLETS: Each jacket shall be equipped with **Nomex[®] 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. Nomex[®] knit is constructed of 96% Nomex[®] and 4% Spandex for shape retention, or equivalent material and shall be listed as an alternative in the bid. The color of the wristlets shall be white.

The wristlets shall be sewn to the end of the liner sleeves. Flame resistant neoprene coated cotton/polyester impermeable barrier material shall be sewn to the inside of the sleeve shell approximately 5 inches from the sleeve end and extending toward the cuff forming the sleeve well. The neoprene sleeve well shall form an elasticized cuff end with an FR Velcro[®] tab providing a snug fit at the wrist and covering the knit wristlet. This sleeve well configuration serves to prevent water and other hazardous elements from entering the sleeves when the arms are raised. The neoprene barrier material shall also line the inside of the sleeve shell from the cuff to a point

approximately 5 inches back, where it joins the sleeve well and is double stitched to the shell. Four 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. One of the snap tabs shall be a different color in the liner to correspond with color coded snap tabs for ease of matching the liner system to the outer shell after inspection or cleaning is completed. This configuration will ensure there is no interruption in protection between the sleeve liner and wristlet.

_____ Comply _____ Exception

3.16 REFLECTIVE TRIM: All 3” fluorescent reflective NFPA-compliant trim shall be used. Placement shall be determined by the department, but shall, as a minimum, meet the NFPA Current Edition. All trim shall be attached by double-stitching (four rows total). The trim shall be 3” Scotchlite “Triple Trim” Lime/Yellow with Silver. The placement shall be New York Style.

_____ Comply _____ Exception

3.17 COAT SIZING: Coats shall be available in even chest sizes; sleeve lengths shall be in whole inch increments. Women’s sizing must be available.

_____ Comply _____ Exception

3.18 DRAG RESCUE DEVICE: Coats shall be equipped with a self-contained rescue harness. The harness shall be placed between the outer shell and inner lining of the coat and when deployed shall secure the wearer under both arms. Access to the handle of the harness shall be at the nape of the garment below the collar and placed in such a way as to operate properly without interference from SCBA. The handle of the harness shall be protected from the environment and weather by an access flap secured with hook and loop or similar material. The flap shall include a strip of 2” matching reflective trim. The harness shall be easily accessible for periodic inspection.

_____ Comply _____ Exception

3.19 SEWN ON RETROREFLECTIVE LETTERING

Each jacket shall have 3” lime/yellow 3M Scotchlite™ lettering on Row A reading: BOLIVAR
Each jacket shall have 3” lime/yellow 3M Scotchlite™ lettering on Row B reading: CITY

_____ Comply _____ Exception

3.20 NAME: Personnel individual “Names” shall be on the tail of each coat. Lettering shall be 4” tall in reflective material. Refer to 2.19 for reflective trim.

_____Comply _____Exception

PANT SPECIFICATIONS:

4.1 DESIGN AND PERFORMANCE: The pant shall be constructed of four separate body panels designed to afford maximum unrestricted movement.

4.2 CONSTRUCTION: All components MUST be in compliance with the test specifications for NFPF 1971 2013 Edition

4.2.1 The outer shell, thermal barrier, moisture barrier and all material components utilized in the construction of the garment shall meet the applicable NFPA 1971 standard. All stitching shall meet the required breaking strength specified by the standard for the particular application. All stress areas shall be bartacked for additional strength.

_____Comply _____Exception

4.2.2 All thread seams shall be constructed with Tex 90 Kevlar Thread. Tex 90 Natural Nomex Thread shall be used on all trim areas. Tex 90 Black Kevlar Thread shall be used on black garments or equivalent material and shall be listed as an alternative in the bid.

_____Comply _____Exception

4.3 PANT METAL CONTACT PREVENTION: The pant shall be constructed so that, when completely assembled, there shall be no direct metal contact from the exterior of the outer shell through the thermal barrier to the wearer’s body.

_____Comply _____Exception

4.4 ELASTICIZED WAISTBAND

The pant design facilitates the transfer of the weight of the pant to the hips instead of the shoulders and suspenders. The two rear outer-shell body panels, beginning at the pant side seams, shall incorporate an elasticized waistband. The rear elasticized waistband shall be integral to the shell of the pant and the elasticized portion shall be covered in an aramid fabric.

The waist area of the pants shall incorporate an independent stretch waistband on the inside with a separate piece of black aramid outer shell material cut on the bias (diagonally) measuring not less than 2 inches in width. Neoprene coated cotton/polyester shall be sewn to the back of the waistband as a reinforcement to create a three-layer protection. The top edge

of the waistband reinforcement shall be double stitched to the outer shell at the top of the pants. 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.

_____ Comply _____ Exception

4.5 EXTERNAL / INTERNAL FLY FLAP

The pants will have a vertical outside fly flap constructed of two layers of outer shell material, with a layer of moisture barrier material sandwiched between. The fly flap shall be double stitched to the left front body panel and shall measure approximately 2 ½ inches wide, with a length graded to size based on waist measurement and reinforced with bartacks at the base. An internal fly flap constructed of one layer of outer shell material, thermal liner and specified moisture barrier, measuring approximately 2 inches wide, with a length graded to size based on waist, shall be sewn to the leading edge of the right front body panel. The inside of the right front body panel shall be thermally enhanced directly under the outside fly with a layer of moisture barrier and thermal liner material.

The underside of the outside fly flap shall have a 1½ inch wide piece of FR Velcro® loop fastener tape quadruple stitched along the full length and through the shell material only; stitching shall not penetrate the moisture barrier insert between the two layers to insure greater thermal protection and reduced water penetration. A corresponding strip of 1½ inch wide piece of FR Velcro® hook fastener tape shall be quadruple stitched to the outside right front body panel securing the fly in a closed position.

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

_____ Comply _____ Exception

4.6 BELT

Each pant shall include a 2 inch wide black aramid belt with an adjustable hi-temp thermoplastic buckle serving as the exterior primary positive locking closure. Sizing adjustments shall be provided by a self locking 2 inch thermoplastic buckle; this buckle shall also provide a quick-release mechanism for donning and doffing. The belt shall be attached to the two front body panels of the pant beginning at the side seams. The belt shall run through tunnels constructed of black 7½ oz aramid outer shell, or equivalent material and shall be listed as an alternative in the bid, material protecting it from damage. The tunnels will begin at the side seams and terminate at the front of the pant exposing the buckle. A single belt loop constructed of a double layer of black 7½ oz. aramid, or equivalent material and shall be listed as an alternative in the bid, measuring

approximately ½ inch by 3 inches shall be attached to the topside of the right side tunnel. The belt loop will be located approximately 2 inches from the tunnel opening for storage of the belt tab.

_____Comply _____Exception

4.7 PADDED H-BACK INTEGRATED SUSPENDERS: H-Back design with padding at the shoulder.

_____Comply _____Exception

4.8 POCKETS: The pockets shall be constructed of one layer of the outer shell material and lined with the vapor barrier. The pockets shall be reinforced with a full wraparound of outer shell material extending halfway up the pocket from the outside to the inside. Pocket flaps shall be double layered and extend ½” beyond each side of the pocket. Pockets shall be 10” x 10” cargo style expanding 2” all around. Pockets shall be equipped with two (2) rust resistant metal drain eyelets for drainage. Pocket flaps shall use 1 ½ inch by 3 inch hook and loop closure.

_____Comply _____Exception

4.9 POCKET DIVIDER

The right side expansion pocket shall be equipped with a vertical divider separating the pocket into two compartments. The divider will split the pocket 50/50.

_____Comply _____Exception

4.10 EXPANSION KNEES: The knees shall be constructed with a series of vertically placed gussets sewn on the inside and outside of the outer shell, moisture barrier, and thermal barrier.

_____Comply _____Exception

4.11 KNEE REINFORCEMENT: The knee area shall be reinforced with double-stitched material to the pant shell. The layer, measuring 9” x 12”, shall include one layer of thermal barrier, and one layer of Dragonhide material, or equivalent material and shall be listed as an alternative in the bid. One layer shall be of foam for extra padding on the knees, sandwiched between the outer shell and knee reinforcement.

_____Comply _____Exception

4.12 PANT CUFF: The cuff area of the pants shall be reinforced with a layer of Dragonhide, or equivalent material and shall be listed as an alternative in the bid, material. The cuff reinforcement shall not be less than 2 inch 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 for a minimum of two rows of stitching.

_____Comply _____Exception

4.13 REVERSE BOOT CUT

The outer shell pant leg cuffs will be constructed such that the back of the leg is approximately 1 inch shorter than the front. The liner will also have a reverse boot cut at the rear of the cuff and a concave cut at the front to keep the liner from hanging below the shell. 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 pant cuffs. Pants that have "cut-outs" in the back panel rather than a contoured boot cut shall be considered unacceptable.

_____Comply _____Exception

4.14 REFLECTIVE TRIM: All 3" fluorescent reflective NFPA-compliant trim shall be used. A band shall be placed completely around each pant leg approximately 3" above the hem. All trim shall be attached by double-stitching (four rows total). The trim shall be 3" Scotchlite "Triple Trim" Lime/Yellow with Silver.

_____Comply _____Exception

4.15 PANT SIZING: Pants shall be available in even waist sizes; Inseams shall be in whole inch increments. Women's sizing must be available.

_____Comply _____Exception

EXCEPTIONS TO SPECIFICATIONS

Any and all exceptions to the above specifications must be clearly stated for each heading. Use additional pages for exceptions, if necessary.

COUNTRY OF ORIGIN

Jackets and Pants shall be manufactured in the United States.