

**REQUEST FOR PROPOSALS FOR  
PURCHASE OF TURNOUT GEAR  
AGILITY**

**GREENEVILLE FIRE DEPARTMENT**



Issued by:

Greenville Fire Department  
Chief Alan Shipley  
710 W. Summer St  
Greenville, TN 37743

Phone (423) 638-4243 Fax (423) 638-2469  
ashipley@greenevilletn.gov  
Date of Issue: April 26, 2023

**Due Date/Time: May 10, 2023; 09:45am  
DEADLINE FOR RECEIVING PROPOSALS**

## CALENDAR OF EVENTS/RFP TIMELINE

Listed below are the important dates and times by which the actions noted must be completed. All dates are subject to change by the Greeneville Fire Department. If the Greeneville Fire Department finds it necessary to change any of these dates or times prior to the RFP due date, the change will be accomplished by addendum.

<u>ACTIONS</u>	<u>COMPLETION DATE</u>
Distribution of RFP	April 26, 2023
Proposals Due	May 10, 2023, by 09:45 a.m.
Proposal Opening	May 10, 2023, at 10:00 a.m.
Consideration of RFP	Six Days
Expected adoption of RFP	May 16, 2023

### FORMS AND SPECIFICATIONS

Details, proposal forms, and specifications are available from the Town of Greeneville website, [www.greenevilletn.gov](http://www.greenevilletn.gov). Vendors are required to use the official "PROPOSAL FORMS", and all attachments itemized herein are to be submitted as a single document.

### PROPOSAL SUBMITTAL

One (1) original and one (1) copy (for a total of 2), of each proposal shall be submitted in a sealed envelope, prominently marked on the outside with the words, "**TURNOUT GEAR AGILITY**". Proposals submitted in express, overnight or courier envelopes, boxes or packages must be prominently marked on the outside with the words, "**TURNOUT GEAR AGILITY**". and contents sealed as required.

- Deadline for Submissions in response to the Request for Proposals: Proposals must be received no later than 09:45 a.m., May 10, 2021. Proposals submitted by FAX or other electronic media will not be accepted under any circumstances. Late proposals will not be accepted, and will be returned, unopened, to the Vendor, at the Vendor's expense.
- The Greeneville Fire Department reserves the right to reject any and/or all proposals, reserves the right to waive any informalities or irregularities in the proposal, and reserves the right to award contract(s) in the best interest of the Department.
- Proposals are to be submitted to the following address:

**Town of Greeneville**  
**Attn: Chief Alan Shipley (TURNOUT GEAR AGILITY)**  
**200 N. College St.**  
**Greeneville, TN 37743**

**PROPOSAL FORM**

**GREENEVILLE FIRE DEPARTMENT**



Name of Firm Submitting Proposal \_\_\_\_\_

Name of Person Submitting Proposal \_\_\_\_\_

**PROPOSAL ACKNOWLEDGMENT**

"The undersigned, as Vendor, hereby declares that he/she has informed himself/herself fully in regard to all conditions to the work to be done, and that he/she has examined the RFP and Specifications for the work and comments hereto attached. The Vendor proposes and agrees, if this proposal is accepted, to contract with the Greeneville Fire Department in the form of a Purchase Order, to furnish all necessary materials, equipment, machinery, tools, apparatus, means of transportation, labor and service necessary to complete the work covered by the RFP and Contract Documents for this Project. The Vendor agrees to accept in full compensation for each item the prices named in the schedules incorporated herein."

\_\_\_\_\_  
**TOTAL SUM PROPOSAL \$**

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

*This document must be completed and returned with your Submittal*

The Greeneville Fire Department is seeking proposals for forty (40) sets of turnout gear. To include protective jacket and pants, including suspenders. A complete proposal package, specifications, sizing, delivery, and training shall be provided in the proposals. The following are the minimum requirements for the turnout gear:

- Include pricing for complete package as well as individual pricing per garment.
- Include option pricing as a per option price. (Harness type or other items listed as options)
- Include pricing option for dual certified rescue type gear (extrication gear)
- Detailed specifications are listed below.
- Under each category, please mark “**COMPLY OR EXCEPTION**” within proposal packet.
- Any and all exceptions to the specifications outlined herein must be noted on this bid specification and thoroughly explained in the bid proposal.

## SCOPE

This specification details design and materials criteria to afford protection to the upper and lower body, excluding head, hands, feet, against adverse environmental effects during structural firefighting. All materials and construction will meet or exceed NFPA Standard #1971 and OSHA for structural fire fighters protective clothing.

\_\_\_\_\_ Comply          \_\_\_\_\_ Exception

## JACKET

### SIZING

In order to ensure that every member of the department can safely perform to the maximum of their ability without extra bulk and without restriction, Jackets shall be available in all sizes and dimensions as follows:

Jackets:

Gender:	Gender specific Men's and Women's patterns will be available.
Chest:	Even sizes
Back Length:	Men's 29 inches, 32 inches, 35 inches, 40 inches Women's 26 inches, 29 inches
Body Shape:	Men's: Straight and Tapered Note: The straight cut offers more fullness at the hips (i.e., jacket sweep) and is recommended when an IH Ready pant is being specified. Women's: Straight
Sleeve:	1-inch increments

Jackets available in only one standard shape will not be acceptable.

\_\_\_\_\_ Comply          \_\_\_\_\_ Exception

### OUTER SHELL MATERIAL - JACKETS

The outer shell shall be constructed of TENCATE **"AGILITY™"**: featuring **ENFORCE™** technology Kevlar®/PBO/ Nomex® blend material with an approximate weight of 6.6 oz. per square yard in a twill weave. The shell material must be treated with a durable water-repellent finish that offers resistance to liquid absorption. The color of the garments shall be light gold.

\_\_\_\_\_ Comply          \_\_\_\_\_ Exception

### THERMAL INSULATING LINER - JACKET

The thermal liner shall be constructed of 7.4 oz. per square yard Safety Components **GLIDE ICE™ 2L-E89**; one layer of 1.5 oz. and one layer of 2.3 oz. per square yard E-89™ spunlaced Nomex®/Kevlar® aramid blend, quilt stitched to a 60% Nomex® Filament/40% Nomex®/Lenzing spun yarn Face Cloth. A pocket, constructed of thermal liner over-edged to a layer of moisture barrier material, shall be affixed to the inside of the jacket thermal liner on the left side by means of a single needle stitch. The thermal liner shall be sewn to the moisture barrier and shall be independently bound around its perimeter. This provides superior abrasion resistance to the less expensive, less durable "stitch and turn" method. Further mention of "Thermal Liner" in this specification shall refer to this section.

\_\_\_\_\_ Comply          \_\_\_\_\_ Exception

**MOISTURE BARRIER - JACKETS**

The moisture barrier material shall be STEDFAST “STEDAIR® 4000” moisture barrier shall be a two-layer laminate comprised of an enhanced Bi-component membrane and Nomex® IIIA woven pajama check substrate. The enhanced Bi-component membrane shall be comprised of an expanded PTFE (polytetrafluoroethylene, i.e.: Teflon®) matrix having a continuous hydrophilic (water-loving) and oliophobic (oil-hating) coating that is impregnated into the matrix. The moisture barrier shall meet and exceed all requirements of NFPA 1971, which includes water penetration resistance, viral penetration resistance, and common chemical penetration resistance. The moisture barrier shall be sewn to the thermal liner at the edges only and bound together with bias-cut neoprene-coated cotton/polyester secured with double stitching. Further mention of “Specified Moisture Barrier” in this specification shall refer to this section.

\_\_\_\_\_Comply            \_\_\_\_\_Exception

**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.

\_\_\_\_\_Comply            \_\_\_\_\_Exception

**METHOD OF THERMAL LINER/MOISTURE BARRIER ATTACHMENT FOR JACKETS**

The thermal liner and moisture barrier shall be completely removable from the jacket shell. A minimum of six snap fasteners shall secure the thermal liner/moisture barrier to the outer shell along the length of the neckline under the topmost collar. The topmost collar shall be turned under and finished such that the snaps on the collar will not be able to contact the wearers skin. Corresponding snaps shall be installed through a moisture barrier leader measuring an approximate height of 1.75 – 2 inches and shall not penetrate through to the outer shell on the backside of the collar. The remainder of the thermal liner/moisture barrier shall be secured with snap fasteners appropriately spaced on each jacket facing and Ara-Shield® snap fasteners at each sleeve end. There shall be one Ara-shield® snap tab at the liner sleeve end which shall be colored to correspond with color coded snap tabs on the shell sleeve end for ease of matching the liner system to the outer shell after inspection or cleaning is completed.

\_\_\_\_\_Comply            \_\_\_\_\_Exception

**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 39.

\_\_\_\_\_Comply            \_\_\_\_\_Exception

**STITCHING**

The outer shell shall be assembled using stitch type #301, #401, #514 and #516. The thermal liners and moisture barriers shall be assembled using stitch type #301, #401, #504, #514, and #516. Major A outer shell structural seams and major B structural liner seams, shall have a minimum of 8 to 10 stitches per inch. All major A seams shall be sewn with ball point needles only. All seams shall be continuously stitched only.

\_\_\_\_\_Comply            \_\_\_\_\_Exception

# **JACKET CONSTRUCTION**

## **BODY**

The body of the shell and liner system shall be constructed of three separate panels consisting of two front panels and one back panel. The body panels shall be shaped to provide a tailored fit thereby enhancing body movement and shall be joined together by double stitching with Nomex® thread. One-piece outer shells shall not be acceptable.

\_\_\_\_\_ Comply                      \_\_\_\_\_ Exception

## **ACTION BACK**

The jacket's outer shell shall include inverted pleats to afford enhanced mobility and freedom of movement in addition to that provided by the sleeves. The outer shell shall have two inverted pleats (one on each side) installed on either side of the back body panel. The inverted pleats shall begin at the 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. Pleats that do not extend to the hem will not be considered, since they do not provide a true flexible back.

The moisture barrier and thermal liner layers shall be designed with darts corresponding to the added length in the shell provided by the action back pleats. The darts are positioned at the shoulder blades, outside of the SCBA straps and work together with the corresponding outer shell pleats in the action back, providing maximum expansion. The moisture barrier darts will be seam sealed to assure liquid resistance integrity.

\_\_\_\_\_ Comply                      \_\_\_\_\_ Exception

## **DRAG RESCUE DEVICE (DRD)**

A Firefighter Drag Rescue Device (DRD) shall be installed in each jacket. The ends of a 1-inch-wide strap, constructed of Kevlar®, shall be sewn together to form a continuous loop. The strap shall 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 an FR strap. The DRD shall be removable for laundering. The access port shall be covered by an outside flap of shell material, designed to fit between the shoulder straps of an SCBA. The flap will have a NFPA-compliant 3M Scotchlite™ reflective logo patch sewn to the outside to clearly identify the feature as the DRD (Drag Rescue Device). The DRD shall not extend beyond the outside flap. This device provides a quickly deployed means of rescuing a downed firefighter. Flimsy, rope-style DRD straps will not be considered.

\_\_\_\_\_ Comply                      \_\_\_\_\_ Exception

## **LINER ACCESS OPENING (JACKET)**

The liner system of the jacket shall incorporate an opening at the leading edge of the right front panel. This opening shall run a minimum of 11 inches for the purpose of inspecting the integrity of the jacket liner system. When installed into the outer shell the Liner Access Opening shall be covered and protected by the overlap of the outer shell facing.

\_\_\_\_\_ Comply                      \_\_\_\_\_ Exception

**RETROREFLECTIVE FLUORESCENT TRIM**

The retroreflective fluorescent trim shall be lime/yellow 3M Scotchlite™ COMFORT Trim (Heat applied segmented 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 and OSHA.

The trim shall be in the following widths and shall be:

**NYC style;** 3-inch-wide stripes - around the bottom of the jacket within approximately 1 inch of the hem, around the back and chest area approximately 3 inches below the armpit, around each sleeve below the elbow, around each sleeve above the elbow.

\_\_\_\_\_Comply      \_\_\_\_\_Exception

**SEWN ON RETROREFLECTIVE LETTERING**

Each jacket shall have 3" lime/yellow 3M Scotchlite™ lettering on Hanging Letter Patch reading Firefighter's name.

\_\_\_\_\_Comply      \_\_\_\_\_Exception

**LETTER PATCH**

**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 hook & loop fastener tape.

\_\_\_\_\_Comply      \_\_\_\_\_Exception

**COLLAR & FREE HANGING THROAT TAB**

The collar shall consist of a minimum four-layer construction and be of one-piece design. There shall be two layers of moisture barrier material sandwiched in between two layers of outer shell fabric (see Moisture Barrier section). The forward inside ply of moisture barrier shall be sewn to the inside of the collar along the edges only. The multi-layered configuration shall provide protection from water and other hazardous elements, while maintaining thermal protection. The collar shall be a minimum of 3 inches high and graded to chest 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 back layers of outer shell and moisture barrier shall be joined to the body panels with a minimum of two rows of stitching. The collar front layers of outer shell and moisture barrier fabric shall have a series of minimum 6 snap fasteners on lower edge of the collar. The topmost collar shall be turned under and finished such that the snaps on the collar will not be able to contact the wearer's skin. There shall be corresponding snap fasteners on a moisture barrier leader, which is sewn to the thermal liner system to engage the snaps on the collar. The snaps on the thermal liner system leader will be installed such that they do not penetrate from the outer shell through to the inner layers. This moisture barrier leader on the thermal liner system shall be sandwiched between the underside of the top collar shell fabric and moisture barrier material and the bottom collar shell fabric and moisture barrier material so as to reduce the possibility of liner detachment while donning and doffing.

The throat tab shall consist of a minimum of four-layer construction and be a scoop type design. There shall be two plies of outer shell material with two center plies of moisture barrier material. The throat tab shall measure not less than 3 inches wide at the center tapering to 2 inches at each end with a total length of approximately 9 inches. The throat tab will be attached to the right side of the collar by a 1 inch wide by 1-inch-long piece of Nomex® twill webbing. The throat tab shall be secured in the closed and stowed position with FR hook and loop fastener tape. The FR hook and



loop fastener tape shall be oriented to prevent exposure to the environment when the throat tab is in the closed position. Two 1½ inch by 3-inch pieces of FR loop fastener tape shall be sewn horizontally to the inside of each end of the throat tab. Corresponding pieces of FR hook fastener tape measuring 1 inch by 3 inches shall be sewn horizontally to the leading outside edge of the collar on each side, for attachment and adjustment when in the closed position and wearing a breathing apparatus mask. In order to provide a means of storage for the throat tab when not in use, a 1 inch by 3-inch piece of FR hook fastener tape shall be sewn horizontally to the inside of the throat tab immediately under the 1½ inch by 3-inch pieces of FR loop fastener tape. The collar closure strap shall fold in half for storage with the FR loop fastener tape engaging the FR hook fastener tape.

A hanger loop constructed of a double layer of outer shell material shall be sewn to the top of the collar at the center.

\_\_\_\_\_ Comply          \_\_\_\_\_ Exception

### **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 approximately 2½ 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. There shall be wicking barrier constructed of a moisture barrier material installed on the front closure system on the left and right side directly below the front facings to ensure continuous protection and overlap. The wicking barrier shall extend no more than a maximum of ¾ inch beyond the inner facing and false facing shall be unacceptable. The thermal liner and moisture barrier assembly shall be attached to the jacket facings by means of snap fasteners.

\_\_\_\_\_ Comply          \_\_\_\_\_ Exception

### **STORM FLAP**

A rectangular storm flap measuring approximately 3 inches (6 inches for hook and dee inside/FR hook and loop fastener tape outside closure; aka #7C) wide and a minimum of 23 inches long (based on a 32-inch length jacket) 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 backtacks.

\_\_\_\_\_ Comply          \_\_\_\_\_ Exception

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

The jacket shall be closed by means of a 22-inch size #10 heavy duty high-temp smooth-gliding YKK Vislon® zipper on the jacket fronts and FR hook and loop fastener tape on the storm flap. The teeth of the zipper shall be mounted on black Nomex® tape and shall be sewn into the respective jacket fronts. The storm flap shall close over the left and right jacket body panels and shall be secured with FR hook and loop fastener tape. A 1½ inch piece of FR loop fastener tape shall be installed along the leading edge of the storm flap on the underside with four rows of stitching. A corresponding 1½ 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 loop fastener tape when the storm flap is closed over the front of the jacket.

\_\_\_\_\_ Comply          \_\_\_\_\_ Exception

## **CARGO/HANDWARMER EXPANSION (BELLOWS) 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. Retroreflective 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. *The expansion pocket shall be reinforced with a layer of Kevlar® approximately 5 inches up on the inside of the pocket.* The pocket flaps shall be rectangular in shape, constructed of two layers of outer shell material and shall measure approximately 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 backtacks. The pocket flaps shall be closed by means of FR hook and loop fastener tape. Two pieces of 1 ½ 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 ½ inch by 3-inch FR 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.

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

## **SLEEVES**

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

## **SLEEVE CUFF REINFORCEMENTS**

The sleeve cuffs shall be reinforced with black Ara-Shield® material.

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. This independent cuff provides an additional layer of protection as compared to a turned and stitched cuff. Jackets finished with a turned and stitched cuff do not provide the same level of abrasion resistance and will be considered unacceptable.

\_\_\_\_\_ Comply          \_\_\_\_\_ Exception

**WRISTLETS / ELASTICIZED ADJUSTABLE SLEEVE WELLS**

Each jacket shall be equipped with Nomex® knit wristlets with thumb loop not less than 4 inches in length and of double thickness. Nomex® knit is constructed of 96% Nomex® and 4% Spandex for shape retention. A loop of ½ inch wide black 6.0 oz. Brigade material shall be installed on each wristlet. This loop is designed to slip over the thumb and hold the wristlets from riding up the arm. The color of the wristlets shall be white, grey.

The wristlets shall be sewn to the end of the liner sleeves. Flame resistant neoprene coated cotton/polyester 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 hook and loop fastener tape 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 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 Ara-shield® 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 Ara-shield® 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

**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 dimensions shall be approximately 5 inches by 8 inches. All edges shall be finished by means of overedging. Raw or unfinished edges shall be considered unacceptable. Thermal scraps shall not be substituted for full-cut fabric padding.

\_\_\_\_\_ Comply                  \_\_\_\_\_ Exception

**LINER SHOULDER AND UPPER BACK THERMAL ENHANCEMENT**

A minimum of one additional layer of thermal liner material shall be used to increase thermal insulation in the upper back, front and shoulder area of the liner system. This full-cut thermal enhancement layer shall drape over the top of each shoulder extending from the collar to the sleeve/shoulder seam, down the front approximately 5 inches from the juncture of the collar down the back to a depth of approximately 5 ¾ inches to provide greater CCHR protection in this high compression area. The upper back, front 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. The thermal enhancement layer shall have finished edges by means of overedging. Raw or unfinished edges shall be considered unacceptable. Thermal scraps shall not be substituted for full-cut fabric padding. Smaller CCHR reinforcements shall not be considered acceptable since they provide far less area of coverage.

\_\_\_\_\_ Comply                  \_\_\_\_\_ Exception

**RADIO POCKET**

The coat shall have a radio pocket measuring nine (9) inches high by four (4) inches wide by two (2) inches deep. The pocket shall be constructed of the specified outer shell material and shall have hook and loop fasteners. The hook and loop fasteners shall be sewn with locks stitching in a box & cross pattern. The pocket shall have at least one (1) drainage eyelet on the bottom. The radio pocket shall have two (2) bartacks on each lower corner and one (1) bartack on each top corner for a total of six (6) bartacks.

\_\_\_\_\_Comply          \_\_\_\_\_Exception

**NOTCHED RADIO POCKET FLAP**

The radio pocket flap shall measure approximately four (4) inches by four (4) inches and shall include a hole in the corner of both (2) side to accommodate the radio antenna. The radio pocket flap shall have a special grabber made of outer shell material and closed cell foam padding to help opening the pockets with a gloved hand. The grabber shall be approximately one and a quarter (1-1/4) inch high by three and a half (3-1/2) inches wide at the widest point and shall be cut at an angle on both sides. The grabber shall be located on the bottom edge of the flap. The flap shall close with the use of FR hook and loop fastener of three (3) inches high by two (2) inches wide and two (2) inches by two (2) inches on the face of the radio pocket. The radio pocket flap shall have one (1) bartack on each side for a total of two (2) bartacks.

\_\_\_\_\_Comply          \_\_\_\_\_Exception

**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 left chest above the radio pocket.  
An additional microphone strap shall be mounted above the right chest above the flashlight holder.

Microphone straps shall be constructed of double layer outer shell material.

\_\_\_\_\_Comply          \_\_\_\_\_Exception

**SURVIVOR FLASHLIGHT HOLDER**

Each jacket shall be equipped with a "Survivor" flashlight holder. An inward facing safety hook, attached to a double layer self-material strap, shall be double stitched in a vertical position to the upper chest. The inward facing safety hook will accommodate the clip portion of the flashlight. Below the safety hook will be a strap constructed of outer shell material measuring approximately 1 ¾ inches high and 9 inches wide and will hold the barrel of the flashlight. The lower strap will be equipped with a 1 ½ inch by 2 ½ inch FR hook and loop closure at the front of the strap to facilitate easy removal of the flashlight. There shall be approximately 3 ½ inches between the upper safety hook and lower strap. The "Survivor" flashlight holder shall be sewn to the jacket on the right chest.

\_\_\_\_\_Comply          \_\_\_\_\_Exception

**EMBROIDERED AMERICAN FLAG – LEFT SLEEVE**

Each jacket shall have a Nomex® embroidered American flag that measures approximately 2½ inches high by 3½ inches wide. Flags made of fabric other than Nomex® shall be considered unacceptable.

\_\_\_\_\_Comply            \_\_\_\_\_Exception

**THIRD PARTY TESTING AND LISTING PROGRAM**

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

\_\_\_\_\_Comply            \_\_\_\_\_Exception

**LABELS**

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

- Compliance to NFPA Standard #1971
- Underwriters Laboratories classified mark
- Manufacturer's name
- Manufacturer's address
- Manufacturer's garment identification number
- Date of manufacture
- Size
- Firefighters Name

\_\_\_\_\_Comply            \_\_\_\_\_Exception

**ISO CERTIFICATION / REGISTRATION**

The protective clothing manufacturer shall be certified and registered to ISO Standard 9001 to assure a satisfactory level of quality. Indicate below whether the manufacturer is certified and registered by checking either "Yes" or "No" in the space provided.

\_\_\_\_\_Yes            \_\_\_\_\_No

**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

**HOOK AND LOOP SUPPORT PROGRAM**

Support program shall cover hook or loop tape that has begun to fray or otherwise degrade from normal wear. This program shall remain in effect for a period of five years from the original date of manufacture of the garment. This support program shall cover the repair or replacement, without charge, of any hook and/or loop on the garments produced by the manufacturer providing the garments are otherwise serviceable.

This support program does NOT cover damage from fire, heat, chemicals, misuse, accident, or negligence. Failure to properly care for garments will serve to void this support program.

\_\_\_\_\_ Comply                  \_\_\_\_\_ Exception

**SIZING BY VENDOR:**

Sizing samples shall be on hand for use when sizing. The vendor shall be available to perform all sizing requirements within 96 hours of written notice. Measuring with a tape measure is not acceptable.

\_\_\_\_\_ Comply                  \_\_\_\_\_ Exception

**GARMENT TRAINING AND SUPPORT**

OSHA requires employees be trained on the capabilities and limitations of their Personal Protective Equipment. The selected vendor shall provide the following:

On-site care and maintenance training shall be provided by the manufacturer. Training shall be in compliance with NFPA 1851, current edition, at the conclusion of which each participant shall receive a certificate of completion.

An on-site OSHA mandated training class on the Knowing the Limits of Your PPE shall be provided at no charge. The training shall include structural firefighting coat, pants, and boots.

\_\_\_\_\_ 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 shall be manufactured in the United States.

Details and specifications are subject to change as necessary, without notification.

# **PANTS**

## **SIZING**

In order to ensure that every member of the department can safely perform to the maximum of their ability without extra bulk and without restriction, Pants shall be available in all sizes and dimensions as follows:

Pants:

Gender:	Gender specific Men's and Women's patterns
Waist:	Even sizes
Body Shape:	Men's Regular, Relaxed and Slim Relaxed is a fuller cut in the hips and thighs, like relaxed jeans. Slim is a more slender cut in the hips and thigh, like straight fit jeans.
	Women's
Inseam:	Even sizes

Pants available in only one or two standard shapes will not be acceptable.

\_\_\_\_\_ Comply          \_\_\_\_\_ Exception

## **OUTER SHELL MATERIAL - PANTS**

The outer shell shall be constructed of TENCATE "**AGILITY™**" featuring **ENFORCE™** Technology Kevlar®/PBO/ Nomex® blend material with an approximate weight of 6.6 oz. per square yard in a twill weave. The shell material must be treated with a durable water-repellent finish that offers resistance to liquid absorption. The color of the garments shall be light gold.

\_\_\_\_\_ Comply          \_\_\_\_\_ Exception

## **THERMAL INSULATING LINER - PANTS**

The thermal liner shall be constructed of 7.4 oz. per square yard Safety Components **GLIDE ICE™ 2L-E89**; one layer of 1.5 oz. and one layer of 2.3 oz. per square yard E-89™ spunlaced Nomex®/Kevlar® aramid blend, quilt stitched to a 60% Nomex® Filament/40% Nomex®/Lenzing spun yarn Face Cloth. The thermal liner shall be sewn to the moisture barrier and shall be independently bound around its perimeter. This provides superior abrasion resistance to the less expensive, less durable "stitch and turn" method. Further mention of "Thermal Liner" in this specification shall refer to this section.

\_\_\_\_\_ Comply          \_\_\_\_\_ Exception

## **MOISTURE BARRIER - PANTS**

The moisture barrier material shall be STEDFAST "**STEDAIR® 4000**" moisture barrier shall be a two-layer laminate comprised of an enhanced Bi-component membrane and Nomex® IIIA woven pajama check substrate. The enhanced Bi-component membrane shall be comprised of an expanded PTFE (polytetrafluoroethylene, i.e.: Teflon®) matrix having a continuous hydrophilic (water-loving) and oliophobic (oil-hating) coating that is impregnated into the matrix. The moisture barrier shall meet and exceed all requirements of NFPA 1971, which includes water penetration resistance, viral penetration resistance, and common chemical penetration resistance. The moisture barrier shall be sewn to the thermal liner at the edges only and bound together with bias-cut neoprene-coated cotton/polyester secured with double stitching. Further mention of "Specified Moisture Barrier" in this specification shall refer to this section.

\_\_\_\_\_ Comply          \_\_\_\_\_ Exception

## **SEALED MOISTURE BARRIER SEAMS**

All moisture barrier seams shall be sealed with a minimum of 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.

\_\_\_\_\_ Comply          \_\_\_\_\_ Exception

## **METHOD OF THERMAL LINER/MOISTURE BARRIER ATTACHMENT FOR PANTS**

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 Ara-Shield® snap fasteners, 2 per leg. The Ara-shield® snap tabs on the shell shall be color coded to corresponding color coded snap tabs in the liner for ease of matching the liner system to the outer shell after inspection or cleaning is completed. There shall be no hook and loop used to close the liner access opening.

\_\_\_\_\_ Comply          \_\_\_\_\_ Exception

## **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.

\_\_\_\_\_ Comply          \_\_\_\_\_ Exception

## **STITCHING**

The outer shell shall be assembled using stitch type #301, #401, #514 and #516. The thermal liners and moisture barriers shall be assembled using stitch type #301, #401, #504, #514, and #516. Major A outer shell structural seams and major B structural liner seams, shall have a minimum of 8 to 10 stitches per inch. All major A seams shall be sewn with ball point needles only. All seams shall be continuously stitched only.

\_\_\_\_\_ Comply          \_\_\_\_\_ Exception

## ***PANT CONSTRUCTION***

### **BODY**

The body of the shell 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. In addition to the four body panels, there shall be a seamless, one-piece crotch gusset. The one-piece gusset allows for less bulk, comfort, and more freedom of movement in this high stress area. The body panels, seam lengths and crotch gusset shall be graded to size to assure accurate fit in a broad range of sizes.

The front body panels will be wider than the rear body panels to provide more fullness over the knee area. This is accomplished by rolling the side leg seams (inside and outside) to the rear of the pant leg beginning at the knee. The slight taper will prevent premature wear of the side seams by pushing them back and away from the primary high abrasion areas encountered on the sides of the lower legs.

\_\_\_\_\_ Comply          \_\_\_\_\_ Exception



## CONTOURED SADDLE

The rise of the rear pant center back seam, including gusset, from the top back of the waistband to where it intersects the inside leg seams at the crotch shall exceed the rise at the front of the pant by approximately 8 inches. The longer rear center back seam provides added length in the seat for mobility without restriction when stepping up, kneeling, or crawling and maintains proper alignment of the knee, without twisting, directly over the kneepads when kneeling and crawling.

\_\_\_\_\_ Comply          \_\_\_\_\_ Exception

## LINER ACCESS OPENING (PANT)

The thermal liner and moisture barrier layers of the pant liner system shall be constructed in such a way as to allow an access opening for interior inspection, service, and replacement. The thermal liner and moisture barrier layers shall be stitched together for security and prevention of inadvertent use of one layer without the other. The liner system shall have a reinforcement material 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 pants.

The liner system of the pant shall incorporate an opening along the back of the waistline for ease in inspecting the inner layers and to facilitate performing the complete Liner Inspection. The thermal liner and moisture barrier shall be individually bound with a neoprene coated bias cut tape and joined together on each of the front panels, along the waistband from the front fly opening to side seam. The back of the liner system will be allowed to remain open with two snaps on either side of the back seam to attach the moisture barrier layer to the thermal liner layer. As described previously, the pant thermal layer system snaps directly to the independent waistband by means of nine snap fasteners. There shall be no hook and loop used to close the liner access opening.

\_\_\_\_\_ Comply          \_\_\_\_\_ Exception

## RETROREFLECTIVE FLUORESCENT TRIM

The pants shall have a stripe of retroreflective fluorescent trim encircling each leg below the knee to comply with the requirements of NFPA #1971 in 3-inch lime/yellow 3M Scotchlite™ COMFORT Trim (Heat applied segmented L/Y borders with silver center).

Bottom of trim band shall be located approximately 3" above the cuff.

\_\_\_\_\_ Comply          \_\_\_\_\_ Exception

## EXTERNAL / INTERNAL FLY FLAP w/ZIPPER

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 right front body panel and shall measure approximately 2 ¾ 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 underside of the outside fly flap shall have a 1½ inch wide piece of FR loop fastener tape quadruple stitched full length along the shell material only; stitching shall not penetrate the moisture barrier insert between the two shell fabric layers to insure greater thermal protection and reduced water penetration. A corresponding strip of 1½ inch wide piece of FR hook fastener tape shall be quadruple stitched to the outside right front body panel securing the fly in a closed position.

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.

\_\_\_\_\_ Comply                      \_\_\_\_\_ Exception

## **CLOSURE**

### **Option 1**

#### **Escape Belt with Wide Belt Loops**

The pant shall have an integrated Escape Belt, which is independently certified as meeting the belt requirements of NFPA 1983, Standard on Life Safety Rope and Equipment for Emergency Services, which shall serve as the exterior primary positive locking closure. The Escape belt shall be comprised of Kevlar® webbing with a hook and an adjustable D-ring closure, graded for the waist size of the pants. The hook and dee closure system of the Escape Belt also serves as the positive front closure for the pants, eliminating redundant closure systems.

The pants shall be equipped with a series of black aramid material belt loops spaced around the waist to accommodate the aramid belt. There shall be three large loops measuring approximately 4 inches high by 4 1/4 inches long and two smaller loops measuring approximately 1/2 inch wide by 3 1/2 inches long. Two of the large belt loops shall be placed on each side of the front of the pant and third on the rear of the waist, centered over the rear seam. The two smaller loops shall be placed on the rear of the pant, behind the side seams.

\_\_\_\_\_ Comply                      \_\_\_\_\_ Exception

### **Option 2**

#### **INTERNAL SEAT HARNESS SERIES 1**

The internal seat harness shall be independently certified to NFPA 1983, Standard on Life Safety Rope and Equipment for Emergency Services as a Class II harness. The harness shall consist of a 1 3/4-inch Kevlar® webbing waist belt, with an anodized aluminum belt buckle that serves as the pants positive closure. Attached to the waist belt are a left and a right 2-inch Kevlar® webbing leg loop, constructed without hardware and graded for the circumference of the pant legs. These loops are designed to be installed on each separate leg of the liner on the inside of the outer shell. Additionally, the harness shall have attachment loops located on either side of the belt buckle, which thread through slots in the outer shell. These loops are designed to receive a carabineer when the system is used as a harness.

\_\_\_\_\_ Comply                      \_\_\_\_\_ Exception

### **Option 3**

#### **INTERNAL SEAT HARNESS SERIES 2**

The internal seat harness shall be independently certified to NFPA 1983, Standard on Life Safety Rope and Equipment for Emergency Services, as a Class II harness. The harness shall consist of a 1 3/4 inches Kevlar® waist belt with an external hardware loop made from 2-inch-wide black Kevlar® webbing. All ends of webbing shall be reinforced with a coated fabric to prevent raveling. The waist belt, graded to waist size, shall secure at the front with a hook and an adjustable D-ring closure. This closure system is also the positive front closure for the pants. Attached to the waist belt are a left and a right 2-inch Kevlar® webbing leg loop, constructed without hardware, and graded for the circumference of the pant legs. The external hardware loop connecting each individual leg loop is constructed from

two combined layers of webbing which form an A-frame and a connection point for the hardware. The leg loops shall be secured to the waist belt by means of a slot formed by an opening in the stitching combining the layers. This construction allows the leg loops to rest lower on the legs for less restriction when the harness is not loaded, but with the ability to snug up higher against the body when the harness is loaded. The slot openings also allow the waist belt to be adjusted in size with the leg loops properly positioned between the front belt loops and the front harness closure. The right and left leg loops shall be installed between the outer shell fabric of the pants and the pants liner, and the strap from each leg loop shall exit the outer shell under the front belt loops on each side of the pants front closure. The center of the hardware loop shall be sewn to narrow the width at its center and reinforced on the outside with a layer of Ara-Shield® material. Sewn to the inside of the center of the hardware loop shall be a 1-inch webbing, which forms a ring to secure the pin of the specified ladder hook. The A-frame hardware loop shall be sized to permit the ladder hook to be secured to the keeper strap located on the front left side of the pants. This hardware loop must be positioned so as to allow the use of the ladder hook without deploying the escape system, and to accommodate donning and doffing of the pants with all hardware installed. A D-ring with a sliding bar shall be attached to the hardware loop to connect to the escape system in the right pocket.

\_\_\_\_\_ Comply      \_\_\_\_\_ Exception

### **ARTICULATED KNEE**

The outer shell of the pant legs shall be constructed with horizontal pleats in the knee area with corresponding darts in the liner. To provide increased freedom of movement and maximum flexibility, extra material is built into the knee area and this additional fullness is contained by stitching down the pleats on the inside of the shell. The knee reinforcement shall be installed proportionate to the pant inseam, in such a manner that it falls in an anatomically correct knee location.

The thermal liner shall be constructed with four darts per leg in the front of the knee. Two shall be located above the knee (one on each side) and two shall be located below the knee (one on each side). On the moisture barrier, the system shall consist of two darts, rather than pleats, to allow added length in the under knee. 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.

\_\_\_\_\_ Comply      \_\_\_\_\_ Exception

### **LINER KNEE THERMAL ENHANCEMENT**

A minimum of one additional layer of specified thermal liner and one additional layer of moisture barrier material, measuring a minimum of 9 inches by 11 inches, shall be sewn to the knee area of the liner system for added CCHR protection and increased thermal insulation in this high compression area. 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. The thermal enhancement layer shall have finished edges by means of overedging. Raw or unfinished edges shall be considered unacceptable. Thermal scraps shall not be substituted for full-cut fabric padding. Smaller CCHR reinforcements shall not be considered acceptable since they provide far less area of coverage.

\_\_\_\_\_ Comply      \_\_\_\_\_ Exception

## CATHEDRAL KNEE REINFORCEMENTS

The knee area shall be reinforced with black Ara-Shield® material.

The cathedral shaped knee reinforcement shall be centered on the leg to ensure proper coverage when bending, kneeling, and crawling. The knee reinforcements shall measure a minimum of approximately 7 inches wide by 12 inches high at the highest point and shall be double stitched to the outside of the outer shell in the knee area for greater strength and abrasion resistance. The articulated cathedral knee reinforcement shall be cut and stitched to the shell in such a way that there shall be an arch at the top of the reinforcement, tapering down the sides of the reinforcement with a squared off bottom. Knee reinforcements of a smaller size do not provide the same protective coverage and shall be considered unacceptable.

The lower edge of the Ara-Shield® knee reinforcement shall be turned under so that the lower row of stitching is covered and protected from abrasion.

\_\_\_\_\_ Comply      \_\_\_\_\_ Exception

## PADDING UNDER KNEE REINFORCEMENTS

Padding for the knees shall be accomplished with one layer of flame-resistant neoprene coated cotton/poly material and one layer of quilted aramid batt. Both layers of padding shall be sandwiched between the shell and the knee reinforcement layers

\_\_\_\_\_ Comply      \_\_\_\_\_ Exception

Padding for the knees shall be accomplished with one layer of foam, sandwiched between the thermal liner and moisture barrier. The placement of Silizone® padding on the thermal versus the shell reduces bulk in the shell and also serves to protect the padding from abrasion and other wear issues that the outer shell is subject to. Pants with Silizone® knee padding on the shell as opposed to on the liner, do not provide the same level of bulk reduction and abrasion resistance and are not recommended.

\_\_\_\_\_ Comply      \_\_\_\_\_ Exception

## EXPANSION (BELLOWS) POCKETS (Left Pocket)

One 2 inch deep by 10 inch wide by 10-inch-high bellows pocket shall be placed over the outer leg seams at thigh level. The pocket shall be sewn to the pant with two rows of lock stitching and shall provide two aluminum eyelets, installed at the bottom of the pocket, for water drainage. *The pocket shall be reinforced with an additional layer of Kevlar material sewn to the inside.* The pocket flap shall be rectangular in shape, constructed of two layers of outer shell material and double stitched to the outer shell. Two pieces of 1½ inch by 3-inch FR hook fastener tape shall be installed on the inside of the pocket flap vertically on each end of the flap. Two piece of corresponding 1½ inch by 3-inch FR loop fastener tape shall be installed horizontally on the outside of each end of pocket near the top and positioned to engage the hook fastener tape. Each pocket flap shall be reinforced with backtacks at the uppermost corners.

\_\_\_\_\_ Comply      \_\_\_\_\_ Exception

## 6 PACK TOOL COMPARTMENT

A tool pocket constructed of Kevlar® material and measuring approximately 8 inches high by 9 ½ inches wide will be installed on the inside of the left 2 inch by 10 inch by 10-inch pocket with double stitching. The front compartments

shall measure approximately 6 ½ inches high and the rear compartments shall measure approximately 7 ½ inches high. Two separate rows of stitching will divide the tool pocket into six compartments, three in front and three in back. Each compartment shall measure a minimum of 2 ¾ inches wide and set side-by-side.

\_\_\_\_\_ Comply                      \_\_\_\_\_ Exception

**ESCAPE SYSTEM POCKET (Right Pocket)**

One 2 inch deep by 7 inches wide by 9 inches high expansion pocket shall be placed over the outer leg seam at thigh level to accommodate storage and deployment of a **Petzl Exo System**. The pocket shall be sewn to the pant with two rows of lock stitching and shall provide two drain eyelets, installed at the bottom of each pocket, for water drainage. The pocket shall be reinforced with a layer of polymer coated aramid from the bottom of the pocket extending approximately five (5) inches. The aramid shall form an angled pocket on the front of the pocket with stitching down the middle of the reinforcement to fit a **Crosby style hook**. The pocket flap shall be rectangular in shape and measure approximately 8½ inches by a minimum of 10½ inches, constructed of two layers of outer shell material and double stitched to the outer shell. The lower edge of the flap shall have foam padding stitched between the two layers to allow a better grip on the flap. Two pieces of 1½ inch by 9-inch FR hook fastener tape shall be installed on the inside of the pocket flap (one on each side). Two pieces of 1 inch by 5 inches FR loop fastener tape shall be installed on the front of the pocket (one on each side). The upper left side of the pocket shall angle downward to allow a loop constructed of a double layer of outer shell material to be installed above the side angled edge of the pocket. This loop will hold a smaller carabiner inside the pocket. A self-material cradle flap measuring approximately 5 inches will be installed 1 inch down inside the pocket. The cradle flap will attach to the front of the pocket with FR hook and loop fastener tape measuring 1 inch by a minimum of 5 inches. This cradle flap shall support the hardware above the rope in the lower portion of the pocket.

\_\_\_\_\_ Comply                      \_\_\_\_\_ Exception

**EXPANSION POCKET REINFORCEMENTS**

The lower half of the expansion pockets shall be reinforced on the outside with black polymer aramid material.

\_\_\_\_\_ Comply                      \_\_\_\_\_ Exception

**PANT CUFF REINFORCEMENTS**

The cuff area of the pants shall be reinforced with black polymer aramid 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. This independent cuff provides an additional layer of protection over a hemmed cuff. Pants that are turned and stitched at the cuff, as opposed to an independent cuff reinforcement, do not provide the same level of abrasion resistance, and shall be considered unacceptable.

\_\_\_\_\_ Comply                      \_\_\_\_\_ Exception

**PADDED RIP-CORD SUSPENDERS & ATTACHMENT**

On the inside waistband shall be attachments for the standard "H" style "Padded Rip-Cord" suspenders. There will be four attachments total – 2 front, 2 back. The suspender attachments shall be constructed of black Ara-Shield® material measuring approximately ½ inch wide by 3-inches long. They shall be sewn in a horizontal position on the ends only to form a loop. The appearance will be much like a horizontal belt loop to capture the suspender ends.

A pair of "H" style "Padded Rip-Cord" suspenders shall be specially configured for use with the pants. The main body of the suspenders shall be constructed of 2-inch-wide black webbing straps. The suspenders shall run over each shoulder to a point approximately shoulder blade high on the back, where they shall be joined by a 2-inch-wide horizontal piece of webbing measuring approximately 8-inches long, forming the "H". This shall prevent the suspenders from slipping off the shoulders. The shoulder area of the suspenders will be padded for comfort by fully encasing the webbing with aramid batting and wrap-around black aramid.

The rear ends of the suspenders will be sewn to 2-inch-wide elasticized webbing extensions measuring approximately 8-inches in length and terminating with thermoplastic loops. The forward ends of the suspender straps shall be equipped with specially configured black powder coat non-slip metal slides with teeth. Through the metal slides will be the 9-inch lengths of strap webbing "Rip-Cords" terminating with thermoplastic loops on each end. Pulling on the "Rip-Cords" shall allow for quick adjustment of the suspenders.

Threaded through and attached to the thermoplastic loops on the forward and rear ends of the suspenders will be black aramid suspender attachments incorporating two snap fasteners. The aramid suspender attachments are to be threaded through the suspender attachment loops on the inside waistband of the pants. The aramid suspender attachments will then fold over and attach to themselves securing the suspender to the pants.

\_\_\_\_\_ Comply                      \_\_\_\_\_ Exception

**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

**THIRD PARTY TESTING AND LISTING PROGRAM**

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

\_\_\_\_\_ Comply                      \_\_\_\_\_ Exception

**LABELS**

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

- Compliance to NFPA Standard #1971
- Underwriters Laboratories classified mark
- Manufacturer's name
- Manufacturer's address
- Manufacturer's garment identification number
- Date of manufacture
- Size

\_\_\_\_\_Comply                      \_\_\_\_\_Exception

**ISO CERTIFICATION / REGISTRATION**

The protective clothing manufacturer shall be certified and registered to ISO Standard 9001 to assure a satisfactory level of quality. Indicate below whether the manufacturer is certified and registered by checking either "Yes" or "No" in the space provided.

\_\_\_\_\_Yes                      \_\_\_\_\_No

**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

**HOOK AND LOOP SUPPORT PROGRAM**

Support program shall cover hook or loop tape that has begun to fray or otherwise degrade from normal wear. This program shall remain in effect for a period of five years from the original date of manufacture of the garment. This support program shall cover the repair or replacement, without charge, of any hook and/or loop on the garments produced by the manufacturer providing the garments are otherwise serviceable.

This support program does NOT cover damage from fire, heat, chemicals, misuse, accident, or negligence. Failure to properly care for garments will serve to void this support program.

\_\_\_\_\_Comply                      \_\_\_\_\_Exception

**SIZING BY VENDOR:**

Sizing samples shall be on hand for use when sizing. The vendor shall be available to perform all sizing requirements within 96 hours of written notice. Measuring with a tape measure is not acceptable.

\_\_\_\_\_Comply                      \_\_\_\_\_Exception

**GARMENT TRAINING AND SUPPORT**

OSHA requires employees be trained on the capabilities and limitations of their Personal Protective Equipment. The selected vendor shall provide the following:

On-site care and maintenance training shall be provided by the manufacturer. Training shall be in compliance with NFPA 1851, current edition, at the conclusion of which each participant shall receive a certificate of completion.

An on-site OSHA mandated training class on the Knowing the Limits of Your PPE shall be provided at no charge. The training shall include structural firefighting coat, pant, and boots.

\_\_\_\_\_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.

Details and specifications are subject to change as necessary, without notification.