CITY OF AURORA
BID PROPOSAL FORM
19-71
PROTECTIVE GEAR
FOR AURORA FIRE DEPARTMENT

I/WE propose to furnish the work shown on the attached Specifications to Bid at the following delivered price. Vendors may choose to submit a bid on all items or on selected items only.

Summary of Page 1 Appendix E	2020 TOTAL NET BID PRICE
1. Bunker Coat: Globe "Tails", or evaluated equal	58750.00
2. Bunker Pants: Globe (compatible with "Tails" coat), or evaluated equal	46000.00
3. Fire Boots, Globe Shadow 14" fire boot, pull-on, or evaluated equal	14440.00
4. Fire Helmet: MSA Cairns 880 Traditional Fire Helmet with Bourke Eye Shield Option, or evaluated equal	6225.00

Discount Percentage if Awarded All Items: 0 %

*These items must be compatible with protective gear identified in the technical specifications.

Contract extension year, percentage mark-up per item, for:

2021 5% %

2022 5% %

All shipments are to be freight prepaid and shipped to the Aurora Fire Department, 75 N. Broadway, Aurora, IL 60505. Vendor to mark all packages as to their contents and list all items on the packing slip, including employee name.

Delivery is of considerable importance. Successful bidders shall agree to commence shipment of items as follows:

Items #1 and #2: within six (6) weeks after receipt of order. (In emergency situations, defined by the Aurora Fire Department as contamination, excessive emergency-related damages, and recruit classes, the vendor shall agree to provide, at no extra cost, delivery within four (4) weeks.

Items #3 and #4: within two (2) weeks after receipt of order.

BID SUBMITTED BY

COMPANY Air One Equipment, Inc.

BIDDER'S CERTIFICATION

I/We hereby certify that:

A. A complete set of bid papers, as intended, has been received, and that I/We will abide by the contents and/or information received and/or contained herein.

B. I/We have not entered into any collusion or other unethical practices with any person, firm, or employee of the City which would in any way be construed as unethical business practice.

C. I/We have adopted a written sexual harassment policy which is in accordance with the requirements of Federal, State and local laws, regulations and policies and further certify that I/We are also in compliance with all equal employment practice requirements contained in Public Act 87-1257 (effective July 1, 1993) and 775 ILCS 5/2-105 (A).

D. I/We operate a drug free environment and drugs are not allowed in the workplace or satellite locations as well as City of Aurora sites in accordance with the Drug Free Workplace Act of January, 1992.

E. The Bidder is not barred from bidding on the Project, or entering into this contract as a result of a violation of either Section 33E-3 or 33E-4 of the Illinois Criminal Code, or any similar offense of "bid rigging" or "bid rotating" of any state or the United States.

F. I/We will abide by all other Federal, State and local codes, rules, regulations, ordinances and statutes.

COMPANY NAME Air One Equipment, Inc.

ADDRESS 360 Production Drive

CITY/STATE/ZIP CODE South Elgin, IL 60177

NAME OF CORPORATE/COMPANY OFFICIAL Sandra M. Frey
PLEASE TYPE OR PRINT CLEARLY

TITLE President

AUTHORIZED OFFICIAL SIGNATURE Sandra M. Frey

DATE 10/28/2019

TELEPHONE (847) 289-9000

FAX No. (847) 289-9001

Subscribed and Sworn to
Before me this 28th day
of October, 2019

Notary Public

OFFICIAL SEAL
MARTIN J SVIHRA
NOTARY PUBLIC - STATE OF ILLINOIS
MY COMMISSION EXPIRES:07/25/20

STATE OF ILLINOIS)
) ss.
County of Kane)

BIDDER'S TAX CERTIFICATION

(BIDDER'S EXECUTING OFFICER), being first duly sworn on oath, deposes and states that all statements made herein are made on behalf of the Bidder, that this despondent is authorized to make them and that the statements contained herein are true and correct.

Bidder deposes, states and certifies that Bidder is not barred from contracting with any unit of local government in the State of Illinois as result of a delinquency in payment of any tax administered by the Illinois Department of Revenue unless Bidder is contesting, in accordance with the procedures established by the appropriate statute, its liability for the tax or the amount of the tax, all as provided for in accordance with 65 ILCS 5/11-42.1-1.

DATED this 28TH day of OCTOBER, 2019.

By Sandra M. Frey
(Signature of Bidder's Executing Officer)

SANDRA M. FREY
(Print name of Bidder's Executing Officer)

PRESIDENT / SECRETARY
(Title)

ATTEST/WITNESS:

By David F Frey

Title VICE PRESIDENT

Subscribed and sworn to before me this 28th day of October, 2019.

Martin J Svihra
Notary Public

(SEAL)

OFFICIAL SEAL
MARTIN J SVIHRA
NOTARY PUBLIC - STATE OF ILLINOIS
MY COMMISSION EXPIRES:07/25/20

GENERAL PROVISIONS

PURPOSE AND SCOPE

This specification is intended to define the minimum requirements for bunker clothing for firefighters. In the absence of comment on particular points, industry standard practice should be presumed to prevail. Workmanship and material are to be first quality throughout. Any exceptions to specifications must be clearly spelled out at time of bid. In the absence of comment on a specific point, bidder will be required to furnish a totally compliant garment. Taking a blanket exception shall not be acceptable.

Does your bid comply with all aspects of this section? Yes ✓ No ____

Comments: _____

_____

CERTIFICATION & WARRANTY

The manufacturer of the protective clothing being bid must certify that the garments being offered meet or exceed all requirements of NFPA #1971 (the most current edition). Manufacturer must also list and label this product with Underwriter's Laboratories as the third party certification organization prescribed in NFPA #1971 (the most current edition). Certification shall include by definition the areas of limited protection resistance from blood borne pathogens as follows: Coat shall provide limited protection to the upper torso including the arms but excluding the head and neck interface area and the hand and wrist interface area. The pant shall provide limited protection resistance to the lower torso including the legs but excluding the foot and ankle interface area. The coat and pant overlap shall provide limited protection resistance to the coat/pant interface area. When utilized with the appropriate gloves, helmets, and boots; the coat with chinstrap unfolded and pant design shall also be capable of providing certified blood borne pathogen protection to the neck, wrist and ankle interface areas. MANUFACTURER must also include a written statement of lifetime warranty terms and conditions with the bid package. Manufacturer must provide upon request, third party certification of the required interface blood borne pathogen resistant capability.

Does your bid comply with all aspects of this section? Yes ✓ No ____

Comments: _____

_____

LABELING REQUIREMENTS

Labels shall be permanently and integrally printed onto breathable materials that meet all the requirements for labels of NFPA Standards 1971 (the most current edition), in addition to the label (as provided in the garment) shall meet the NFPA vertical flammability tests. The garment shall be clearly labeled to fully identify the material content of every layer-outer shell, moisture barrier, and thermal liner.

In addition, each separable layer of garment shall be labeled with the FEMSA (copyrighted) warning label in an obvious location.

FOR LIABILITY REASONS, ALL FABRICS AND CLOTHING MUST BE MANUFACTURED IN THE UNITED STATES OF AMERICA.

Does your bid comply with all aspects of this section? Yes ✓ No _____

Comments: _____

_____

CARE INSTRUCTIONS

Successful manufacturer to provide the FEMSA (copyrighted) Official User Information Guide. This material to be packaged with each garment along with a summary sheet describing garment specifications, sizing and production details. This written information is to be in complete compliance with all NFPA guidelines, and to reference same. Topics to include but not necessarily be limited to: User Cautions, Cleaning Instructions, doffing and donning instructions, maintenance criteria, repairs/customer changes, warranty information, size, fit and protective overlap requirements, safety considerations, storage conditions, decontamination considerations, retirement considerations, etc.

Does your bid comply with all aspects of this section? Yes ✓ No _____

Comments: _____

_____

TRACEABILITY PROGRAM

Successful bidding manufacturer to have in place a computer maintained traceability program that allows the assignment of a production control number to each garment and traceability from that production control number down to individual bolts of cloth used in all three layers of the garment composite construction. Production Control # to be recorded on garment label and on another protected area of garments.

Does your bid comply with all aspects of this section? Yes ✓ No _____

Comments: _____

_____

PATENT CONSIDERATIONS

Seller agrees to defend Buyer at Seller's own expense, in all suits, actions or proceedings in which Buyer is made a defendant for actual or alleged infringement of any United States of America or foreign letters patent resulting from Buyer's use of the goods purchased as a result of this Invitation to Bid. Seller further agrees to pay and discharge any and all judgments or decrees, which may be rendered in any such suit, action or proceedings against Buyer.

Seller agrees to indemnify and hold harmless the Buyer from any and all licenses, royalty and proprietary fees or costs, including legal costs which may arise out of Buyer's purchase and use of goods supplied by the seller.

It is expressly agreed by Seller that these covenants are irrevocable and perpetual.

Does your bid comply with all aspects of this section? Yes ✓ No ____

Comments: _____

_____

FLAMMABILITY OF CONSTITUENT MATERIALS

Label, bindings, hang up loops and production labels shall be tested for flame resistance and shall comply with NFPA 1971 (the most current edition) vertical flammability testing.

Does your bid comply with all aspects of this section? Yes ✓ No ____

Comments: _____

_____

SELF BINDING

Liner and moisture barrier to be stitched together and turned then top stitched to create a self binding. The extra bulk of separate binding material is specifically disallowed.

Does your bid comply with all aspects of this section? Yes ✓ No ____

Comments: _____

_____

THREAD

All thread to be Nomex of minimum TEX 50 24/4 size. Lighter colored garments and trim areas to feature yellow colored thread while black garments feature black thread.

Does your bid comply with all aspects of this section? Yes ✓ No ____

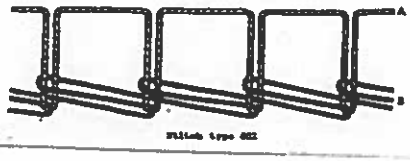
Comments: _____

_____

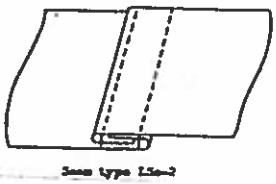
STITCH METHODS

Major A and B Seams:

All major A & B seams (as defined by NFPA Standard #1971/current edition) shall be doubled stitched, double feld throughout all three layers (outer shell, moisture barrier and thermal liner) with the specified Nomex thread. Detailed stitch and seam type requirements follow:



Stitch type 401 (i.e., double locked stitch) as defined by Fed. Std. No. 751a (diagram above also drawn from that source) to be used on all Major A & B seams (in all three garment layers)



Seam type Lsc-2, modified to ensure both stitch lines penetrate all layers of cloth at joining, as otherwise defined by Fed. Std. 751a (original diagram modified above, also drawn from that source) to be used on all Major A & B seams (in all three garment layers).

All moisture barrier seams shall be tape sealed to meet NFPA water penetration requirements.

Does your bid comply with all aspects of this section?

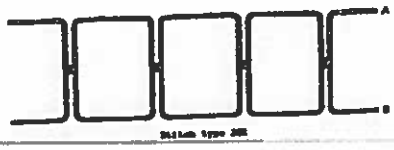
For Shell:	Yes ✓	No ____
For Moisture Barrier	Yes ✓	No ____
For Thermal Lining	Yes ✓	No ____

Comments: _____

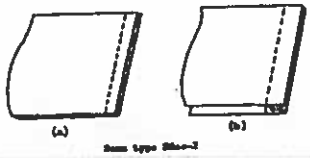
_____

Minor Seams

Minor seams, such as collar, shields and mated hems, also to be stitched with the specified Nomex thread; detailed stitch and seam type follow:



Stitch type 301 (i.e., lock stitch) as defined by Fed. Std. No. 751a (diagram above also drawn from that source) to be used for all minor seams.



Seam type Ssae-2 (shown before and after required turning) shall be used for all Minor Seaming (diagram above drawn from Fed. Std. 751a).

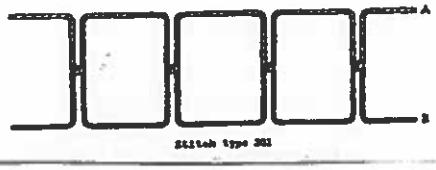
Does your bid comply with all aspects of this section? Yes ✓ No ____

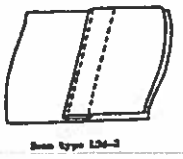
Comments: _____

_____

Pockets

Exterior garment pockets and garment labels shall be stitched per the detailed requirements outlined below:





Stitch type 301 (i.e., lock stitch) as defined by Fed. Std. No. 751a (diagram above also drawn from that source) to be used for all pockets.

Seam type Lsd-2 (diagram above drawn from Fed. Std. No. 751a) shall be used for all exterior pocketing.

NOTE: Interior pocketing should feature same construction details but reinforced single stitch line (seam type Lsd-1) may be substituted.

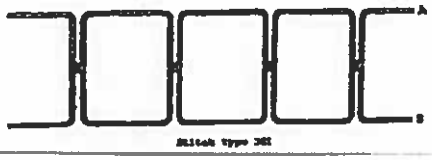
Does your bid comply with all aspects of this section? Yes ✓ No ____

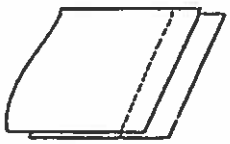
Comments: _____

_____

Trim And Warning Labels

Trim stitching shall be detailed below:





Stitch type 301 (i.e., lock stitch) as defined by Fed. Std. No. 751a (diagram above also drawn from that source) to be used for all Trim.

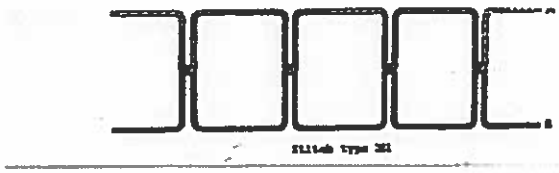
Seam type Ssbd-1 (diagram above drawn from Fed. Std. No. 751a) shall be used for all trim attachment.

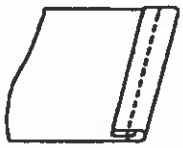
Does your bid comply with all aspects of this section? Yes ✓ No ____

Comments: _____

_____

Single Layer Hemming & Finishing





Stitch type 301 (i.e., lock stitch) as defined by Fed. Std. No. 751a (diagram above also drawn from that source) to be used for all single layer hemming and finishing.

Seam type Efb-1 (diagram above drawn from Fed. Std. No. 751a) shall be used for all single layer hemming or finishing.

Does your bid comply with all aspects of this section? Yes ✓ No ____

Comments: _____

_____

SIZING

Garments shall be available in custom coat chest (in 2" increments), sleeve (in 1" increments), and length (in 1" increments) and pants waist (in 2" increments) and inseam (in 1" increments) sizes. A full range of woman's sizing (on woman's patterns) will also be available. Small, medium, large, and extra large sizing and women's garments cut to men's patterning will not be considered acceptable since proper fit facilitates mobility and minimizes stress. There shall be no additional charges allowed for oversized or customer fitting, including sleeve lengths.

Does your bid comply with all aspects of this section? Yes ✓ No ____

Comments: _____

_____

POINTS OF STRESS

All points of stress shall be reinforced with sturdy bar tacks. Rivets will not be considered acceptable because of the possibility of rust and electrical or heat conduction.

Does your bid comply with all aspects of this section? Yes ✓ No ____

Comments: _____

_____

HIGH TEMPERATURE, NFPA CERTIFIED MATERIAL REINFORCEMENTS

Reinforcements to be provided at cuffs and pockets and shall meet the requirements of NFPA #1971/current edition. Standard placement will be utilized unless specified otherwise by purchaser (any special instructions are noted in custom option section of this specification). Purchaser has determined the type of reinforcement material for their own use and purposes. Therefore, alternate or substitute reinforcement materials other than those specified will not be considered.

Does your bid comply with all aspects of this section? Yes ✓ No ____

Comments: _____

_____

APPLICABLE DOCUMENTS

The following documents and edition in effect on the date of invitation for bid shall form a part of this specification to the extent specified herein.

STANDARDS:

NFPA 1971/LATEST EDITION	Firefighters Protective Apparel
29 CFR 1910.156	Occupational Safety and Standards: Fire Brigades
FED-STD-191-A	Textile Test Methods
FED-STD-311	Leather, Methods of Sampling and Testing
FED-STD-751	Stitches, Seams and Stitching

SPECIFICATIONS:

MIL-B-286	Button, Tack and Tack Button
MIL-C-10750	Coat, Firemen's
MIL-C-43774	Cloth, Aramid, Plain or Rip-Stop Weave
MIL-F-10884	Fasteners, Snap
MIL-T-44100	Fastener Tapes, Hook and Pile, Synthetic
MIL-T-83193	Thread, Aramid, Spun
MIL-T-3091	Trousers, Firemen's
GRF-KKL-271	Leather, Cattlehide, Strap Vegetable Tanned

Does your bid comply with all aspects of this section? Yes ✓ No ____

Comments: _____

_____

REPAIRS/ALTERATION SUPPORT

Successful bidding manufacturer to provide, free of charge, reasonable quantities of NFPA certified thread, materials, etc., to allow the department to manage their ongoing maintenance efforts. Also, successful bidding manufacturer to have on-call at no charge, during normal business working hours, a liaison for the repair department to assist the Fire Department on a telephone consultation basis, on any maintenance/repair questions that arise. Additionally, successful bidding manufacturer will agree to expedite, on their cost only basis, any repairs required to be done at the manufacturers plant, rather than in department, over the life of the contract.

Does your bid comply with all aspects of this section? Yes ✓ No ____

Comments: _____

_____

ITEM #1

DESCRIPTION: COAT

To avoid liability and interface problems, it is the intent of the purchaser that coats and pants be procured from the same manufacturer and be manufactured in the U.S.A.

PATTERNING CONCEPT

Garments shall feature a tailored three piece body (one piece back) construction throughout the outer shell, moisture barrier and thermal liner. One piece garments (either all layers or some layers) will not be considered acceptable since they cannot be tailored to contours. Similarly, garments with seams in mid back will not be considered acceptable because of backbone irritation that can occur with SCBA use. To facilitate individual tailoring needs, the major A & B seams joining the one-piece back to the right and left front body panels (outer shell and all interior layers) shall be located at the most lateral position when the coat is laid flat for inspection.

Does your bid comply with all aspects of this section? Yes ✓ No ____

Comments: _____

_____

PATTERNING REQUIREMENT

To assure maximum freedom of movement and reduce kinetic resistance with minimum garment weight and bulk; coat patterning should include the following features:

- Degree of slope on shoulders to be no more than 20%.
- Hydraulic Butterfly sleeve patterning with 85 degree Lift Up Release Action shall be provided to minimize coat hem rise.
- Coat hem rise with overhead reach of both arms to not exceed 4" at maximal extension on properly fitted garments.
- Swivel Action Reversible sleeve attachment to minimize shoulder lift and allow full 360 degree freedom of movement.

- Cuff shell/liner retraction shall not exceed ½" when both arms are raised overhead to eliminate wrist exposure.
- 10" chest over sizing shall be provided.
- Reach (measured with coat laying flat on back and standard length sleeves extended to sides) to be provided as detailed below:

Chest Size	Standard Reach
40"	66"
42"	68"
44"	70"
46"	71"

- Coat sweep measurements must be consistent or slightly negative at the bottom.

Does your bid comply with all aspects of this section? Yes ✓ No _____

Comments: _____

_____

LINER ATTACHMENT

The completed liner/moisture barrier assembly shall attach by means of four (4) evenly spaced glove snaps to each outer shell front facing to reduce weight and bulk/stiffness. To provide continuous moisture/blood borne protection at the front, the liner shall be positioned so it is sandwiched between an outer facing breathable pathogen shield and inside facing. The use of zippers or Velcro in this area shall not be allowed due to their added weight, bulk and stiffness.

Liner sleeves shall be attached at the outer shell cuff by means of snaps and 2 sets of Nomex tabbing strips per cuff.

To provide continuous moisture/blood borne pathogen protection at the neck, the liner shall be positioned so it is sandwiched between an outer facing pathogen shield, and inside facing of the specified outer shell material folded over and both sewn in at the neck seam. Attachment shall be by means of four (4) glove snaps that penetrate ONLY the outside layer of the innermost facing, so that metal contact at the wearers' neckline is completely eliminated.

Does your bid comply with all aspects of this section? Yes ✓ No _____

Comments: _____

_____

LINER INSPECTION DEVICE

Garment shall feature an opening in attaching stitching between liner and moisture barrier which will close and open via hook and pile tape. The opening to allow total liner/moisture barrier inversion so that the moisture barrier film, seam sealing, and thermal liner fill can be fully and effectively inspected.

Does your bid comply with all aspects of this section? Yes ✓ No _____

Comments: _____

_____

COAT LINER LABEL

Shall be integrally printed on FR Cotton Indura and lock stitched to the inside right body panel in a fashion to provide an inside liner pocket.

Does your bid comply with all aspects of this section? Yes ✓ No ____

Comments: _____

_____

COAT SHELL LABEL

Shall be integrally printed on FR Cotton Indura and lock stitched to the shell along one side of the label at the collar seam.

Does your bid comply with all aspects of this section? Yes ✓ No ____

Comments: _____

_____

COLLAR

Collar layered construction, consisting of a layer of a moisture/pathogen barrier material and another layer of NFPA approved insulating material, sandwiched between two layers of specified outer shell material and at least 3" high. The design shall incorporate in the patterning a natural contour that will allow proper fit and performance in the standing (upright) or stowed position. There shall be no vertical or horizontal seams or stitching in the body of the collar, since this may weaken collar integrity. Left outside of collar to have a sewn piece of 3"x5" Velcro hook to insure maximum adjustability when engaging chinstrap/collar closure.

Does your bid comply with all aspects of this section? Yes ✓ No ____

Comments: _____

_____

CHINSTRAP

Chinstrap layered construction identical to that of the collar configuration listed in the previous paragraphs. Chinstrap shall be 8" long across the top corners, 11" long across the bottom corners, and be of a longitudinally folding design so that when unfolded it offers a height of approximately 5" and while folded a 3- ¾" height, 4" vertical height measured at the center. The bottom edge shall incorporate extra material in the shape of a crescent to insure full interface closure of the collar, chinstrap and coat front closure/stormflap in order to pass the whole garment water tight integrity test. The leading underside edge of the chinstrap shall have a vertical strap of 1.5" Velcro pile to insure closure and passage of the whole garment water tight integrity test.

Does your bid comply with all aspects of this section? Yes ✓ No ____

Comments: _____

_____

HANG UP LOOP

80 pound tear strength hang up loop to the interior provided at collar. Loop to be constructed of triple layers of the specified outer shell material lock stitched to the coat. Webbing or substituting other than the specified outer shell material will not be considered acceptable because of lower relative strength and wearlife.

Does your bid comply with all aspects of this section? Yes ✓ No ____

Comments: _____

_____

SLEEVES

Extra full cut one piece outer shell set in sleeves with built in bellows for maximum freedom. To reduce the chances of possible top seam failure in that high thermal exposure area the outershell sleeve's only Major A seam shall follow the underside of the arm and shall not cross over the outside of the elbow joint. Sleeve seam and sleeve attachment to coat body in all layers shall be 100% double feld and double stitched for maximum strength (i.e., a Major A seam requirement, as defined previously in this specification).

Does your bid comply with all aspects of this section? Yes ✓ No ____

Comments: _____

_____

EXTERNAL WRISTLET

100% Nomex knit outer wristlet to be mounted to the end of the outer shell sleeve to prevent debris movement up the sleeve (between outer shell and moisture barrier/thermal liner assembly).

Does your bid comply with all aspects of this section? Yes ✓ No ____

Comments: _____

_____

INNER WRISTLET & WATERWELL

100% Nomex knit inner wristlet protected by a flame and moisture resistant waterwell must be featured on every garment. Longer inner wristlet incorporating a Nomex webbing thumb attachment loop shall be sewn to the thermal liner sleeve end (not to the outer shell). A specified moisture barrier waterwell with an elastic gather shall be sewn to the moisture barrier sleeve end with all seams sealed to allow maximum channeling of water away from inside the moisture barrier/thermal liner sleeve end and pass the whole garment water tight integrity test. Thermal liner/wristlet shall be bar tacked and seam sealed at the junction of the moisture barrier sleeve to waterwell seam to prevent liner pull out. This inner waterwell assembly shall be interface capable with the appropriate glove to provide wrist protection during the liquid tight integrity test.

Does your bid comply with all aspects of this section? Yes ✓ No _____

Comments: _____

_____

FRONT CLOSURE PROTECTIVE OVERLAP

Two inch wide panels of breathable moisture/pathogen barrier (film facing outward) and specified thermal liner material shall be provided at coat front closure facings to preclude any type of break in the protective envelope. The entire circumference of a closed coat will consist of specified shell, moisture barrier and thermal liner materials. The inside trailing edge of each 2" wide inner panel shall have the breathable moisture/pathogen material wrapped around the edge by ½" to create an anti-wick guard to prevent soak through during the required shower test. An additional layer of 6" wide breathable moisture/pathogen barrier material (film facing outward) shall be sewn between the 2" wide panels and outer shell coat body for the entire length of coat front in a fashion to prevent liquid entry during the whole garment water tight integrity test.

Does your bid comply with all aspects of this section? Yes ✓ No _____

Comments: _____

_____

STORM SHIELD

Double thickness outer shell material exterior mounted storm shield to be provided. Closure must be either inner or outer Velcro and a protective closure (i.e., hooks & dees or zipper).

NOTE: When an external hook and dee closure is specified in custom features, the leading edge of the storm flap shall be internally reinforced with minimum 2" wide additional layer of NFPA certified material.

Does your bid comply with all aspects of this section? Yes ✓ No _____

Comments: _____

_____

POCKETS

All exterior specified pockets and flaps are reinforced at all stress points with bartack stitching. All pockets will be reinforced with an extra layer of NFPA certified outer shell, moisture barrier, or reinforcement material for extra durability. All pocket closures to be made with 1.5" minimum width Velcro.

Does your bid comply with all aspects of this section? Yes ✓ No ____

Comments: _____

_____

DESIGN CONCEPT (Styling)

Tailed styling designed to allow 9" frontal and 15" rear overlap with traditional waist high pants.

MATERIALS

Coat to be constructed in the following multi-layer configuration:

OUTER SHELL: 7.5oz 40% Nomex, 60% Kevlar treated with shelltite for maximum water repellency. (color: black)

MOISTURE BARRIER: Crosstech 1.2 oz. Film on a 3.3 oz. Nomex Plainweave substrate

THERMAL LINER: 2-Layer Spunlace/Meta Aramid Facecloth (6.8 oz.). Blue in color and shall provide a minimum of 38.7 TPP's before washing, 48 TPP's after five washings.

Does your bid comply with all aspects of this section? Yes ✓ No ____

Comments: _____

_____

CUSTOM OPTIONS TO BE PROVIDED

Std- coat cuffs, PBO Millenia black, double stitched

Std-substitute positive closure articulating rapid rescue strap in new coat for articulating rapid rescue strap

Std- Foldover Comfort Chinstrap

Std- Inspection Port Liner

Std- Liner detachable

Std- Liner label pocket

Std- Nomex – Tabbed long wristlet

New York-2 trim – Lime Reflexite, double stitched

Back Patch – Advanced black as specified.

AURORA six –3" sewn letters – Lime Reflexite

LAST NAME of firefighter on tail of coat in 3" sewn letters – Lime Reflexite

3" coat collar available

Chicago closure – 7" Shield – 2" hook and pile ext. with hook and D interior.

Dead Air Panels Extended – coat

X-large Half Height Bellow Pockets lined with Kevlar, flap closure with three strips of double stitched Velcro

Radio Pocket – Advanced. 9" X 3" X 2", double stitched Velcro

- left chest
- Mic Tab – Advanced, to match color.
- left collar – topside / underside

Flashlight clip reverse clip on patch with Velcro strap

Bar coded label – permanent, breathable and meets NFPA fire resistive requirements

Any instructions in this custom option section that contradicts earlier specified statements supersede those earlier statements as long as the required certifications are not compromised.

All custom options to be attached to coat with lock stitching. Chain stitching will not be considered acceptable since it will unravel if even a single stitch is broken.

Does your bid comply with all aspects of this section? Yes ✓ No ____

Comments: _____

_____

MANUFACTURER	VENDOR PRODUCT #	UNIT PRICE	ESTIMATED UNITS	TOTAL PRICE INCL SHIPPING	ESTIMATED DELIVERY TIME
Globe	Classic Metro	1175.00	50	58750.00	30-45 Days

OPTIONAL

1. Hand warmer Dirkal pockets

Comments: _____

_____

MANUFACTURER	VENDOR PRODUCT #	UNIT PRICE	ESTIMATED UNITS	TOTAL PRICE INCL SHIPPING	ESTIMATED DELIVERY TIME
1. Globe	N/A	52.00	50	2600.00	30-45 Days

ITEM #2

DESCRIPTION: PANTS

To avoid liability and interface problems, it is the intent of the purchaser that coats and pants be procured from the same manufacturer and manufactured in the U.S.A.

Pants to meet or exceed NFPA #1971, most recent edition

PATTERING CONCEPT

Garments shall feature a tailored four piece outer shell with two piece, moisture barrier and thermal liner.

Does your bid comply with all aspects of this section? Yes ✓ No ____

Comments: _____

_____

PATTERNING REQUIREMENTS

To assure maximum freedom of movement and reduced kinetic resistance with minimum garment weight and bulk, the pants patterning shall incorporate:

- Hydraulic swivel action legs to torso interface
- An oversized diamond shaped crotch insert, graded according to size, for maximum action stride, optimum stepping reach and no "in crotch" seaming. To meet individual tailoring needs, and offer superior functionality, diamond shall extend from just above the left knee to just above the right knee and be centered equally from front to rear. Width of diamond at top of crotch shall be approximately 4", graded to size.
- Pants to rest in normal body line balance of 22" center to center distance at the cuff.

Does your bid comply with all aspects of this section? Yes ✓ No ____

Comments: _____

_____

SUSPENDER BUTTONS

Eight heavy duty, rust resistant suspender buttons to be positioned around the waist. Suspender buttons shall be mounted through waist band of triple layer outer shell material that is internally reinforced with a ¾" wide additional band of coated needlepunch Aramid.

Does your bid comply with all aspects of this section? Yes ✓ No ____

Comments: _____

_____

LINER ATTACHMENT

Moisture barrier and thermal liner assembly shall be attached to the outer shell at the cuff by means of two (2) Nomex webbing snap assemblies per leg and at the waist with seven (7) evenly spaced glove snaps at the waistband.

Does your bid comply with all aspects of this section? Yes ✓ No ____

Comments: _____

_____

LINER INSPECTION DEVICE

Garment shall feature an opening in attaching stitching between liner and moisture barrier which will close and open via hook and pile tape. The opening to allow total liner/moisture barrier inversion so that moisture barrier film, seam sealing, and thermal liner fill can be fully and effectively inspected.

Does your bid comply with all aspects of this section? Yes ✓ No ____

Comments: _____

_____

PANT LINER LABEL

Shall be integrally printed on FR cotton Indura and lock stitched to the inner left hip area in a fashion to provide an inner pocket.

Does your bid comply with all aspects of this section? Yes ✓ No ____

Comments: _____

_____

PANT SHELL LABEL

Shall be integrally printed on FR cotton Indura and lock stitched at the top at the inside right hip, below a finished slash opening and outside pocket flap to provide at right hip, trouser style pocket.

Does your bid comply with all aspects of this section? Yes ✓ No ____

Comments: _____

_____

FLY FRONT

Outer shell fly shall be lock stitched to left side of front opening and be in proportion to waist size and crotch rise in both length and width. Fly inner lining shall extend at least 2" to the left of the outer shell fly attachment seam and shall be constructed of certified breathable (when breathable liners are specified) moisture barrier (film facing outward) and thermal liner. The right front pant opening shall have an internal facing extending at least 2" to the right and constructed of specified fabric. In combination with liner, the system shall offer 360 degrees protection without gaps during movement of outer shell moisture barrier and thermal liner. Closure shall be by means of minimum 1.5" Velcro and all construction techniques used shall provide liquid penetration protection under the whole garment watertight integrity test.

Does your bid comply with all aspects of this section? Yes ✓ No ____

Comments: _____

_____

DESIGN CONCEPT (Styling)

Pant shall be of a traditional waist high only design to facilitate full torso ventilation of front, rear and sides of trunk for maximum body cooling effect to help minimize firefighter heat stress. For this reason, other than waist high pants (bibs, semi-bibs, rear bibs, "enhanced waist", lumbar panels, etc.,) shall not be considered acceptable or "as equal" since additional trunk wrapping traps heat and moisture increasing heat stress build up while also creating mechanical resistance when covering the natural torso flexion point of the waist.

Does your bid comply with all aspects of this section? Yes ✓ No ____

Comments: _____

_____

MATERIALS

Pants to be constructed in the following multi-layer configuration:

OUTER SHELL: 7.5 oz 40% Nomex, 60% Kevlar trated with shelltite for maximum water repellency (color: black).

MOISTURE BARRIER: Crosstech 1.5 oz. Film on a 3 oz. Nomex plainweave substrate.

THERMAL LINER: 2-Layer Spunlace/Meta-Aramid Facecloth (6.8 oz). Blue in color and shall provide a minimum of 38.7 TPP's before washing, 48 TPP's after five washings.

Does your bid comply with all aspects of this section? Yes ✓ No ____

Comments: _____

_____

CUSTOM OPTIONS TO BE PROVIDED:

Std-Inspection Port Liner
Std-Liner detachable
No Medical Records Pocket
Std-Narrow 1.5" Velcro Fly, double stitched over hook and dee fastener
Dead Air Panels - Pants
3" Cuff trim – Lime Reflexite, double stitched
Heat Channel Knees – PBO Millenia, Advanced, color black
Angled Cuffs – pants –PBO Millenia, Advanced, color black
Pants Cuffs –PBO Millenia, double stitched, Advanced, color black
Take up Straps 2 postman – Color black
X-Large Bellows pockets – pants Advanced, color black - lined with – Kevlar, three strips double stitched Velcro
Sew Liner label on all sides
Bar coded label– permanent, breathable and meets NFPA fire resistive requirements
Dynafit Suspenders (8-Point) Installed

Any instructions in this custom option section that contradicts earlier specified statements supersede those earlier statements as long as the required certifications are not compromised.

All custom options to be attached to pants with lock stitching. Chain stitching will not be considered acceptable since it will unravel if even a single stitch is broken.

Does your bid comply with all aspects of this section? Yes ✓ No ____

Comments: _____

_____

MANUFACTURER	VENDOR PRODUCT #	UNIT PRICE	ESTIMATED UNITS	TOTAL PRICE INCL SHIPPING	ESTIMATED DELIVERY TIME
Globe	IH Pant	920.00	50	46000.00	30-45 Days

OPTIONAL:

1. Prep for Spider Class II Internal Pants Opening (adopt harness to pants) for any that are requested at time of measurement.

   Comments: _____

   _____

MANUFACTURER	VENDOR PRODUCT #	UNIT PRICE	ESTIMATED UNITS	TOTAL PRICE INCL SHIPPING	ESTIMATED DELIVERY TIME
1. Globe	SC Harness II	285.00	50	14250.00	30-45 Days

SPEC COMPLIANCE PERCENTAGE CALCULATIONS

Total Number Of Yes Answers	49
Total Number Of No Answers	0
Total Answers	49
% Spec Compliance (Total Yes Answers ÷ Total Answers)	100 %

ANY "NO" ANSWER REQUIRES A FULL WRITTEN EXPLANATION.

ALL YES/NO QUESTIONS NOT CHECKED WHERE PROVIDED WILL BE CONSIDERED A "NO" ANSWER.

ITEM #3

DESCRIPTION: GLOBE SHADOW 14" FIRE BOOT, PULL-ON

Boots must meet or exceed NFPA #1971 AND 1992, the most current edition

Comments: _____

_____

MANUFACTURER	VENDOR PRODUCT #	UNIT PRICE	ESTIMATED UNITS	TOTAL PRICE INCL SHIPPING	ESTIMATED DELIVERY TIME
Globe	14" Shadow	361.00	40 pr	14440.00	45 Days

ITEM #4

DESCRIPTION: FIRE HELMET

MSA Cairns 880 Traditional Fire Helmet with *Bourke Eye Shield Option that is required by NFPA-1971:2018 and NFPA-1500:2018 requirements,* eight (8) trahedron shaped of retro-reflective trim around the exterior crown of the helmet shell that meets performance standards and the requirements of NFPA 1971:2013 (or the current edition); US-OSHA 1910.156, and CAL-OSHA.

Helmets must meet or exceed NFPA #1971, the most current edition

Color: black, red, or white

Comments: _____

_____

MANUFACTURER	VENDOR PRODUCT #	UNIT PRICE	ESTIMATED UNITS	TOTAL PRICE INCL SHIPPING	ESTIMATED DELIVERY TIME
Cairns	880 Helmet	249.00	25	6225.00	45 Days

BID SUBMITTAL CHECKLIST
19-71
PROTECTIVE GEAR
FOR THE AURORA FIRE DEPARTMENT

Each bid must be placed in an envelope, sealed, and clearly marked on the outside: "Bid Proposal for Protective Gear for the Aurora Fire Department." In order to be considered responsive, the bidder must submit all of the following items in their sealed envelope:

✓	Bid Bond or Cashier's Check
✓	Bid Proposal Form (Appendix G)
✓	Detailed Technical Specifications (Appendix B)
✓	Group Description/Pricing (Appendix F)
✓	Bidder's Certification (Page 1)
✓	Bidder's Tax Certification (Page 2)
✓	References (Appendix D)
✓	Contact Information (Appendix E)
✓	Contract (Appendix H)
N/A	Local Vendor Preference Application – If Applicable (Appendix I)

CITY OF AURORA
INVITATION TO BID
19-71
PROTECTIVE GEAR
FOR THE AURORA FIRE DEPARTMENT

REFERENCES

(Please Type)

Organization Lombard Fire Department

Address 50 East St. Charles Road

City, State, Zip Lombard, Il 60148

Phone Number 630-873-4507

Contact Person Lt. M. Ringa

Date of Project Current

****

Organization Wood Dale F.P.D.

Address 589 N. Wood Dale Road

City, State, Zip Wood Dale, IL 60191

Phone Number 630-766-1147

Contact Person P. Drawz

Date of Project Current

****

Organization Itasca F.P.D.

Address 520 West Irving Park Road

City, State, Zip Itasca, IL 60143

Phone Number 630-773-1223

Contact Person Mark Ber

Date of Project Current

****

Bidder's Name: Air One Equipment, Inc.

Signature & Date: David P. Pugh 10/28/19

CITY OF AURORA
INVITATION TO BID
19-71
PROTECTIVE GEAR
FOR THE AURORA FIRE DEPARTMENT

CONTACT INFORMATION

Vendor shall provide the following contact information assigned to service the City of Aurora account.

Customer Service/General Information: Ph: 847-289-9000

To place an order:
Name: Brett Frey
Ph: 847-289-9000 Fax: 847-289-9001
E-mail: bfrey@aoe.net

Billing & Invoicing question:
Name: Patricia DeBiase
Ph: 847-289-9000 Fax: 847-289-9001
E-mail: pdebiase@aoe.net

Questions:
Name: John Dinnsen
Ph: 224-856-7724 Fax: 847-289-9001
E-mail: jdinnsen@aoe.net

Bidder's Name: Sandra M. Frey
Signature & Date: Sandra M. Frey 10/28/2019

THIS FORM TO BE COMPLETED AND SUBMITTED WITH BID 19-71

FIRE DEPARTMENT PROTECTIVE GEAR **COMPANY NAME:**_____

ITEM	MANUFACTURER	VENDOR PRODUCT #	UNIT PRICE	ESTIMATED UNITS	TOTAL PRICE INCL. SHIPPING	ESTIMATED DELIVERY TIME
1. Bunker Coat: Globe "Tails", or evaluated equal	Globe	Classic Metro	1175.00	50	58750.00	30-45 Days
2. Bunker Pants: Globe (compatible with "Tails" coat), or evaluated equal	Globe	IH Pant	920.00	50	46000.00	30-45 Days
3. Fire Boots: Globe 14" structural fire boot, pull-on, or evaluated equal	Globe	14" Shadow	361.00	40 pr	14440.00	45 Days
4. Fire Helmet: MSA Cairns 880 Traditional Fire Helmet with Bourke Eye Shield Option, or evaluated equal	Cairns	880 Helmet	249.00	25	6225.00	45 Days

CITY OF AURORA
BID PROPOSAL FORM
19-71
PROTECTIVE GEAR
FOR AURORA FIRE DEPARTMENT

The City of Aurora reserves the right to sever the contract and request that the City Council award remainder of contract to the next lowest responsible bidder if these delivery schedules cannot be maintained.

No additional charges over total net bid price will be accepted without written approval of the Purchasing Director.

Do not add state, federal or local taxes. Municipalities are exempt. Exemption Certification Permit No. Illinois E9996-0842-07.

The City of Aurora reserves the right to reject any or all Bids, or parts thereof, and to waive any technicality, informality or irregularity in the Bids received, and to disregard all nonconforming or conditional Bids or counter-proposals and to hold the best Bids for ninety (90) days from the opening date set forth above. The City further reserves the right to award the Bid to the lowest responsible Bidder whose offer best responds in quality, fitness and capacity to the requirements of the proposed Work or usage and therefore is in the best interest of the City.

BID SUBMITTED BY

COMPANY Air One Equipment, Inc.

ADDRESS 360 Production Drive

CITY, STATE, ZIP South Elgin, IL 60177

PREPARER'S NAME Brett Frey
Please Type

CONTACT PERSON John Dinnsen
Please Type

EMAIL jdinnsen@aoe.net

AUTHORIZED SIGNATURE Sandra M. Frey PRESIDENT / SECRETARY
Title

PHONE #(847)289-9000 FAX #(847)289-9001 DATE 10/28/2019

CITY OF AURORA CONTRACT

THIS CONTRACT, entered on this ___ day of ____, 2019 ("Effective Date"), for **Protective Gear for the Aurora Fire Department** is entered into between the **CITY OF AURORA** ("City"), a municipal corporation, located at 44 E. Downer Place, Aurora, Illinois and Air One Equipment, Inc. ("Bidder"), located at 360 Production Drive South Elgin, IL 60177.

WHEREAS, the City issued an Invitation to Bid 19-71 **Protective Gear for the Aurora Fire Department**; and

WHEREAS, the Bidder submitted a Bid Proposal in response to the BID and represents that it is ready, willing and able to perform the Services specified in the BID and herein as well as any additional services agreed to and described in the Contract; and

WHEREAS, _____, 2019, the City's awarded a contract to Bidder.

IN CONSIDERATION of the mutual promises and covenants herein contained, the parties hereto do mutually agree to the following:

1. **Contract Documents.** The Contract shall be deemed to include this document, Bidder's response to the BID, to the extent it is consistent with the terms of the BID, any other documents as agreed upon by the parties throughout the term of this Contract, along with any exhibits, all of which are incorporated herein and made a part of this Contract. In the event of a conflict between this Contract and any exhibit, the provisions of this Contract shall control.

Invitation to Bid 19-71

In connection with the BID and this Contract, Bidder acknowledges that it has furnished and will continue to furnish various certifications, affidavits and other information and reports, which are incorporated herein. Bidder represents that such material and information furnished in connection with the BID and this Contract is truthful and correct. Bidder shall promptly update such material and information to be complete and accurate, as needed, to reflect changes or events occurring after the Effective Date of this Contract.

2. **Scope of Services.** Bidder shall perform the Services listed in the Scope of Services, attached hereto as Exhibit 1.

3. **Term.** This Contract is for an initial one year term beginning January 1, 2020, and unless sooner terminated, ending December 31, 2020. This Contract has options for two 1-year extensions subject to mutual consent between the City of Aurora and Bidder.

4. **Compensation.**

a. **Maximum Price.** In accordance with the Contractor's Bid Proposal, the maximum price for providing the Services shall be in accordance to the pricing on the BID proposal form. The maximum price may not be changed unless the City is provided with supporting documentation to warrant the change in maximum price or as otherwise provided in this Contract.

b. Schedule of Payment. The City shall pay the Contractor for the Services in accordance with the amounts set forth in Exhibit 2. The Contractor shall be required to submit an itemized invoice as well as any supporting documentation as required by the City. Payment shall be made upon the basis of the approved invoices and supporting documents. The City shall utilize its best efforts to make payment within thirty (30) days after approval of the invoice. Each invoice shall be accompanied by a statement of the Contractor of the percentage of completion of the Services through the date of the invoice, where applicable.

5. Performance of Services.

Standard of Performance. Bidder shall perform all Services set forth in this Contract, and any other agreed documents incorporated herein, with the degree, skill, care and diligence customarily required of a professional performing services of comparable scope, purpose and magnitude and in conformance with the applicable professional standards. Bidder shall, at all times, use its best efforts to assure timely and satisfactory rendering and completion of the Services. Bidder shall ensure that Bidder and all of its employees or subcontractors performing Services under this Contract shall be: (i) qualified and competent in the applicable discipline or industry; (ii) appropriate licensed as required by law; (iii) strictly comply with all City of Aurora, State of Illinois, and applicable federal laws or regulations; (iv) strictly conform to the terms of this Contract. Bidder shall, at all times until the completion of the Services, remain solely responsible for the professional and technical accuracy of all Services and deliverables furnished, whether such services are rendered by the Bidder or others on its behalf, including, without limitation, its subcontractors. No review, approval, acceptance, nor payment for any and all of the Services by the City shall relieve the Bidder from the responsibilities set forth herein.

Notwithstanding the foregoing, Bidder shall not be responsible for the performance of construction contracts, work or products, or any deficiencies or effects resulting therefrom, of any contractor, subcontractor, manufacturer, supplier, fabricator, or consultant retained by the City or any other third-party, including any person working on their behalf. Nothing herein shall be construed as giving the Bidder the responsibility for or the authority to control, direct, or supervise construction, construction means, methods, techniques, sequences, procedures, and safety measures and programs except those which directly relate solely to Bidder's performance of Services as set forth in this Contract.

6. Termination.

Termination for Convenience. The City has the right to terminate this Contract, in whole or in part, for any reason or if sufficient funds have not been appropriated to cover the estimated requirement of the Services not yet performed, by providing Bidder with thirty (30) days notice specifying the termination date. On the date specified, this Contract will end. If this Contract is terminated by the City, as provided herein, the City shall pay the Bidder only for services performed up the date of termination. After the termination date, Bidder has no further contractual claim against the City based upon this Contract and any payment so made to the Bidder upon termination shall be in full satisfaction for Services rendered. Bidder shall deliver to the City all finished and unfinished documents, studies and reports and shall become the property of the City.

7. **Miscellaneous Provisions.**

a. **Illinois Freedom of Information Act.** The Bidder acknowledges the requirements of the Illinois Freedom of Information Act (FOIA) and agrees to comply with all requests made by the City of Aurora for public records (as that term is defined by Section 2(c) of FOIA in the undersigned's possession and to provide the requested public records to the City of Aurora within two (2) business days of the request being made by the City of Aurora. The undersigned agrees to indemnify and hold harmless the City of Aurora from all claims, costs, penalty, losses and injuries (including but not limited to, attorney's fees, other professional fees, court costs and/or arbitration or other dispute resolution costs) arising out of or relating to its failure to provide the public records to the City of Aurora under this Contract.

b. **Entire Contract.** This Contract, along with the documents set forth in Section 1 and incorporated by reference elsewhere in this Contract, with consent of the parties, represents the entire Contract between the parties with respect to the performance of the Services. No other contracts, representations, warranties or statements, written or verbal, are binding on the parties. This Contract may only be amended as provided herein.

c. **Consents and Approvals.** The parties represent and warrant to each other that each has obtained all the requisite consents and approvals, whether required by internal operating procedures or otherwise, for entering into this Contract and the undertakings contemplated herein.

d. **Counterparts.** This Contract may be executed in one or more counterparts, each of which shall be an original, but all of which shall constitute one and the same instrument.

FOR **CITY OF AURORA**

By: _____

ATTEST:

_____

City Clerk

FOR _____

By_____

(SEAL)

(CORPORATE SEAL)

(If a Corporation) CORPORATE NAME Air One Equipment, Inc.

(SEAL)

By _____
President – Contractor / SECRETARY

ATTEST:

_____
~~Secretary~~ VICE PRESIDENT

(If a Co-Partnership)

_____

_____

_____
Partners doing Business under the firm

_____
Contractor

(If an Individual) _____(SEAL)

_____(SEAL)
Contractor

CITY OF AURORA
BID PROPOSAL FORM
19-71
PROTECTIVE GEAR
FOR AURORA FIRE DEPARTMENT

EXHIBIT 1

(INVITATION TO BID)

CITY OF AURORA
BID PROPOSAL FORM
19-71
PROTECTIVE GEAR
FOR AURORA FIRE DEPARTMENT

EXHIBIT 2

(BID PROPOSAL FORM 19-71)

APPENDIX I

LOCAL PREFERENCE APPLICATION

City of Joliet Local Bidder Application

The business as identified below is requesting to be placed upon the City of Joliet, Illinois Local Bidder Preference List, in accordance with the City of Joliet Ordinance 17362, passed May 5, 2015.

1. Name of Business: _____
2. Address of Local Office: _____
3. City, State, Zip: _____
4. Submitted by: (signature) _____
5. Print your name: _____
6. Title: _____
7. Email address: _____
8. Company's web address: _____
9. Phone: _____
10. Fax: _____
11. Name of County your Local Business is located in: _____

(1) If an interested bidder would like to qualify as a "local bidder", such bidder shall complete and submit the prequalification application along with supporting documentation, to the finance department, as follows:

a. Whether the bidder has established and maintained a physical presence in Will County or Grundy County or Kendall County, by virtue of the ownership or lease of all or a portion of a commercial building for a period of not less than twelve (12) consecutive months prior to the submission of the prequalification application; and

b. Whether the bidder is legally authorized to conduct business within the State of Illinois and the city, and has a business license to operate in the city if required; and

c. Is not a debtor to the City of Joliet. For purposes of this subparagraph, a debtor is defined as having outstanding fees, water bills, sales tax or restaurant/bar tax payments that are thirty (30) days or more past due, or has outstanding weed or nuisance abatements or liens, failure to comply tickets or parking tickets that are not in dispute as to their validity and are not being challenged in court or other administrative process.

Backup documentation (1) a. and (1) b. must accompany this submittal or application will be rejected. Please note that for (1) c. above the City of Joliet will verify internally that your company does not have any outstanding fees. Your company should make sure that to the best of its knowledge all bills are current.

Do not write below this line: For City of Joliet Use ONLY

(1) a.

(1) b.

(1) c.

Return completed application with all backup information to: City of Joliet Purchasing Division, 150 W. Jefferson St., Joliet, IL 60432 or email to purchasing@jolietcity.org

AIR ONE
EQUIPMENT, INC.

360 Production Drive
South Elgin, IL 60177-2637
Telephone: 847-289-9000
Fax: 847-289-9001
E-mail: airone@aoe.net

Aurora City Clerk
44 East Downer Place
Aurora, IL 60507-2067

Attention:

Section 5.0 – Warranty and Repair Service

Air One Equipment, Inc. will pick up Aurora Fire Department's protective gear for any warranty issues and repair service.

Sincerely,

(Vice-President)

AIR ONE
EQUIPMENT, INC.

360 Production Drive
South Elgin, IL 60177-2637
Telephone: 847-289-9000
Fax: 847-289-9001
E-mail: airone@aoe.net

Aurora City Clerk
44 East Downer Place
Aurora, IL 60507-2067

Attention:

Air One Equipment, Inc. intends to meet the intent of the specifications. Please note that the bid specifications are not the current configuration used by the Aurora Fire Department. Additionally, the bid specifications reference a previous edition of NFPA 1971 and are not current. Attached is the current Globe Turnout Gear specification for the Aurora Fire Department, which is the exact specification that Air One Equipment, Inc. is quoting.

Sincerely,

David Ring

(Vice-President)

GENERAL SPECIFICATIONS
PROTECTIVE JACKET
FOR STRUCTURAL FIRE FIGHTING

October 9, 2019
Aurora FD

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 fire fighting. All materials and construction will meet or exceed NFPA Standard #1971 and OSHA for structural fire fighters protective clothing.

_____Comply _____Exception

OUTER SHELL MATERIAL - JACKETS

The **"ARMOR AP"** outer shell shall be manufactured by Safety Components and constructed of 67/33 Para-Aramid/Meta-Aramid with a comfort twill weave, having an approximate weight of 6.5 oz. per square yard. The shell material must be treated with a durable water-repellent finish and the color of the garments shall be black.

_____Comply _____Exception

(Optional) OUTER SHELL MATERIAL JACKETS

The outer shell shall be constructed of TENCATE "BRIGADE™ 750" (Nomex®) plain weave with an approximate weight of 7.5 oz. per square yard, shall be treated with ShelltiteTM water repellent finish. Color of the garments shall be natural (off white).

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. An approximate 8 inch by 10 ½ inch 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 attached to the moisture barrier and bound together by bias-cut Neoprene coated cotton/polyester around the 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 W.L. GORE **CROSSTECH® black moisture barrier** - Type 2F, which is comprised of a CROSSTECH® membrane laminated to a 3.3 ounce per square yard

Nomex® IIIA woven pajama check substrate. The CROSSTECH® membrane is an enhanced bicomponent membrane comprised of an expanded PTFE (polytetrafluoroethylene, for example Teflon®) matrix having a continuous hydrophilic (i.e. water-loving) and oleophobic (i.e. oil-hating) coating that is impregnated into the matrix. CROSSTECH® moisture barrier seams shall be sealed with GORE-SEAM® tape using a Series 6000 (or higher) GORE-SEAM™ sealing machine to afford comparable bacteriophage penetration resistance performance. 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

One strip of 5/8 inch wide FR hook and loop fastener tape shall secure the moisture barrier system to the shell. In addition, a minimum of 6 snap fasteners shall secure the thermal liner/moisture barrier to the outer shell along the length of the neck line under the top most collar (see Collar section). The top most collar shall be turned under and finished such that the snaps on the collar will not be able to contact the wearers skin. Snaps shall be protected from exterior heat by moisture barrier fabric. The remainder of the thermal liner/moisture barrier shall be secured with snap fasteners appropriately spaced on each jacket facing and snap fasteners at each sleeve end.

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 shall be color coded to a corresponding color coded snap tab in the liner 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 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, major B structural liner seams and 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 AXTION® liner system shall be constructed of three separate panels consisting of two front panels and one back panel. The body panels shall be shaped so as to provide a tailored fit thereby enhancing body movement and shall be joined together by double stitching with Nomex® thread.

The hem of the jacket and liner system shall be constructed with EXTENDED BACK (EB) panels incorporating all 3-layers of the system. The outer shell EB shall be constructed of two layers of specified outer shell material, double stitched to the hem. The liner EB shall be constructed with one layer each of specified thermal liner and moisture barrier materials, serge stitched to the liner hem. There shall be two Ara-Shield® snap tabs sewn to the bottom of the shell portion of the EB which shall attach to corresponding snaps on the liner portion of the EB. The EB shall extend approximately 6 inches lower in the back than the front of the jacket providing and maintaining proper overlap when bending or crawling.

There shall be 2" lime/yellow Scotchlite™ Triple trim installed along the bottom of the EB allowing room for lettering above the trim at the top of the EB.

_____Comply _____Exception

LOGOS

The garment brand shall be identified by means of red FR Nomex thread embroidery on the top of the left collar denoting "GLOBE" as the manufacturer. There shall be a reflective label specific to the garment style, measuring 1 inch wide by 4 inches long, installed on the left pocket flap.

_____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 thermal liner and moisture barrier shall be completely removable from the jacket shell. oNE strips of ⅝ inch wide FR hook and loop fastener tape shall secure the thermal liner/moisture barrier to the outer shell along the length of the neckline under the collar. A minimum of 6 snap fasteners, to minimize gaps, shall secure the thermal liner/moisture barrier to the outer shell along the length of

the neckline under the collar. This opening shall run the full length of the collar for the purpose of inspecting the inner surfaces of the jacket liner system. The remainder of the thermal liner/moisture barrier shall be secured with a minimum of four snap fasteners appropriately spaced on each jacket facing and four Ara-Shield® snap fasteners at each sleeve end. The outside perimeter of the AXTION® liner moisture barrier and thermal liner layers shall be bound together along the side and bottom edges with a bias-cut Neoprene coated cotton/polyester binding for a finished appearance that prevents fraying and wicking of contaminants. Stitching used to secure the thermal liner and moisture barrier in place of the Neoprene shall not be considered since stitching is not able to provide the same level of abrasion resistance.

_____Comply _____Exception

SIZING

The standard coat design shall be 6 inches longer at the rear hem than at the front hem and provide continuous and unbroken moisture barrier and thermal liner protection from the collar seam to the hem at the bottom of the jacket MEB. Each jacket length shall be determined by each individual's torso length to provide the jacket to pant interface as defined by NFPA 1500. Jacket design must interface properly with standard waist high turnout pants. To facilitate various body types the front jacket lengths shall be provided in the following lengths: 29 inches long (standard)

The jacket shall be available in even size chest measurements of two-inch increments, and shall range from a small size of 30 to a large size of 68. Generalized sizing, such as small, medium, large, etc., will not be considered acceptable. Sizing specifically for women shall also be available.

_____Comply _____Exception

RETROREFLECTIVE FLUORESCENT TRIM

The retroreflective fluorescent trim shall be lime/yellow 3M Scotchlite™Triple Trim (L/Y borders with silver center). Each jacket shall have an adequate amount of retroreflective fluorescent trim affixed to the outside of the outer shell to meet the requirements of NFPA #1971 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

REINFORCED TRIM STITCHING

All reflective trim is secured to the outer shell with Nomex® thread, using a locking chainstitch protected by our exclusive TrimTrax® system. Developed exclusively by Globe Manufacturing Co., LLC. this strip of 3/32-inch strong, durable, flame resistant black Kevlar® cording provides a bed for the stitching along each edge of the retroreflective fluorescent trim surface and affords extra protection for the thread from abrasion. TrimTrax® has been proven to be 5 to 7 times more durable than single or even double rows of stitching, significantly reducing maintenance costs and providing more value and a longer service life. Two rows of stitching used to attach the trim in place of the TrimTrax® shall be considered an unacceptable alternative, since it has been proven that the two

rows of stitching has insignificant impact on wear life. All trim ends shall be securely sewn into a seam for a clean finished appearance.

_____Comply _____Exception

SEWN ON RETROREFLECTIVE LETTERING

Each jacket shall have 3" lime/yellow 3M Scotchlite™ lettering on Row B reading: AURORA

Each jacket shall have optional 2" or 3" lime/yellow 3M Scotchlite™ lettering for Fire Fighter names, location to be advised.

_____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 specified moisture barrier material sandwiched in between (see Moisture Barrier section) two layers of outer shell fabric.. The forward inside ply of moisture barrier shall be sewn to the inside of the collar at the edges only. The multi layered configuration shall provide protection from water and other hazardous elements, while maintaining thermal protection. The collar shall be a minimum of 3 inches high and graded to size. The leading edges of the collar shall extend up evenly from the leading edges of the jacket front body panels so that no gap occurs at the throat area. The collar's back layers of outershell and moisture barrier shall be joined to the body panels with a minimum of two rows of stitching. Inside the collar, above the rear seam where the collar moisture barrier is joined to the shell, there shall be a full strip of ⅝ inch wide FR hppk fastener tape running the full length of the collar on the moisture barrier , and a corresponding piece of ⅝ inch wide FR loop fastener tape running the full length of the collar on the outer shell. The collar 's inside outershell and moisture barrier layer shall have 6 snap fasteners (minimum) spaced equidistant, to minimize gaps on lower edge of the collar. There shall be a series of corresponding snap fasteners on the thermal liner to engage the snaps on the collar, thus enclosing the liner access opening under the shell collar. These snaps shall be installed such that they do not penetrate from the outer shell through to the inner layers. The top of the thermal liner and moisture barrier 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.

A self material fabric hanger loop shall be sewn at the top of collar.

The throat tab shall be a minimum of 4 layers, of scoop type design and constructed of two plies of outer shell material with two center plies of moisture barrier material. The throat tab shall measure not less than 3½ inches wide at the center tapering to 1½ inches at each end with a total length of approximately 8½ inches. The throat tab shall be attached to the right side of the collar by a 1 inch wide by 1½ 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. A 1½ inch by 3 inch piece of FR loop fastener tape shall be sewn horizontally to the inside leading end of the throat tab and a 1 inch by 3 inch piece of FR hook fastener tape shall be sewn horizontally towards the opposite end of the throat tab. A corresponding piece of FR hook fastener tape measuring 1½ inches by 3 inches shall be sewn horizontally to the leading outside edge of the collar on the left side, for attachment and adjustment when in the closed position and wearing a breathing

apparatus mask. The collar closure strap shall fold in half for storage with the FR loop fastener tape engaging the FR hook fastener tape.

_____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 Crosstech 2F 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" 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 (requires 6 inch wide storm flap) four non-ferrous inward facing hook and dee rings plus FR hook and loop fastener tape on the storm flap. The inner closure hook and dee rings shall be riveted to the leading edges of the left and right jacket body panels. The inward facing hooks shall be installed on the right front body panel and the dee rings shall be installed on the left front body panel. The storm flap shall close over the left and right jacket body panels and shall be secured with flame resistant hook and loop fastener tape. A 1½ inch by 23 inch piece of FR loop fastener tape shall be sewn with four rows of stitching along the leading edge of the storm flap on the underside. A corresponding 1½ inch by 23 inch piece of FR hook fastener tape shall be sewn with four rows of stitching to the left 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

HALF HIGH EXPANSION (BELLOWS) POCKETS

Each jacket front body panel shall have a 2 inch deep by 10 inch wide by 6 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 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 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.

The half high expansion pockets shall be lined with a full Kevlar® twill material pouch to include the front, back, bottom and up the sides.

_____Comply _____Exception

(Optional) 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.

(32" or shorter length) Retroreflective trim shall run over the bottom of the pockets so as not to interrupt the trim stripe.

_____Comply _____Exception

SLEEVES

The sleeves shall be of two-panel construction, contoured, drop shoulder design. The outer and under sleeve panels shall be double stitched together with Nomex® thread. The sleeves shall be contoured (curved) to follow the natural shape of the human arm unlike straight, tubular sleeve configurations. The drop shoulder design, along with the contoured sleeves shall provide for a high degree of uninhibited arm and shoulder movement. The same contoured, drop shoulder design shall be used in all layers of the garment (shell, moisture barrier, and thermal liner).

_____Comply _____Exception

SLEEVE CUFF REINFORCEMENTS

The sleeve cuffs shall be reinforced with an extra layer of outer shell material.

The cuff reinforcements shall not be less than 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 / 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. 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 grey.

The wristlets shall be sewn to flame resistant neoprene coated cotton/polyester material, which in turn shall be sewn to the inside of the sleeve shell approximately five inches from the sleeve cuff. This sleeve well configuration serves to prevent water and other hazardous elements from entering the sleeves when the arms are raised. The neoprene material shall also line the inside of the sleeve shell from the cuff to a point approximately five inches up, where it joins the sleeve well and is double stitched to the shell. Four 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 SHOULDER THERMAL ENHANCEMENT

A minimum of one additional layer of thermal liner material shall be used to increase thermal insulation in the shoulder area of the liner system. This thermal enhancement layer shall drape over the top of each shoulder extending from the collar to the sleeve/shoulder seam, down the front a minimum 2 inches from the juncture of the collar down the back to a depth of a minimum of 2 inches to provide greater CCHR protection in this high compression area. 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

Each jacket shall have a pocket designed for the storage of a portable radio. This pocket shall be of box type construction, double stitched to the jacket and shall have one drainage eyelet in the bottom of the pocket. The pocket flap shall be constructed of two layers of outer shell material measuring approximately 3 inches longer than the depth of the pocket and ¼ inch wider than the pocket. The pocket flap shall be closed by means of FR hook and loop fastener tape. A 1½ inch by 3 inch piece of FR hook fastener tape shall be installed on the inside of the pocket flap beginning at the center of

the bottom of the flap. A 1½ inch by 3 inch piece of FR loop fastener tape shall be installed horizontally on the outside of the pocket near the top center and positioned to engage the hook fastener tape. In addition, the entire inside of the pocket shall be lined with neoprene coated cotton/polyester material to ensure that the radio is protected from the elements. The impermeable barrier material shall also be sandwiched between the two layers of outer shell material in the pocket flap for added protection. The radio pocket shall measure approximately 2 inches deep by 3 inches wide by 9 inches high. The location of the radio pocket will be determined at the time of the order.

Note: radio pocket 6-inch and over in height requires trim.

_____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 and shall be constructed of double layer outer shell material.

The microphone strap shall be mounted on inside of the collar (when the collar is in the raised position). Advise left or right side at the time of order.

An additional microphone strap shall be mounted on outside of the collar (when the collar is in the raised position) Advise left or right side at the time of order.

_____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, location to be advised at the time of order.

_____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 so 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

Both male and female sizing samples shall be available.

_____Comply _____Exception

BAR-CODE/RECORD KEEPING INTERFACE

A 1 dimensional barcode, in the interleaved 2 of 5 format shall be printed on the label of each separable layer of the garment.

This barcode shall represent the serial number of the garment. The manufacturer shall be able to provide a detailed list of each asset of a drop-shipped order, and shall include the following:

- Brand
- Order Number

- Serial Number
- Style Number
- Color
- Description
- Chest/Waist Size
- Jacket/pant Length
- Sleeve Length
- Date of Manufacture
- Mark-For Data

This information shall be able to be imported into the manufacturers web-based system designed to facilitate the organization and tracking of assets in accordance with the cleaning and inspection requirements of OSHA and NFPA 1851.

_____Comply _____Exception

PPE RECORD KEEPING

The manufacturer shall make available and no-charge, a password protected data based backed website that does not care whose brand of PPE assets are being recorded. The website shall have the functionality to allow the manufacturer to import all of the pertinent data into the department's account so that the initial data entry by fire department personnel is eliminated.

The website shall allow for the department to use a barcode scanner, if desired, to scan the Interleaved 2 of 5 barcode found in the gear by going to the Search the Serial Number page in PPE record keeping program, and scanning the asset's barcoded serial number.

_____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.

GENERAL SPECIFICATIONS
PROTECTIVE PANTS
FOR STRUCTURAL FIRE FIGHTING

October 9, 2019
Aurora FD

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 fire fighting. All materials and construction shall meet or exceed NFPA Standard #1971 and OSHA for structural fire fighters protective clothing.

_____Comply _____Exception

OUTER SHELL MATERIAL - PANTS

The **"ARMOR AP"** outer shell shall be manufactured by Safety Components and constructed of 67/33 Para-Aramid/Meta-Aramid with a comfort twill weave, having an approximate weight of 6.5 oz. per square yard. The shell material must be treated with a durable water-repellent finish and the color of the garments shall be black.

_____Comply _____Exception

(Optional) OUTER SHELL MATERIAL - PANTS

The outer shell shall be constructed of TENCATE **"BRIGADE®"** (Nomex®) plain weave with an approximate weight of 7.5 oz. per square yard, shall be treated with Shelltite™ water repellent finish. Color of the garments shall be natural (off white).

_____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 attached to the moisture barrier and bound together by bias-cut Neoprene coated cotton/polyester around the 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 W.L. GORE **CROSSTECH® black moisture barrier** - Type 2F, which is comprised of a CROSSTECH® membrane laminated to a 3.3 ounce per square yard Nomex® IIIA woven pajama check substrate. The CROSSTECH® membrane is an enhanced bicomponent membrane comprised of an expanded PTFE (polytetrafluoroethylene, for example Teflon®) matrix having a continuous hydrophilic (i.e. water-loving) and oleophobic (i.e. oil-hating) coating that is impregnated into the matrix. CROSSTECH® moisture barrier seams shall be sealed with GORE-SEAM® tape using a Series 6000 (or higher) GORE-SEAM™ sealing machine to afford comparable bacteriophage penetration resistance performance. 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 AND 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/moisture barrier 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 shall be color coded to a corresponding color-coded snap tab in the liner 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 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, major B structural liner seams and 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 pant design facilitates the transfer of the weight of the pant to the hips instead of the shoulders and suspenders.

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. The body panels and seam lengths shall be graded to size to assure accurate fit in a broad range of sizes.

The front body panels shall 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 shall 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

SIZING

In order to insure 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 ranging from 24 to 56
Body Shape:	Relaxed and Regular
	Note: Relaxed is a fuller cut in the hips and thighs, like relaxed jeans.
Inseam:	Even sizes

Pants available in only one standard shape shall not be acceptable. Generalized sizing, such as small, medium, large, etc., shall not be considered acceptable.

_____Comply _____Exception

PANT LINER SYSTEM

The combined moisture barrier and the thermal liner shall be completely removable for the pant. The thermal liner and moisture barrier layers of the liner system shall be stitched together and bound around the top waist and cuffs with Bias-Cut Neoprene coated cotton/polyester binding for a finished appearance that prevents fraying and wicking of contaminants.

The body of the liner system (thermal liner & moisture barrier) shall be of a four-piece design to match the cut of the shell to include the rolled back side seams. The design of the liner system shall incorporate darts in the knee area providing a contour to the leg and shall also have a reverse boot cut at the rear of the liner cuff and a concave cut at the front to keep the liner from hanging below the shell.

_____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 shall 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 shall 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

WAISTBAND

The waist area of the pants shall be reinforced on the inside with a separate piece of black aramid outer shell material, cut on the bias (diagonally). The reinforcement shall be folded in half, for a finished bottom edge and shall have a finished width of not less than approximately 1½ inches. 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 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 by means of nine snaps, spaced equidistant along the length of the waistband reinforcement. Inserting the liner system between the waistband reinforcement and outer shell serves to reduce the possibility of liner detachment while donning and doffing. The independent waistband construction affords greater comfort and fit than a turned and stitched method. Pants that do not include an independent waistband or are not cut on the bias shall not provide the same amount of stretch to the garment and shall be considered unacceptable.

_____Comply _____Exception

EXTERNAL/INTERNAL FLY FLAP

The pants shall 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 2½ 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 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 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

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™ Triple Trim (L/Y borders with silver center). Bottom of trim band shall be located approximately 3" above cuff.

_____Comply _____Exception

REINFORCED TRIM STITCHING

All reflective trim is secured to the outer shell with Nomex® thread, using a locking chainstitch protected by our exclusive TrimTrax® system. Developed exclusively by Globe Manufacturing Co., LLC. this strip of 3/32-inch strong, durable, flame resistant black Kevlar® cording provides a bed for the stitching along each edge of the retroreflective fluorescent trim surface and affords extra protection for the thread from abrasion. TrimTrax® has been proven to be 5 to 7 times more durable than single or even double rows of stitching, significantly reducing maintenance costs and providing more value and a longer service life. Two rows of stitching used to attach the trim in place of the TrimTrax® shall be considered an unacceptable alternative, since it has been proven that the two rows of stitching has insignificant impact on wear life. All trim ends shall be securely sewn into a seam for a clean finished appearance.

_____Comply _____Exception

BLACK ARAMID BELT WITH BELT LOOPS

If the IH Pant is ordered with either an Escape Belt or a Harness, that belt shall be installed as the positive pant closure. If neither an Escape Belt or a Harness is specified, the IH Pant shall include an approximate 2-inch wide belt constructed of aramid webbing material with an adjustable hi-temp thermoplastic Delrin buckle serving as the exterior primary positive locking closure. This buckle shall also provide a quick-release mechanism for donning and doffing.

The pants shall be equipped with a series of belt loops, spaced around the waist to accommodate an Escape Belt, a Harness or the aramid belt. One loop shall be located on the rear of the waist, centered over the rear seam, measuring approximately 3½ inches by 3½ inches. There shall be two additional wide loops at the front of each pant. The top of these two belt loops shall be angled, with the top measuring approximately 2½ inches and the bottom measuring approximately 4 ½ inches. Under each of the front belt loops there shall be a slit to accommodate an internal harness passing from the inside of the pant, to the outside. The slits shall be at the same angle as the front belt loops, reinforced with black Ara-Shield® material, and having an opening that measures approximately 3 inches.

There shall be 2-piece loops constructed of a double layer of black aramid material installed inside the shell in the hip area, which shall serve to hold the leg loops of an optional internal harness in place. The top and bottom of the loops shall attach to each other with an approximate 1 inch by 1 inch FR hook and loop fastener tape sew to the ends.

In addition to the 3 wide belt loops, there shall be two rappelling harness loops installed at the rear of the pant, just behind each side seam. The loops shall be constructed of a double layer of outer shell material and shall be of a 2-piece design – top and bottom. The top and bottom of each loop shall attach to each other with snap fasteners and FR hook and loop fastener.

_____Comply _____Exception

CARABINER HOLD DOWN STRAP

The pant shall be equipped with a carabiner hold down strap. The strap shall be constructed of double layer black Ara-Sheild® material, consisting of two separate portions to form a strap with an opening of approximately 3 inches. Each portion of the strap shall measure approximately 1¾ inches wide by 3½ inches long. The lower portion of the strap shall be double needle stitched in the vertical position, opening upwards. There shall be a piece of 1½ by 2½ inch hook FR fastener tape single needle stitched to the strap approximately ¼ inch up from the bottom. The upper portion of the strap shall be double needle stitched in the vertical positon, opening downwards to interface with the lower portion of the strap. There shall be a piece of corresponding 1½ by 2½ inch loop FR fastener tape single needle stitched to the strap approximately ½ inch down from the top of the strap. On both the upper and lower portions of the strap, there shall be a bartack centered between the double needle stitching. The strap shall be located behind the left front belt loop.

In the event the IH Pant is ordered with the Escape Belt, there shall be an additional carabiner hold down strap, added to the right front belt loop.

_____Comply _____Exception

(Optional) ESCAPE BELT

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. 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.

_____Comply _____Exception

(Optional) INTERNAL SEAT HARNESS SERIES 3

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 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 Harness Belt also serves as 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. 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. There shall be 2-piece loops constructed of a double layer of outer shell material installed at each hip and inside the shell 8" down from the waist to hold the leg straps in place. The top and bottom of the loop will attach to each other with a 1 inch x 1 inch flame resistant hook & loop fastener tape sewn to ends.

_____Comply _____Exception

AXTION® SEAT

The rise of the rear pant center back seam, 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 fullness to the seat area for extreme mobility without restriction when stepping up or crouching and shall be graded to size. This feature in combination with other design elements shall maintain alignment of the knee directly over the knee pads when kneeling and crawling.

_____Comply _____Exception

EXPANSION (BELLOWS) POCKETS (Left)

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 Kelvar 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

EXPANSION (BELLOWS) IH ROPE POCKET (Right)

One 2 inch deep x 10 inch wide x 10 inch high bellows pocket shall be placed over the outer leg seam at thigh level. The pocket shall be sewn to the pant with two rows of lock stitching and shall provide two eyelets, installed at the bottom of each pocket, for water drainage. *The pocket shall be reinforced with an additional layer of outer Kevlar® material sewn to the inside.* The pocket flap shall be rectangular in shape and measure a minimum of 6 inches by a minimum of 11 inches, constructed of two layers of outer shell material and double stitched to the outer shell. Six pieces of 1½ inch by 3 inch FR hook fastener tape shall be installed vertically on the inside of each pocket flap – the six pieces shall form three rows, one each side and one in the middle, each row consisting of two pieces of FR hook fastener tape. Three pieces of1 ½ inch by 3 inch FR loop fastener tape shall be installed horizontally on the outside of the pocket near the top and positioned to engage the hook fastener tape. The pocket flap shall be reinforced with backtacks at the uppermost corners. A 2-piece loop constructed of a double layer of black outer shell material shall be installed under the front edge of the pocket flap. The top and bottom of the loop shall attach to each other with a 1 inch x 1 inch FR hook and loop fastener tape sewn to ends. Inside the pocket, a strap constructed of black outer shell material measuring approximately 1 inch by 9 inches (when hook and loop is engaged) shall run the full vertical height of the pocket where it shall secure at the top with hook and loop fastener tape. A second strap shall be installed horizontally at the top front corner of the pocket. This strap shall be constructed of black

outer shell material and measure approximately 1 inch by 4 inches and shall be sewn at one end and attach at the other end with hook and loop fastener tape. The straps are specially designed to secure the contents of the pocket and allow for quick release.

_____Comply _____Exception

AXTION® KNEE

The outer shell of the pant legs shall be constructed with horizontal expansion pleats in the knee area with corresponding darts in the liner to provide added fullness for increased freedom of movement and maximum flexibility. The pleats shall be folded to open outwardly towards the side seams to insure no restriction of movement. The AXTION® knee 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 darts 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

KNEE REINFORCEMENTS

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

The knee reinforcement shall be centered on the leg to insure proper coverage when bending, kneeling and crawling. The knee reinforcements shall measure approximately 9 inches wide by 12 inches high and shall be double stitched to the outside of the outer shell in the knee area for greater strength and abrasion resistance. Knee reinforcements of a smaller size do not provide the same protective coverage and shall be considered unacceptable. The knee reinforcement specified shall be removable for replacement without opening Major A seams of the outer shell of the pant. 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 **Silizone®** 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

PANT CUFF REINFORCEMENTS

The cuff area of the pants shall be reinforced with black Ara-Shield® 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 shall 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 shall 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 shall be padded for comfort by fully encasing the webbing with aramid batting and wrap-around black aramid.

The rear ends of the suspenders shall 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 shall 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 shall 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 shall then fold over and attach to themselves

securing the suspender to the pants.

_____Comply _____Exception

REVERSE BOOT CUT

The outer shell pant leg cuffs shall be constructed such that the back of the leg is approximately 1 inch shorter than the front. The liner shall 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 shall minimize the chance of premature wear of the cuffs and injuries due to falls as a result of "walking" on the pant cuffs.

_____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 so 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 shall serve to void this support program.

_____Comply _____Exception

SIZING BY VENDOR

Both male and female sizing samples shall be available.

_____Comply _____Exception

BAR-CODE/RECORD KEEPING INTERFACE

A 1 dimensional barcode, in the interleaved 2 of 5 format shall be printed on the label of each separable layer of the garment.

This barcode shall represent the serial number of the garment. The manufacturer shall be able to provide a detailed list of each asset of a drop-shipped order, and shall include the following:

- Brand
- Order Number
- Serial Number
- Style Number
- Color
- Description
- Chest/Waist Size
- Jacket/pant Length
- Sleeve Length
- Date of Manufacture
- Mark-For Data

This information shall be able to be imported into the manufacturers web-based system designed to facilitate the organization and tracking of assets in accordance with the cleaning and inspection requirements of OSHA and NFPA 1851.

_____Comply _____Exception

PPE RECORD KEEPING

The manufacturer shall make available and no-charge, a password-protected data based backed website that does not care whose brand of PPE assets are being recorded. The website shall have the functionality to allow the manufacturer to import all of the pertinent data into the department's account so that the initial data entry by fire department personnel is eliminated.

The website shall allow for the department to use a barcode scanner, if desired, to scan the Interleaved 2 of 5 barcode found in the gear by going to the Search the Serial Number page in PPE record keeping program, and scanning the asset's barcoded serial number.

_____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.

Bank of America

Cashier's Check

No. 1590005238

Notice to Purchaser - In the event that this check is lost, misplaced or stolen, a sworn statement and 90-day waiting period will be required prior to replacement. This check should be negotiated within 90 days.

Void After 90 Days

30-1/1140
NTX

Date 10/28/19 01:45:47 PM

ELGIN

0006 0000361 0058

Pay BANK OF AMERICA ONE TWO SIX ZERO ZERO 12600 00 CTSCTS

$12,600.00

Twelve Thousand Six Hundred and 00/100 Dollars

To The Order Of CITY OF AURORA

Remitter (Purchased By): AIR ONE EQUIPMENT INC

Bank of America, N.A.
SAN ANTONIO, TX

AUTHORIZED SIGNATURE

00-53-3364B 11-2010

COPYRAM CAPTURE ANTI-FRAUD PROTECTION

⑈1590005238⑈ ⑆114000191⑆ 00164100414 2⑈

THE ORIGINAL DOCUMENT HAS A REFLECTIVE WATERMARK ON THE BACK. HOLD AT AN ANGLE TO VIEW WHEN CHECKING THE ENDORSEMENTS.